

# **National College of Ireland**

URVote Technical Report

Software Development

2023/2024

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## 1.0 Objectives

The objective of my software project is to create a web application that uses new techniques for voting, the Web application will allow the user that voting can be done quickly and simply from anywhere at any time using Chrome, Edge, Firefox and Google. I believe this will enable the user to vote from the laptop from home and anywhere as far as they have a network. The project aims to make admin/ manager gather the employee's thoughts and what they want for new policies or new changes in the company. The administrator inputs queries or arguments into the system. Staff members are then able to vote with a yes or no response. For each argument, a voter can only post a single vote. Every single vote cast is kept on file in the database for that specific argument. The system counts the total votes, and then the process of voting on the argument provides to administrator with a brief report on it. As a result, the app supports the organization in gathering accurate employee feedback for the company. My goal is to develop this application a high-quality web app that can be used anywhere for voting, the web application hopes to reduce situations where managers going or having depression on new changes this URVote will release the depression and give feedback from the employees very quickly.

## 2.0 Background

The college requires final year students to develop an application, websites, or any other requirement so as a student, it is my final year project the reason to develop this project. I chose to undertake this project to help managers, employers and administer who are working in business companies and other company to help them to see what their staff want or their ideas on anything or any issue that they want to get their feedback if an admin in a company which has more 400 staff want to come with new ideas to change the policy

instead of him/her to go or send email to the employees in the company, he/she can use the application and can know their employee's feedback easy and simple way. Therefore, I believe this URVote Web application will bring more advantages for companies and aid them and their workers.

Additionally, it is more convenient for everyone to vote for changes in the company using a web application rather than taking time to send the vote to the administrator, which makes their job a lot simpler. Furthermore, it provides the employer with a total count report, which can assist the administrator in understanding staff feedback, which is something I believe is important for an administrator to understand and know their employee's ideas in everything.

I am hoping to design this project to make their job issue easy for them by utilizing this application, which will help many business firms out there and any other sector that needs this type of application to receive their worker feedback in any argument.

### 3.0 State of the Art

There is an existing Web application which I have linked to that application in technical approach but it is not the same as mine because it will be utilized by administrators, managers, and employers for any company; also it will be unique in that it will feature an administrator who can ask questions concerning employee voting, and I will be using new methods to make voting easier for the staff to use and work. Additionally, it will be different because my application will collect all the data for the administrator, count the total number of votes, and provide the admin with a report at the end that will resolve all issues for the employer and provide the admin with all the information they need to

My web application will be designed to be eye-catching and unique, and I may incorporate security and privacy features. For instance, the report will only be accessible to the administrator and not to voters, and only the admin will be able to add queries for votes. Once the app is developed, I will make sure that every function is clear.

### 4.0 Technical Approach

It will be a Web application system for all web browsers, so I will be using Notepad ++ to develop it. I intend to use Java, which I am more familiar with than any other programming language. I will identify all the requirements while I am developing the application as that will be the time when I will face all issue which arises. The application will allow an admin to choose any queries and a topic so that the workers can vote. The admin then wants to get

the result with a report of the casting voting, to make it easy to follow the voting system, I am going to initially plan to construct a class diagram for my app and then extend it with an ERD diagram. After that, I will start my project and work through all the requirements step-by-step, using my class and ERD diagrams as a guide.

I researched my ideas and my project although there are a few application websites that are used for voting where there are votes for the county, countries which mine will be used for business, company, staff workers etc some applications are paid and also will not be simple than this website and they also do not give feedback which this will, therefore are few web application that has similarity such login, the below are some website is used for voting.

[Simply Voting](#)

[democracy-technologies.org/voting/](http://democracy-technologies.org/voting/)

[Electoral Portal \(voter. ie\)](http://electoral-portal.com/voter/)

## 5.0 Technical Details

I'll be using Notepad ++ as Principal libraries, and I'll be implementing them with MySQL for the primary database and Java for the application. The crucial algorithms are those for programming the application; I'll dissect it piece by piece, employ my diagram, and adhere to my plans after using all the qualifications. This web application also requires a network or 4G to use and you need to staff workers in the company where the admin user is aware of the user. I might also go further to search more to make this web application very standard and I may later an App of it.

## 6.0 Special Resources Required

HTML Bootstrap, CSS, Python and MySQL.

## 7.0 Project Plan

	A	B	C	D	E
1	Task Name:	Duration	Start	Finish	
2	Project Idea	week			
3	Project Pitch video			19/11/2023	
4	Project Proposal	ongoing	08/11/2023		
5	Starting Proposal		08/11/2023		
6	Reflective Journal	1 day	24-Oct-23	25-Oct-23	
7	Reflective Journal submission		25/10/2023		
8	Project Proposal submission	two weeks		21/11/2023	
9	Creating few WireFrame	weeks			
10	Reflective Journal		28/10/2023		
11	Reflective Journal submission	3-4 days		01/11/2023	
12	Creating use cases	5 days	22/11/2023		
13	stating Technical report	8 days	05/12/2023	13/12/2023	
14	starting Midpoint preparation	ongoing	18/12/2023		
15	creating power point slide	1 day	19/12/2023		
16	preparing for presentation		02/01/1900		
17	Recording persentation	1 day	22/122023	22/12/2023	
18	Demo	3-4 days	17/12/2023	22/12/2023	
19	Midpoint submission	1 day		22/12/2023	
20					

Focus	TimeLine	Deadline
Downloading all the software that is needed/starting wireframe/completing ERD Diagram /choosing what language I may use. /	6-10days	30/11/2023
Start project	10 days	10/12/2023
Continuing with my pages and designing principle / adding login authentication /Developing a dashboard that allows the admin to add the issue or any topic /voting interface giving an action button for the	25-30 days	10/01/2024

dashboard/login in detail username and password		
Finalising all votes and gathering all the information in the database	15-20 days	28/02/2024
Add the report to give information to admin back of casting votes	15-20 days	15/03/2024

## 8.0 Testing

I'll test the admin's data, information, and report that will be kept in the database. I'll also

Testing the application / checking all the requirements and adding everything that is needed for my application	20-25 days	10/04/2024
Adding some other functions and features to make my application look enjoyable and make everything clear and simple for the user	20-25 days	30/04/2024

test my function and features, like the login function, which will allow me to see if someone can log in using the user they created and the same password. I'll test the voting process, which will allow someone to cast one vote that they shouldn't be able to cast again. Finally, I'll check the report to make sure all the information is correct and there are no issues or misleading details.

Similarly, I will test my application in Android Studio, where I am building it, to see if there are any errors that I can delve into and troubleshoot. I should verify that the user may log in while using the application if they are logged in with the

## Executive Summary

The main purpose of this technical report is to express and explain the development of my Computing project, which URVote web application for the midpoint, the URVote project is to be completed for my four-year computing project. This project aims to use a new technique of casting a vote, the URVote is mostly developed for organisations to get employees to vote for any new policy regulation or issue. This report defines the

implementation, and functional requirements of URVote developed so far example use case diagrams, and other important web applications, the admin, employer and managers prefer such web applications for their companies to get the ideas of his/her employees staff worker through an easy web App or any technology that can be used and gather information as quickly as possible which that can prosperity support them. Furthermore, I will add additional information to this technical before the final submission. URVote web app will allow users such as staff to vote yes or no, one voter can only post one vote on the argument, and at the end, the admin will receive a feedback report which will benefit the admin in many ways to know what the employee is seeking for, which I am in opinion that will help the admin a lot

## 9.0 Introduction

### 9.1. Background

In the final year in NCI students will be given a project to complete either to developed application, web application, or any other project which it depends on the course the student is studying, the key goal for this project is to emphasise an important issue that a manager face and need to gather everyone thoughts, ideas, and decision which they will face a situation where he/she have to know what the employees want so she will get the aid as well, therefore I came and I decided by developing such an URVoting web application will resolve their issue, I am more confident to develop such a web app than any other application. The web application is targeting to use a new structure and uses different techniques. I see more benefits and advantages of URVoting, the choice for me to take and develop URVoting is to make the admin and employer job simple to get all the staff feedback that can help him/her to manage every argument while sharing it with the employee and can come with best conclusion, result, and best choice at the end.

### 9.2. Aims

URVoting aims to achieve a new technique for casting votes, It will be developed to deploy an easy and flexible way of casting voting anytime and from anywhere. the URVoting web application will specially be designed for organisations to get employees' votes for any new policy regulation. The issues or arguments are fed into the system by the admin. Employees can then cast their vote as yes or no. One voter can only post one vote for an argument. Every vote cast is stored in the database for the respective argument. At the end of the voting process, the system counts the total votes and generates a brief report of it to the admin. Thus, the app helps the company to get proper feedback from the employees.



**Efficiency:****The efficiency of URVoting ;**

- User and admin need to log in.
- It will allow the admin to put the argument.
- Allows users to vote.
- The data will be managed.
- The manager will get the information report.
- All the votes will clearly
- The employer will have an overall accurate result.

**Productiveness:****The productiveness of URVoting;**

1. It sends a report.
2. Data will be stored.
3. Proper decisions will be made.
4. It will reduce the lack of time spent on new policy regulation.

### 9.3. Technology

In the development and my idea for this project, I paid attention to the best result to create this web, when there is a new regulation policy happening in a company the manager will come through many difficulties of one of the important difficulties is he/she may need help from the staff on deciding something very important for the business, which the why I am deciding to develop URVoting and the below is the technology I will use.

**Software technology:**

Visual studio code:

Notepad ++:

MySQL:

**Language:**

- Php
- HTML
- CSS

I will be using HTML, CSS, and JavaScript in Notepad++ for my front ends.

I am interested in using JavaScript and PHP for my Back-ends.

#### 9.4. Structure

The structure of this report has been divided into four main parts, a quick introduction, a system, further research development and a conclusion concerning the project at the end.

##### **Summary & Introduction:**

- The purpose of my report
- Important point in my report
- Why I am undertaking this project.
- The background of my project
- Overview of my project
- What it will achieve at the end
- Technologies

**System:** Functional and functional requirement, use cases diagram, UML diagrams flow chart, ERD diagram and implementation action and the graphical user interface

**Evaluation & Testing:** how I will test the web application, testing for bugs or any errors.

**Conclusion:** the key, main purpose, and reflection of the report for the URVote.

**Development & research:** How the URVote will be developed and processed through development and finding more study further research and exploring the project.

**Appendix & Reference:** link to website, video and other supporting resources or reference material that I may use during developing the URVote.

## 10.0 System

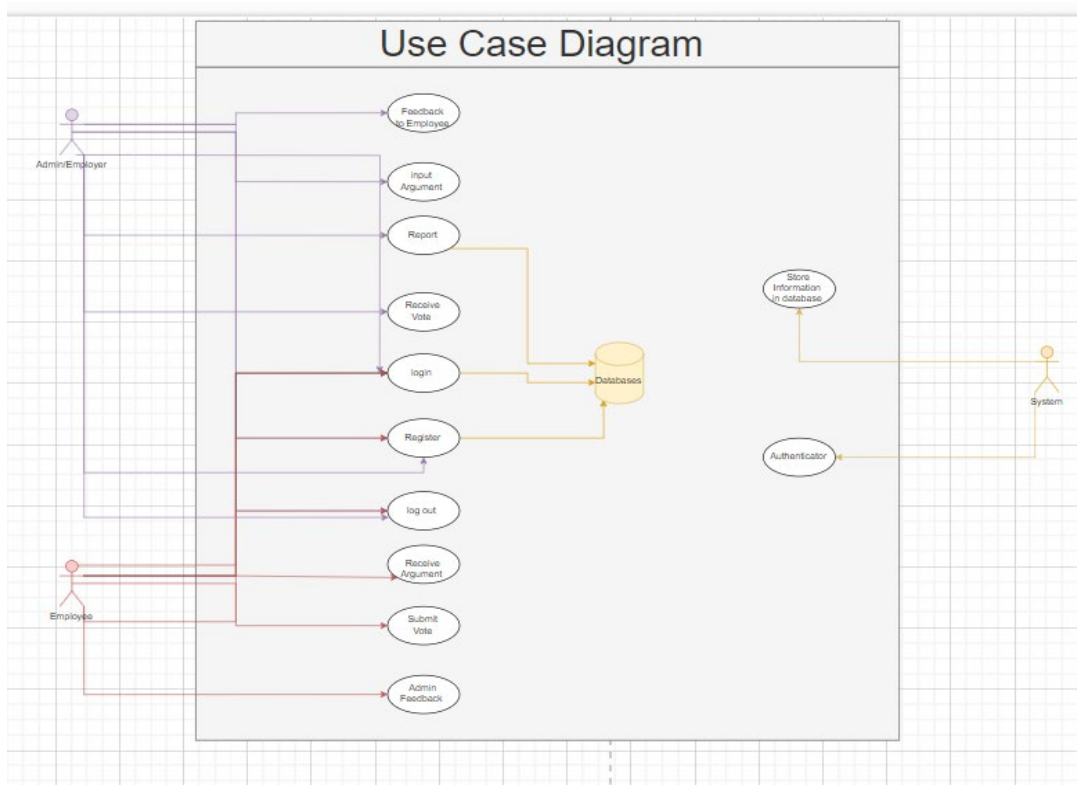
### 10.1. Requirements

The requirements are separated into two parts which are functional requirements and non-functional requirements, explaining what the web application must do and non-functional are the actions or the abilities of URVote.

#### 10.1.1. Functional Requirements

Requirements	Reflections
The admin should register to application.	They should be able to register him/herself into the URVote.
The system should allow employees to register for the application.	Same they shall be able to register.
The system should allow the employer to input the issue for a vote.	Employers can add the new policy or any other argument for a vote.
The system takes the input for a vote.	
The system shall allow the employees to vote.	Every employee who is logged in shall be able to vote.
One voter can vote yes or no.	No, number only option shall be ("yes"/"no").
The system shall allow employees to vote.	They should not allow one employee to vote more than one vote.
The system stores all the votes in a database.	The system needs to keep all the votes in the database safe.
The system should count the total vote.	Total vote.
The system should have a report.	Generate a report.
The system shall allow the employer to use the report.	Admin can go over the report.
The employer/admin shall receive accurate feedback from his/her employee.	Collecting the correct decision from the result.

#### 10.1.1.1. Use Case Diagram



#### 10.1.1.2. Requirement 1

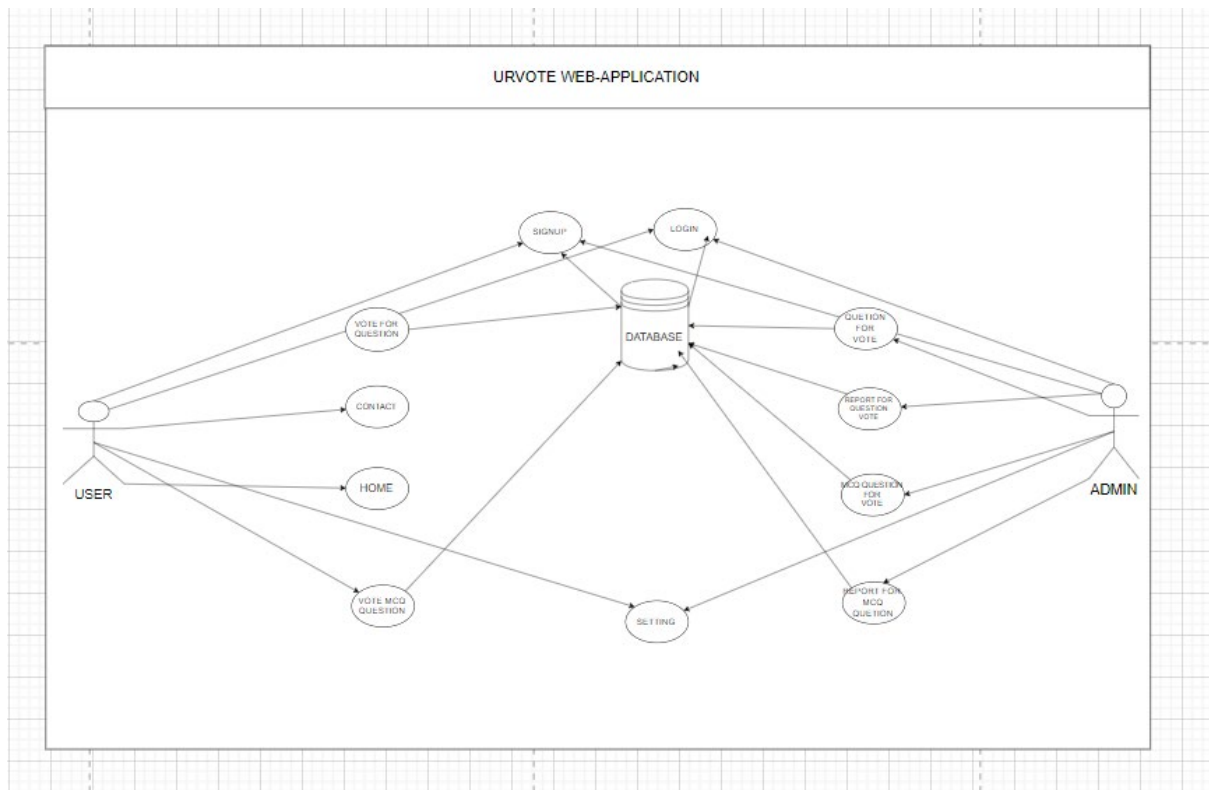
The requirements for both admin and employees are as below.

- Register for web application.
- Login
- For employers to add new policies for voting in the system
- Employee allowed to vote once.
- Employers have more access than an employee such as the employer seeing the employee's voting result, and getting report feedback of the voting.
- Contact page where employees can send any employer email which is displayed for admin in the website user page.
- Employees can receive any advice from the employer.

#### 10.1.1.3. Description & Priority

#### 10.1.1.4. Use Case

#### 10.1.1.5. Use Case Diagram

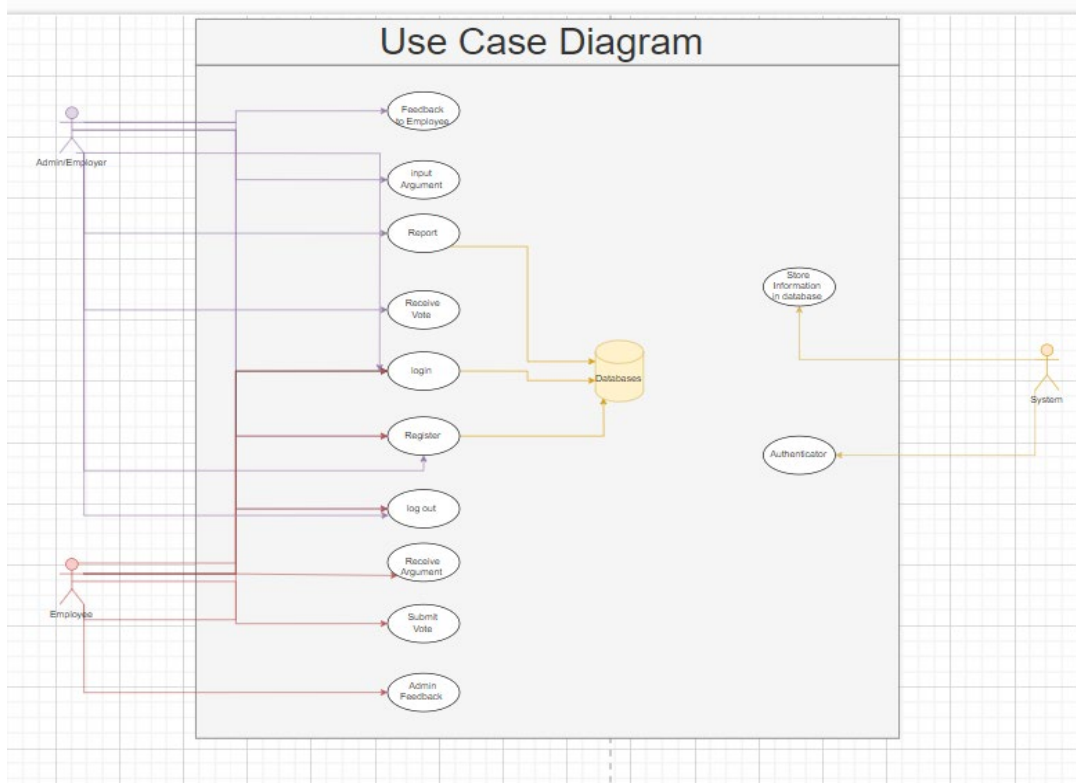


#### 10.1.1.6. Requirement 1

The requirements for both admin and employees are as below.

- Register for web application.
- Login
- For employers to add new policies or any issue question to input for voting in the system
- Employees are allowed to vote once.
- Employers have more access than employees such as the employer sees the employee's voting result, and gets report feedback on the voting result in different ways such as chart, percentage and table
- Employees can receive any advice from the employer.

#### 10.1.1.7. Description & Priority



#### 10.1.1.8. Requirement 1

The requirements for both admin and employees are as below.

- Register for web application.
- Login
- For employers to add new policies for voting in the system
- Employee allowed to vote once.
- Employers have more access than an employee such as the employer seeing the employee's voting result, and getting report feedback of the voting.
- Contact page where employees can send any employer email which is displayed for admin in the website user page.
- Employees can receive any advice from the employer.

#### 10.1.1.9. Description & Priority

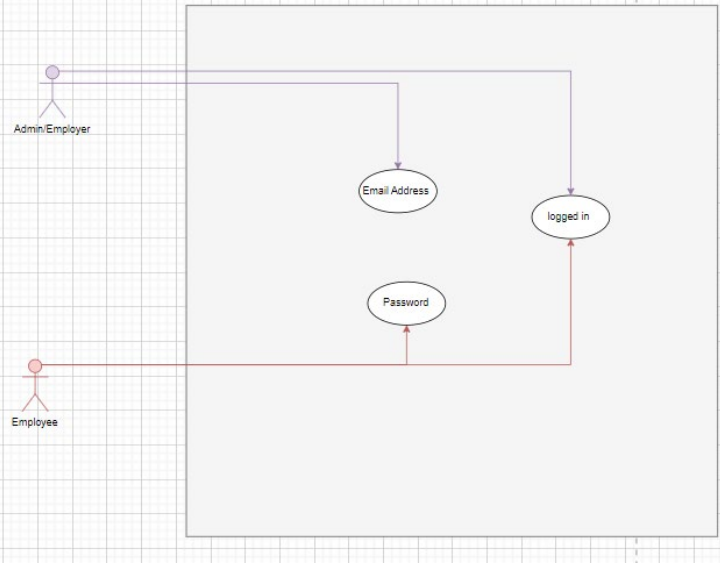
#### 10.1.1.10. Use Case

Name	User /admin registration
scope	The scope of this use is expecting the user and admin to register to URVote.

<b>Description</b>	The user creates an account and registers himself/herself username password, first name, last name, and email address should be entered for registration.
<b>Use Case Diagram</b>	<pre> sequenceDiagram     actor Admin as Admin/Employee     actor Employee     participant System     Admin-&gt;&gt;First Name     Admin-&gt;&gt;First Name     Admin-&gt;&gt;Last Name     Admin-&gt;&gt;Password     Admin-&gt;&gt;Confirmed Password     Admin-&gt;&gt;Email Address     Employee-&gt;&gt;First Name     Employee-&gt;&gt;First Name     Employee-&gt;&gt;Last Name     Employee-&gt;&gt;Password     Employee-&gt;&gt;Confirmed Password     Employee-&gt;&gt;Email Address     First Name-&gt;&gt;Registration Confirmation     First Name-&gt;&gt;Registration Confirmation     Last Name-&gt;&gt;Registration Confirmation     Password-&gt;&gt;Registration Confirmation     Confirmed Password-&gt;&gt;Registration Confirmation     Email Address-&gt;&gt;Registration Confirmation     Registration Confirmation-&gt;&gt;System     </pre> <p>The diagram illustrates the registration process. Two actors, 'Admin/Employee' and 'Employee', interact with a system boundary. Each actor has a series of messages (represented by arrows) to input 'First Name', 'Last Name', 'Password', 'Confirmed Password', and 'Email Address'. These inputs are processed by the system, leading to a 'Registration Confirmation' use case, which then sends a message to the 'System' actor.</p>
<b>Flow Description</b>	The above use case explains the user /admin registration process.
<b>Precondition</b>	The user and admin can enter their detail to register and then will be registered to the system.
<b>Activation</b>	The user will create an account.
<b>Main flow</b>	The system allows the user to enter his/her details. The user click registered to register itself. The system will confirm the user.
<b>Alternate flow</b>	A1 The user may forget to enter full details. Error is corrected by the user.
<b>Exceptional flow</b>	E1 The user may not receive any confirmation if they do not input all the requirements
<b>Termination</b>	The user can refer once he /she receives the registration. System send confirmation
<b>Postcondition</b>	A user is created. System user-created

#### Use case UC-2

<b>Name</b>	<b>login</b>
<b>scope</b>	This use case is to show a user/ actor to login

<b>Description</b>	The actor/user has to login to the URVote to use the application
<b>Use Case Diagram</b>	 <pre> graph LR     AdminEmployer[Admin/Employer]     Employee[Employee]     EmailAddress((Email Address))     Password((Password))     LoggedIn((logged in))      AdminEmployer --&gt; EmailAddress     Employee --&gt; Password     EmailAddress --&gt; LoggedIn     Password --&gt; LoggedIn </pre> <p>The diagram illustrates the login process for two types of users: Admin/Employer and Employee. The Admin/Employer actor is connected to the 'Email Address' use case, and the Employee actor is connected to the 'Password' use case. Both use cases lead to the 'logged in' state.</p>
<b>Flow Description</b>	The above use case explains the user /admin registration process.
<b>Precondition</b>	The user should not log in before entering his/her detail
<b>Activation</b>	This allows users/actors to log in with the details they are registered with
<b>Main flow</b>	<p>The user should able to see the login once they are registered.</p> <p>The system shall allow users with the correct email and password.</p> <p>The user should be logged in after entering the details.</p> <p>The system should allow the correct user to access the home page.</p>
<b>Alternate flow</b>	<p>A1 In the case of a user not able to log in, they should find out what is he/she inputting incorrectly.</p> <p>The user should be able to log in without any error.</p> <p>The system should give the option of registering if the user is not already registered.</p>
<b>Exceptional flow</b>	<p>E1 Login with Email – address</p> <p>And password</p>
<b>Termination</b>	The user should see the home page.
<b>Postcondition</b>	<p>The user enters the email and password.</p> <p>The system user logged in</p>



Use case UC-3

Use case UC-2

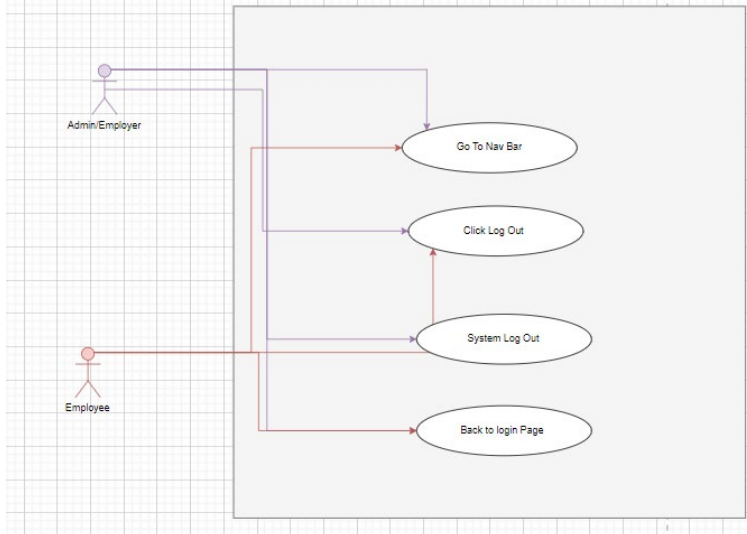
<b>Name</b>	<b>Home Page</b>
<b>scope</b>	This use case is to show a user/ actor the home page.
<b>Description</b>	The actor/user have now access to the Home Page, Able to view any information on the Home Page. The admin user can add announcements on the Home Page
<b>Use Case Diagram</b>	<pre> graph LR     AdminEmployer[Admin/Employer] --&gt; UC1((User Logged In))     Employee[Employee] --&gt; UC3((go to nav bar click Home Page))     UC3 --&gt; UC2((able to access different pages))     UC2 --&gt; UC1 </pre>
<b>Flow Description</b>	The above describes the employee and employer user to log in to the Home Page.
<b>Precondition</b>	The employee user shall be able to see and not able to add anything.
<b>Activation</b>	The user logged in can have access to the system.
<b>Main flow</b>	The user is logged in. The user should have a navigation bar. The user can see information on any new update on the Home Page of the company.
<b>Alternate flow</b>	A1 If a new user wants to log in it is requested that the new account the able to view the Home Page, Nav Bar also other pages such as Contact.
<b>Exceptional flow</b>	E1 Login detail approved. Successfully logged in to the Home Page
<b>Termination</b>	Users have access to the home page.
<b>Postcondition</b>	Logged in Home Page

<b>Name</b>	<b>Voting Page</b>
<b>scope</b>	Voting page
<b>Description</b>	The user must be able to vote on the argument from the manager and can only vote once as yes or no.
<b>Use Case Diagram</b>	<pre> graph LR     AdminEmployer[Admin/Employer] --&gt; GoToNavBar([Go To Nav Bar])     AdminEmployer --&gt; ClickVotePage([Click Vote Page])     AdminEmployer --&gt; Vote([Vote])     Employee[Employee] --&gt; ClickVotePage     Employee --&gt; Vote </pre>
<b>Flow Description</b>	The above terminate votes for any argument
<b>Precondition</b>	The user must be able to vote.
<b>Activation</b>	The user logged in can have access to the system
<b>Main flow</b>	The user logins. The user should go vote page. The user votes.
<b>Alternate flow</b>	A1
<b>Exceptional flow</b>	E1 Voting opening time or closing
<b>Termination</b>	Users can vote once
<b>Postcondition</b>	Successfully can vote

Use Case UC-4

# Use case UC-5

<b>Name</b>	<b>Report Page /feedback/result for the admin user</b>
<b>scope</b>	This use case shows the report page of the web application.
<b>Description</b>	The admin user has access to the report section to see all the feedback.
<b>Use Case Diagram</b>	<pre> graph LR     Admin[Admin/Employer]     Employee[Employee]     subgraph System         G1([Go To Nav Bar])         C1([Click Report Page])         R1([Report result])         F1([Feedback])         G1 --&gt; C1         C1 --&gt; R1         R1 --&gt; F1     end     Admin --&gt; G1     Admin --&gt; C1     Employee --&gt; C1     Employee --&gt; R1     Employee --&gt; F1 </pre>
<b>Flow Description</b>	The above session explains the report that is generated for the employer
<b>Precondition</b>	Employer users have the report.
<b>Activation</b>	Report page
<b>Main flow</b>	The user goes to the nav bar. The user should click the report page. The user sees all the information clearly on the report page.
<b>Alternate flow</b>	.A1
<b>Exceptional flow</b>	E1 The system successfully generates a report for admin users.
<b>Termination</b>	
<b>Postcondition</b>	Employees can see any announcement from the employer.

<b>Name</b>	<b>Logout</b>
<b>scope</b>	The user can log out the user from the system.
<b>Description</b>	For the Admin user once he/she gets the report and result and sends feedback to the employee in the announcement the user clicks log out into the web application Employees can log out by clicking the logout button
<b>Use Case Diagram</b>	 <pre> graph LR     Admin[Admin/Employer]     Employee[Employee]     subgraph System         U1([Go To Nav Bar])         U2([Click Log Out])         U3([System Log Out])         U4([Back to login Page])     end     Admin --&gt; U1     Admin --&gt; U2     Admin --&gt; U3     Admin --&gt; U4     Employee --&gt; U3 </pre> <p>The diagram illustrates the logout process. It features two actors: 'Admin/Employer' and 'Employee'. A system boundary contains four use cases: 'Go To Nav Bar', 'Click Log Out', 'System Log Out', and 'Back to login Page'. The 'Admin/Employer' actor is connected to all four use cases. The 'Employee' actor is connected to the 'System Log Out' use case.</p>
<b>Flow Description</b>	This use case shows how to log out the user from the system.
<b>Precondition</b>	After the voting, the user shall be able to log out
<b>Activation</b>	System logout
<b>Main flow</b>	<p>The user goes to the nav bar.</p> <p>The user should be able to see logout in the nav bar's last button.</p> <p>The user is now logged out and the system will bring the user to the login page.</p> <p>Log out.</p>
<b>Alternate flow</b>	A1
<b>Exceptional flow</b>	E1 Logout successfully

<b>Termination</b>	The user has no issue logging out and should be out.
<b>Postcondition</b>	System logout

#### Use Case UC-6

#### Use case 7

<b>Name</b>	<b>VOTE PROCESS</b>
<b>scope</b>	The user can vote for the question which has the option yes, no and other and also can vote for the MCQ question. The admin inputs questions
<b>Description</b>	As described in the scope admin receives the question and selects either yes, no or other on the voting page , the user also can vote multiple choice questions if required the votes are saved in the database, admin inputs the question for the vote
<b>Use Case Diagram</b>	<pre> graph LR     ADMIN[ADMIN] --- QA1((QUESTION ADD))     QA1 --- VOTE((VOTE))     VOTE --- VOTEMCQ[(VOTEMCQ)]     VOTEMCQ --- QA2((QUESTION ADD))     QA2 --- ADMIN     USER[USER] --- VOTE     VOTE -.-&gt; QA1     VOTEMCQ -.-&gt; QA2   </pre>
<b>Flow Description</b>	This use case shows the process of receiving questions for a vote and allowing to vote, and also admin adding questions for a vote
<b>Precondition</b>	Once the user votes they can log off the website

<b>Activation</b>	The user visited successfully and was able to log
<b>Main flow</b>	The user submitted a vote Admin inputs vote
<b>Alternate flow</b>	A1
<b>Exceptional flow</b>	E1 Logout successfully

### Use case 8

<b>Name</b>	<b>Report page</b>
<b>scope</b>	The admin can view the vote result on the report page
<b>Description</b>	The admin receives the vote result as a report where the admin can view the report in a table, chart and the total percentage of the result for the voting process
<b>Use Case Diagram</b>	<pre> graph LR     subgraph "REPORT OF VOTES"         direction TB         UC1((REPORT OF QUESTION VOTE))         UC2((REPORT OF MCQ))         UC1 --&gt; UC2     end     ADMIN[ADMIN] --&gt; UC1     UC1 &lt;--&gt; DB[(DATABASE)]     UC2 &lt;--&gt; DB     </pre> <p>The diagram illustrates the 'Report page' use case. It features a boundary box labeled 'REPORT OF VOTES' containing two use cases: 'REPORT OF QUESTION VOTE' and 'REPORT OF MCQ'. An actor labeled 'ADMIN' is connected to the 'REPORT OF QUESTION VOTE' use case. A database entity labeled 'DATABASE' is connected to both use cases within the boundary. The 'REPORT OF QUESTION VOTE' use case has a green start circle and a blue end circle. Blue arrows indicate the flow of data between the database and the use cases, and from the admin to the 'REPORT OF QUESTION VOTE' use case.</p>
<b>Flow Description</b>	This use case shows me the admin receives votes on the report page all votes are saved in the database

<b>Precondition</b>	The admin able to view the report
<b>Activation</b>	The system generates a report for the admin
<b>Main flow</b>	Generating report Viewing result in table, chart. Able to see the total vote submitted for each option
<b>Alternate flow</b>	A1
<b>Exceptional flow</b>	E1 report generated successfully

**List further functional requirements here, using the same structure as for Requirement 1.**

#### 10.1.2. Data Requirements

##### **Employee :**

- Employee login and register the details will be saved in a database table in myphpadmin.
- Employee votes will be saved in the database table.

##### **Employer Data:**

- Employer login is saved in the table background. I
- Employer entering question for vote will be saved
- Employer changes will also saved in the database
- Any user login or registers the employer can delete him/her from the database they cannot log in and need to make a difference even an employer can delete employees from the database when they may not be able to login to the website.

##### **Vote Data:**

The web application will need to have data such as all people who are voting where their vote needs to be safe in data. therefore I have created a table in myphpadmin where the user data is secure and saved.

**Report Data:**

The web application should cast every vote in a data make a report and give feedback from the data that is stored. the report voting is saved in the background table also with the question and answer from the user which is also displayed for admin on the report page.

I have created a database for both employees and employers to keep their details saved in the background.

### 10.1.3. User Requirements

**Profile:**

The user will be able to add the name first and last name in the register they can add the company they are working for with their email which will saved, if they escape anything they may not be registered so they need to answer everything for signup.

**Login:**

The users are required to log in to the website with a signup detail email and password if they enter any missing letter or incorrect detail will be not permitted to log in to the website.

**Vote :**

The user needs to vote to be perceived in the voting system by their employer

### 10.1.4. Environmental Requirements

**Security & privacy:**

The web application should be secure user information should be safe and non-else should be able to edit, see and add something for another user, the vote should be secure in the database. I also have prevented SQL injection where hackers try to log in with fake details this website is protected from such attacks.

**Network:**

To use URVote Web you need to be connected to WiFi or the internet, such as 4G or, 3G as you can use the web application. As environmental requirements come to the network as mainly other websites URVote need also a network such as Wi-Fi, etc. to work else no data will be saved

**System:**

- Chrome
- Edge firefox
- Google

**Technology**

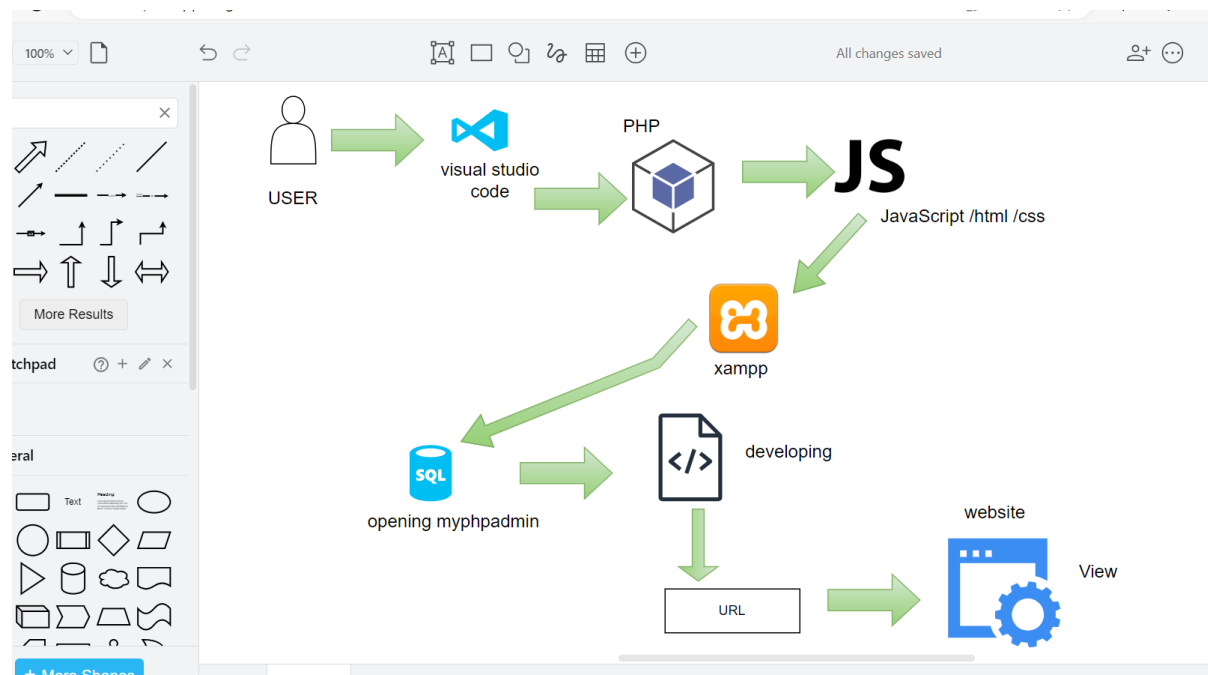


The employer needs to use the correct requirement such as camp needs all pages contacted with data background and also needs to have myphpadmin opened to see data entered.

#### 10.1.5. Usability Requirements

The URVote will have a usability requirement the user should able to log in with the correct details, the system should let the user know if they are putting incorrect email or password, and the user should be able to have access between pages by using the nav Bar or search, the user should be able to see the announcement from the admin user, the system should allow each user to vote only once and also the system reports to admin user to collect more information and decide what his/her employee think is better for the company.

### 10.2. Design & Architecture



### 10.3. Implementation

The implementation will cover the key components of the URVote website, it will go through the main or most important classes and pages of the URVote web, an explanation of logic with screenshots of codes from Visual Studio and each part of the page. URVote web application connects my database using xampp and my database is phpMyAdmin where I have my tables for all my pages, the languages I have used are HTML, PHP, and javascript and also for styling, I have used CSS.

I will go through my sign-up page, vote page, question for vote page, and also my report page for Urvote. There are more pages included on my website such as home, page, log in, contact, vote multiple choice question, adding multiple choice questions, and report for multiple choice so I decided to choose an important page out of them and go over my implementation.

## Sign Up class/page

```
signup.php
<?php

session_start();

// the db.php is my database class where i have connected my pages to the database tables
include("db.php");

//the POST is making sure for sending user below requirement to my data
if (isset($_POST['fname'], $_POST['lname'], $_POST['workplace'], $_POST['email'], $_POST['password'], $_POST['typeof_user'])) {

    // collecting the first name , last name etc and inputting to my data
    $fname = $_POST['fname']; $lname = $_POST['lname']; $workplace = $_POST['workplace']; $email = $_POST['email']; $password = $_POST['password'];

    // making sure my email and password are inputted and also email is not numeric so it use string
    if (!empty($email) && !empty($password) && !is_numeric($email)) {
        //inserting my fields to my data base
        $query = "INSERT INTO form (fname, lname, workplace, email, password) VALUES (?, ?, ?, ?, ?)";

        // using the sql statement here which also it protect of sql injection attack and also binding variable
        $stmt = mysqli_prepare($con, $query);
        mysqli_stmt_bind_param($stmt, "sssss", $fname,
        $lname, $workplace, $email, $password, $typeof_user); mysqli_stmt_execute($stmt);

        // comments if they are success to sign up
        echo "<script type='text/javascript'> alert(' Thanks Your Successfully Registered')</script>";
    }

    // comments if they are unsuccess to sign up
    else {
        echo "<script type='text/javascript'> alert('Please input all the above requirement ')</script>";
    }
}
```

As you can see the above code is my signup page I have connected it to my database which is named db.php, I have created a table named form and created a field as you can see I am selecting the field into my table, also used I have used MySQL prepare and bind statement, this is used for SQL injection so if someone tries to log in to my website without their email and password so they must register to the website then it allows them to log in to the website. In my register to input my field and signup I have to create a form where I can input my detail so I have form as you see in snippets and label for every field and also placeholder if they have not entered anything it will display what will go in the field. At the end I have a button for submit where the user can submit his/her detail for login also mention that you will not permit to login with a fake email or id so order to have access you to sign up and log in with signup email and password. The reason why is the register page done first it needs to be there as it is a voting application so every user who wants to vote needs to be registered, it saves that not everyone can have access to the website if I check my table I will who is register to URVote so every vote need done by the user so every user cast one vote example I log in to the website I

can vote but if there is no signup page every people who are there can vote which this is used for an employer to get employees feedback to help for better future.

```
?>
<!-- my html -->

<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <title>Signup page</title>
  <!-- link to my css class -->
  <link rel="stylesheet" href="stylessignup.css">
</head>
<body>

  <!-- begin of my div container -->
  <div class="container">

    <form id="signup" method="POST">
      <h1> SIGN UP</h1>
      <!--label or naming my input, placeholder appear before writing anything
      and fname is what is called in my table with required which must be there -->
      <div class="inputBox">
        <label>First Name</label>
        <input type="First Name"
        placeholder="Enter First name"
        name="fname" required><br><br>
      </div>

      <div class="inputBox">
        <label>Last Name</label>
        <input type="Last Name"
        placeholder="Enter Last name"
        name="lname" required><br><br>
      </div>
```

```
      <div class="inputBox">
        <label>Workplace</label>
        <input type="workplace"
        placeholder="Enter Workplace"
        name="workplace" required><br><br>
      </div>

      <div class="inputBox">
        <label>Email</label>
        <input type="email"
        placeholder="Enter Email"
        name="email" required><br><br>
      </div>

      <div class="inputBox">
        <label>Password</label>
        <input type="password"
        placeholder="Enter Password"
        name="password" required><br><br>
      </div>

      <div class="inputBox"><button type="submit">SUBMIT</button><br><br></div>
      <!-- linking back to my login page -->
      <div class="inputBox"><a href="login.php">LOGIN</a><br><br></div>

    </form><!-- closing my form -->
    <!-- closing my div -->

  </div>

  <!-- closing my body and html -->
</body>
```

Question class:

At the beginning I have included a nav bar screenshot, I have a nav bar through all my pages and am using the same nave for all my pages so it will be better to include it here going over, I have a logo which I did the CSS for in my navbar, I have my link to all my pages in the website so if the user want to navigate through pages the navbar is there and the click different pages to have access to al the pages I have dropdown for admin

where I include pass code for pages in my website as see the javascript I have used to get the passcode working for specific page which this is done for sfty of employer. The nav bar is done to give users quick access to different pages while employers can have more access to some pages that require such report pages o of the examples I can share.

```

<nav>
    <!-- style for my icon -->
    <div class="icon" style="background-color:">
    <div class="icon">
    <b style="color: #004d00;">UR</b><b style="color: #ff9900;">Vo</b><b style="color: #0000b3;">te</b>
    </div>
    </div>
    <!-- my search box -->
    <div class="search-box">
    <input type="text" placeholder="Search...">
    <a href="#">
    <i class="fas fa-search"></i>
    </a>
    </div>
    <!-- link to my different pages in my nav bar -->
    <ul class="links">
    <li><a href="home.php">Home</a></li>
    <li><a href="contact.php">Contact</a></li>
    <!-- my drop down whn i click i wil see all below pages -->
    <li class="dropdown">
    <a href="#" class="dropbtn">ADMIN</a>
    <div class="dropdown-content">
    <ul><!-- link to my javascript and enter passcode when user onclick on these pages they should recievs prompt to enter pin -->
    <a href="javascript:void(0);" onclick="enterPinAndNavigate('question.php')">Question</a>
    <a href="javascript:void(0);" onclick="enterPinAndNavigate('MCQ.php')">Multiple Choice</a>
    <a href="javascript:void(0);" onclick="enterPinAndNavigate('report.php')">Report</a>
    <a href="javascript:void(0);" onclick="verifyPinAndRedirect('reportMCQ.php')">Report MCQ</a>
    </ul>
    </div>
    </li>
    </ul>
    <!-- using javascript to given my drop down nav bar pin -->
    <script>
    <!-- function to enter pin --> <!-- a prompt allowing user to enter passcode-->
    function enterPinAndNavigate(pageUrl) {const pass = prompt("please enter passcode to acces this page:");
    <!-- passcode-->
    </script>
    </nav>
    <?php
    session_start();
    include("db.php");

    if (isset($_POST['addQuestionBtn'])) {

        $vote_question = $_POST['vote_question']; $fname = $_POST['fname']; $lname = $_POST['lname'];
        $date = $_POST['date']; $typeof_user = $_POST['typeof_user']; $vote_option = $_POST['vote_option'];

        // i am querying all field and inserting so it will be save in the question table in my database
        $query = "INSERT INTO question (vote_question, fname, lname, date, typeof_user, vote_option) VALUES ('$vote_question', '$fname', '$lname', '$date'

```

I have PHP code as seen in the screenshot I have a toggle button in my question page where when you toggle it will display the form for the question to be input for vote first I created a table called question in my database I have required all the field which I would taught is to have in my question page in here I inserting to the field for my question I have connect my page with the my database page and inserted all my field I have give a message using echo if the employer was successful to submit the question and for this the will be sure if the have submitted the question or not.

```

session_start();
include("db.php");

if (isset($_POST['addQuestionBtn'])) {

    $vote_question = $_POST['vote_question']; $fname = $_POST['fname']; $lname = $_POST['lname'];
    $date = $_POST['date']; $typeof_user = $_POST['typeof_user']; $vote_option = $_POST['vote_option'];

    // i am querying all field and inserting so it will be save in the question table in my database
    $query = "INSERT INTO question (vote_question, fname, lname, date, typeof_user, vote_option) VALUES ('$vote_question', '$fname', '$lname', '$date', '$typeof_user', '$vote_option')";

    $result = mysqli_query($con, $query);

    // Checking if the vote is submitted or not
    if ($result) {
        echo "Question submitted successfully!";
    } else {
        echo "Unable to submit question.";
    }
}

?>

<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
    <title>Add Vote</title>
    <link rel="stylesheet" href="question.css">
</head>
<body>
<script>
    function showOtherInput() {

```

```

</script>
</script>
</head>
<body>
    <div class="button-question">
        <button id="questionBtn" class="btn btn-primary">ADD QUESTION FOR VOTE</button>
    </div>

    <form id="voteForm" method="POST" class="form-container">

        <div class="form-group">
            <label> Question </label>
            <input type="text" name="vote_question"
            placeholder="Question for vote" required>
        </div>

        <div class="form-group">
            <label> First Name </label>
            <input type="text" name="fname"
            placeholder="First Name" required>
        </div>

        <div class="form-group">
            <label> Last Name </label>
            <input type="text" name="lname"
            placeholder="Last Name" required>
        </div>

        <div class="form-group">
            <label> Voting Date </label>
            <input type="date" name="date" required>
        </div>

        <div class="form-group">
            <label> User / admin </label>

```

Then after my PHP, I used HTML to create a form to be displayed on the page, which is connected to my question table in my database here I have the same field included in my database for employers to input the question for vote and I also used a dropdown for my question vote option so they employer can make his/her vote and a submit button to send the question for vote .they reason this page was done is that the employer can enter a vote for his /her employee to vote on and the topic they admin wanted they vote.

```

6 <div class="form-group">
7 <label> Select your option for vote </label>
8 <select name="vote_option" id="vote_option" onchange="showOtherInput();" required>
9 <option value="">Select an option</option>
10 <option value="Yes">Yes</option>
11 <option value="No">No</option>
12 <option value="Other">Other</option>
13 </select>
14 </div>
15
16 <div id="otherInput" style="display: none;">
17 <label for="other_input">Other:</label>
18 <input type="text" id="other_input" name="other_input"
19 placeholder="Enter your vote">
20 </div>
21
22 <input type="submit" value="Add Vote" name="addQuestionBtn" class="btn">
23 </form>
24
25 <!-- toggle button when user that the question will be display -->
26 <!-- vote form which is my question form that i add for my vote when i click at the button the question is form will be display and when i click it
27
28 <script>
29     document.getElementById('questionBtn').addEventListener('click', function() {
30         var voteForm = document.getElementById('voteForm'); if (voteForm.style.display === 'none') {
31             voteForm.style.display = 'block';
32         } else { voteForm.style.display = 'none'; }
33     });
34 </script>

```

Vote page /class

For employees to vote I have created a vote page where the employee can insert the vote for a submitted question, when I submit my question from my question page I get to display the question for the user to vote on the vote page, here I have connected back to my question table, using the PHP I am fetching the question and showing the user the question to be vote along with the answer option. I allowed the user to able to see the question which I coming with input their first name and last name to inform they were the ones voting for the question and permit them to vote as yes or no and other so they so user can select any of them and submit with the button.

```

<?php
session_start();
include("db.php");

// set vote if the need and remove the session as user voted already
if (isset($_POST['hideVotes'])) { unset($_SESSION['voted']); }

// add question
if (isset($_POST['addQuestionBtn'])) {

    $fname = $_POST['fname']; $lname = $_POST['lname']; $typeof_user = $_POST['typeof_user'];
    $vote_option = $_POST['vote_option'] === 'Other' ? $_POST['other_option'] : $_POST['vote_option']; $vote_question = $_POST['vote_question'];

    // inserting to my question table
    $query = "INSERT INTO question(vote_question, fname, lname, typeof_user, vote_option) VALUES ('$vote_question', '$fname', '$lname', '$typeof_user', '$vote_option')";

    if (mysqli_query($con, $query)) {
        // mark the question and thanking for voting the back to vote page
        $_SESSION['voted'][$vote_question] = true; $_SESSION['Thank You'] = "Thank you for voting!"; header("Location: vote.php "); exit;
    } else {echo "Error: " . mysqli_error($con);}
}

// query and select from my table
$query = "SELECT * FROM question"; $result = mysqli_query($con, $query);
?>

```

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <title>Vote on Questions</title>
    <link rel="stylesheet" href="stylevotes.css">
</head>
<body>
    <div class="container">
        <?php
            // checking the session for appreciation and removing it after it's set
            if (isset($_SESSION['Thanks'])) {
                ?>
                <p><?= $_SESSION['Thanks'] ?></p>
            }
            // Check if the query result has one or more rows
            if (isset($result) && mysqli_num_rows($result) > 0) {
                // using loop along rows
                while ($row = mysqli_fetch_assoc($result)) {
                    // Assign the 'vote_question' field value to a variable
                    $vote_question = $row['vote_question'];

                    // Checking if the question has been voted yet
                    if (isset($_SESSION['voted'][$vote_question])) {
                        ?>
                    }
                    <!-- div starting with question container -->
                    <div class='question-container'>
                        <h3><?= htmlspecialchars($vote_question) ?></h3>
                        <form method='POST'>

```

I have created my vote question with an answer form where it is coming from the question page to be seen here on the voting page for employees I also used javascript for other options so when the user chooses other not yes or no I give it to input their opinion so I know that the user needs and why they are not agreed or disagreed. the voting page was done to be completed by the user and the admin found that by this process he/she can get the question she/he is inputted can be answered.

```

??
<form method='POST'>

<input type='hidden' name='vote_question'
value='<?= htmlspecialchars($vote_question) ?>'>
<!-- inputing my details for voting and submit my vote -->
<label for='fname'>First Name:</label>
<input type='text' id='fname' name='fname'
placeholder='First Name' required >

<label for='lname'>Last Name:</label>
<input type='text' id='lname' name='lname'
placeholder='Last Name' required >

<label for='typeof_user'>Type of User:</label>
<input type='text' id='typeof_user' name='typeof_user'
placeholder='Type of User' required >

<!-- here is where my vote process for yes no and other and it will display option -->
</div>
<div class="form-group">
<select name="vote_option" id="vote_option"
onchange="showOtherInput();" required>
<option value="">Select an option</option>
<option value="Yes">Yes</option>
<option value="No">No</option>
<option value="Other">Other</option>
</select>
</div>

<div id="otherInput" style="display: none;">
<label for="other_input">Other:</label>
<input type="text" id="other_input" name="other_input" placeholder="Enter your vote">
</div>

<!-- my button which submit the vote -->

```

```

// displaying message if there is no question available
}else {echo "No questions available for vote";
}
??

<!-- using javascript for my option giving it toggle when the user hover over the button they will be able to see the option -->
<script>
function showOtherInput() {
// getting back html for vote option and other option
var selectBox = document.getElementById('vote_option'); var otherInputDiv = document.getElementById('otherInput');
// or else it will not display anything for not select other
therInputDiv.style.display = selectBox.value === 'Other' ? 'block' : 'none';

</script>

</body>
</html>

```

## Report Page /class

In the report I will be receiving the result of the vote here I am querying and selecting my table and looking for vote questions along with the user vote.



```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Detailed Voting Results</title>
  <link rel="stylesheet" href="report.css">
  <script src="https://cdn.canvasjs.com/canvasjs.min.js"></script>
</head>

<body>
<?php
  include("db.php");

  // selecting my field from my table
  $query = "SELECT DISTINCT vote_question FROM question ORDER BY vote_question"; $result = mysqli_query($con, $query);

  // Checking and fetching my result for voting question
  if (mysqli_num_rows($result) > 0) {
    while ($row = mysqli_fetch_assoc($result)) { $currentQuestion = htmlentities($row['vote_question'], ENT_QUOTES, 'UTF-8');

    $formId = "form-" . urlencode($currentQuestion);

    // querying my vote
    $votesQuery = "SELECT fname, lname, vote_option FROM question WHERE vote_question = ?";
    $votesStmt = $con->prepare($votesQuery); $votesStmt->bind_param("s", $currentQuestion); $votesStmt->execute();
    $votesResult = $votesStmt->get_result(); $totalVotes = $votesResult->num_rows; $yesCount = $noCount = $otherCount = 0;
    // counting my vote using while loop
    while ($vote = $votesResult->fetch_assoc()){
      $voteOption = strtolower($vote['vote_option']); if ($voteOption == 'yes') { $yesCount++;}
      elseif ($voteOption == 'no') { $noCount++;
    } else { $otherCount++;

    }
  }
}

```

I used PHP to fetch my vote page and results for voting and I also used a loop to count the vote option as you see in the screenshot I used a table, chart, and percentage to display my voting results so I used data points for my chart and a javascript connect my ids for my result to php to display the result in the chart, I used the same process for the table I have selected the field to be seen in the table and also percentage to count the total vote for yes no and othe

```

}
// my data for chart
$dataPoints = [
  ['label' => "Yes", 'y' => $yesCount], ['label' => "No", 'y' => $noCount], ['label' => "Other", 'y' => $otherCount] ];
?>

<!-- my container -->
<div class="container">

  <a href="vote.php" class="section">
    <!-- this is button where displaying my question for vote -->
    <button type="button"
      style="background-color:#e0e0d1; height: 40px; width: 100%;">?>Question Voted
    <?php echo $currentQuestion; ?></button>

  </a>

  <!-- my chart -->
  <div class="CHART-section section">
    <div style="height: 200px; width: 200px;"
      class="chartContainer" data-points='<?php echo json_encode($dataPoints, JSON_NUMERIC_CHECK); ?>'></div>
  </div>

  <!-- my table-->

  <div class="TABLE-section section">
    <table border="1">
      <tr>
        <th>First Name</th>
        <th>Last Name</th>
        <th>Vote Option</th></tr>

    <?php
      $votesResult->data_seek(0);
      while ($vote = $votesResult->fetch_assoc()) {

```

```

<?php
    $votesResult->data_seek(0);
    while ($vote = $votesResult->fetch_assoc()) {
        echo "<tr><td>" . htmlspecialchars($vote['fname']) . "</td>"; echo "<td>" . htmlspecialchars($vote['lname']) . "</td>";
        echo "<td>" . htmlspecialchars($vote['vote_option']) . "</td></tr>";
    }
?>
</table>
</div>
<!-- getting my % for yes, no , and other / counting them -->
<div class="PERCENTAGE-section section">

    <p>MY TOTAL VOTES: <?php echo $totalVotes; ?></p><p>Yes: <?php echo $yesCount; ?></p>
    <p>No: <?php echo $noCount; ?></p> <p>Other: <?php echo $otherCount; ?></p>

    </div>
</div>
<!-- message if there is no result -->
<?php
    }
    } else {echo "<p>No results founded.</p>";
}
?>
</form>
</div>

<script src="https://canvasjs.com/assets/script/canvasjs.min.js"></script>
<script>

<!--javascript for chart -->
window.onload = function () {

    var charts = document.querySelectorAll('.chartContainer'); charts.forEach(function(chart) {

        <!-- message if there is no result -->
        <?php
            }
            } else {echo "<p>No results founded.</p>";
        }
        ?>
        </form>
        </div>

        <script src="https://canvasjs.com/assets/script/canvasjs.min.js"></script>
        <script>

        <!--javascript for chart -->
        window.onload = function () {

            var charts = document.querySelectorAll('.chartContainer'); charts.forEach(function(chart) {

                <!-- Using CanvasJS with the parsed data displaying the chart by its requirement -->
                var chartData = JSON.parse(chart.getAttribute('data-points')); new CanvasJS.Chart(chart, {
                    animationEnabled: true, theme: "light2", title: { text: "My Voting Results" },axisY: { includeZero: true },
                    data: [{ type: "column", dataPoints: chartData }]).render();
                });
            }
        }
    }
</script>
</body>
</html>

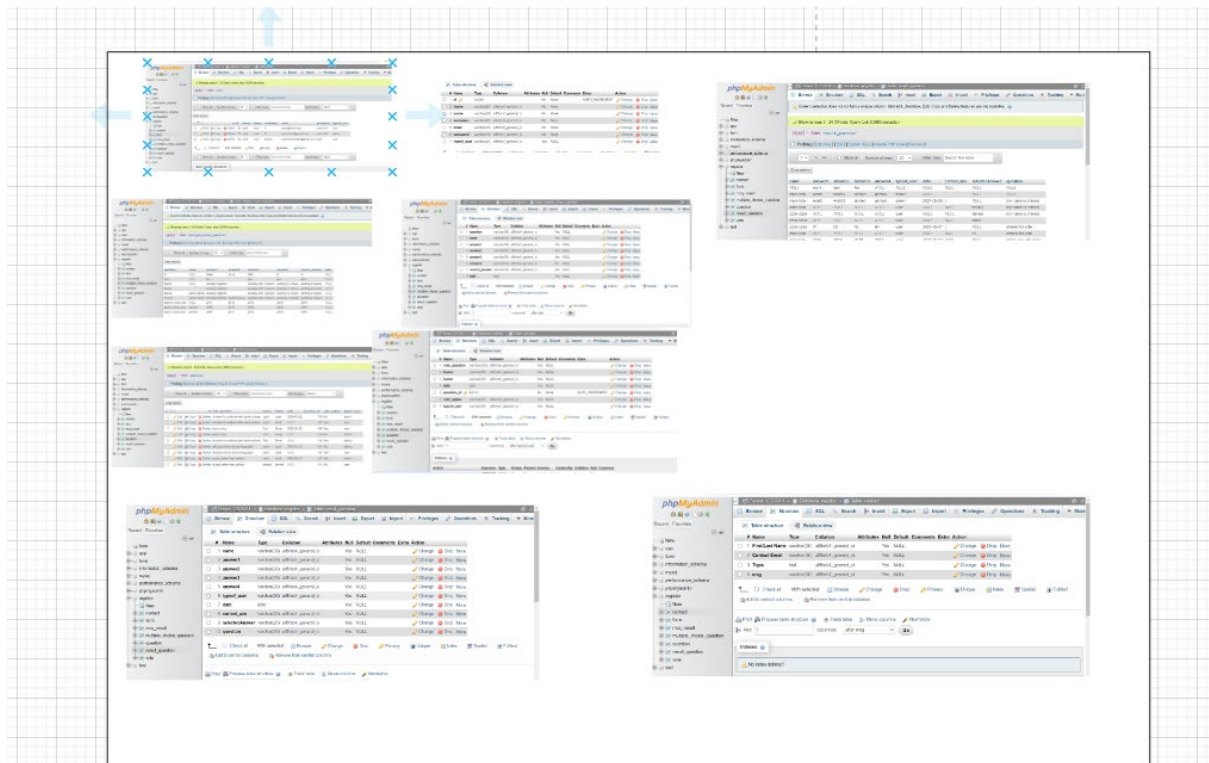
```

The reason the report page was done is to allow the employer to see the employee's feedback in a very quick way and see what is better for the company and what the employees want for new changes or anything else.

## 10.4. Graphical User Interface (GUI)



Database :



## 10.5. Testing

### Sign Up

TEST	DESCRIPTION	TEST DATE	EXPECTED RESULT	ACTUAL RESULTS	PASS/FAIL	COMMENTS
Input field	Should input field	12/05/2024	The field hovers different colours you can input fields	When I hover over my fields it changes colour, and I can input my details	PASS	SUCCESSFULLY
Submit button	The form should submit details to sign up	12/05/2024	Successfully submitted	Successfully submitted	Pass	succussed

### Login page

TEST	DESCRIPTION	TEST DATE	EXPECTED RESULT	ACTUAL RESULTS	PASS/FAIL	COMMENTS
Input email	Should input field email	12/05/2024	Once the user inputs the email and password it will bring the	Homepage	PASS	SUCCESSFULLY

			user to the home page			
Wrong email or password	Enter a random password or email	12/05/2024	Pop message invalid detail or it should not login	Did not login	Fail to login	Not successful in login

#### Question for vote

TEST	DESCRIPTION	TEST DATE	EXPECTED RESULT	ACTUAL RESULTS	PASS/FAIL	COMMENTS
Toggle the button to add a question	When admin toggle this button the form for the question should be displayed	12/05/2024	Click to display the question	Question for vote displayed	PASS	SUCCESSFULLY
Input in the form	Click the field and add a question	12/05/2024	Add question Submitted successfully	Submit successfully	pass	successful
Choose option /select	Users allowed to select the option	12/05/2024	Submitted option any option	Allowed to select any of the options	pass	success
Allowed to input field when selecting "other "	When selected other a field should be displayed	12/05/2024	Input or specify different	Allowed to input field and allowed me to write	pass	success
Submit button	Submit questions for a vote	12/05/2024	Submitted question message for success	Submitted successfully	pass	success

#### vote page

TEST	DESCRIPTION	TEST DATE	EXPECTED RESULT	ACTUAL RESULTS	PASS/FAIL	COMMENTS
Able to see question	The question can be view	12/05/2024	New questions can be viewed	Able to see question	PASS	SUCCESSFULLY
Input in the form	Click the field and add your detail	12/05/2024	First name, last name, type of user	Able to add all the field	pass	successful

Choose option /select	Users able to choose a vote	12/05/2024	Submitted vote successful	All functions are working and able to be submitted successfully	pass	success
The thanking user question disappeared	Question voted system thanking me	12/05/2024	Thank you for your vote	Question submitted thank you	pass	success

Report page

TEST	DESCRIPTION	TEST DATE	EXPECTED RESULT	ACTUAL RESULTS	PASS/FAIL	COMMENTS
Able to see chart	The admin can view the chart	12/05/2024	Chart with result	The chart can be viewed very clear	PASS	SUCCESSFULLY
View table	Admin can view the table	12/05/2024	The table appears as recommended	Able to view table	pass	successful
Admin allowed to view all the votes yes, no, and other and total	Admin can view all vote viewed vote	12/05/2024	Can view the vote in %	Viewed vote total in %	pass	success

Nav bar/logout

TEST	DESCRIPTION	TEST DATE	EXPECTED RESULT	ACTUAL RESULTS	PASS/FAIL	COMMENTS
Able to navigate through a different page	View all pages	12/05/2024	Success I can view all pages	Using the navbar I can move to different pages	PASS	SUCCESSFULLY
Able to move to the contact link in the footer	When clicking the link in the footer on the homepage I can go to the contact page	12/05/2024	Moved to contact page	Success has access to the contact page in the footer	pass	successful
When I want to enter pages admin has access	Pop prompt to enter code for some pages	12/05/2024	Please enter the passcode to gain access	Asking me for code	pass	success

## 11.0 Conclusions

Every manager and employer needs their employee's feedback or what their employer and workers suggest and more consider staying and making their work more enjoyable, preferring to create such applications to help them out there to get the employee worker feedback and working together, now day most manager and employer need website and application to do their jobs quicker and get the job done quickly, it will be difficult for an employer to make and bring some changes to the company which they may need in time of getting what might this best solution for the business inspect of their employee taught decision, staying together making a decision together can bring a very positive result to the company, the employer may suggest URVote casting web-application to get feedback by the report using this web application they can be more flexible and choose to make up a decision more quickly for any new changes so URVote is they way out your vote will be your wish.

## 12.0 Further Development or Research

To develop my web application I could add more to web application and make it more professional I could add new pages with different functions I could add more style to my pages even and could add a table on a page where all employees to see the vote and vote I ci would of make an option for my vote question where I could allow who wanted to vote and whom I would prefer to access the vote

which I could apply the same pages and allow the employer to add more than admin to see report pages, I would do a small video and inputted on the home page for user to learn more about the website as sometimes it better so user can enjoy to learn more about the website watch video instead of going through every page and see what each page do, they are all what I would consider my self for further development and research on is next to make my increased and attract more employer to see it.

## 13.0 References

In my project, I have links to my pages on every page,

Github :

[ahmedozair/URVote-Web-Application \(github.com\)](https://github.com/ahmedozair/URVote-Web-Application)

Here is the link to my repository URVote-Web-Application

[Login](#)

Also included a link to the website.

[ahmedozair \(github.com\)](#)

link to my GitHub

Link to uses cases :

  
design and  
architecture.drawio

  
ALL usecase.drawio

  
USECASE.drawio

[USECASE.drawio - draw.io \(diagrams.net\)](https://draw.io)

## 14.0 Appendices

### 14.1. Project Proposal



National College of Ireland

Project Proposal

Computing Project

17/11/2023

URVote Web App

Software Development

2023/2024

Ahmed Ozair Chakari

X20447226

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## Contents

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## 15.0 Objectives

The objective of my software project is to create a web application that uses new techniques for voting, the Web application will allow the user that voting can be done quickly and simply from anywhere at any time using Chrome, Edge, Firefox and Google. I believe this will enable the user to vote from the laptop from home and anywhere as far as they have a network. The project aims to make admin/ manager gather the employee's thoughts and what they want for new policies or new changes in the company. The administrator inputs queries or arguments into the system. Staff members are then able to vote with a yes or no response. For each argument, a voter can only post a single vote. Every single vote cast is kept on file in the database for that specific argument. The system counts the total votes then the process of voting on the argument provides to administrator with a brief report on it. As a result, the app supports the organization in gathering accurate employee feedback for the company. My goal is to develop this application a high-quality web app that can be used anywhere for voting, the web application hopes to reduce situations where managers going or having depression on new changes this URVote will release the depression and give feedback from the employees very quickly.

## 16.0 Background

The college requires final year students to develop an application, websites, or any other requirement so as a student, it is my final year project the reason to develop this project. I chose to undertake this project to help managers, employers and administer who are working in business companies and other company to help them to see what their staff want or their ideas on anything or any issue that they want to get their feedback if an admin in a company which has more 400 staff want to come with new ideas to change the policy instead of him/her to go or send email to the employees in the company, he/she can use the application and can know their employee's feedback easy and simple way. Therefore, I believe this URVote Web application will bring more advantages for companies and aid them and their workers.

Additionally, it is more convenient for everyone to vote for changes in the company using a web application rather than taking time to send the vote to the administrator, which makes their job a lot simpler. Furthermore, it provides the employer with a total count report, which can assist the administrator in understanding staff feedback, which is something I believe is important for an administrator to understand and know their employee's ideas in everything.

I am hoping to design this project to make their job issue easy for them by utilizing this application, which will help many business firms out there and any other sector that needs this type of application to receive their worker feedback in any argument.

## 17.0 State of the Art

There is an existing Web application which I have linked to that application in technical approach but it is not the same as mine because it will be utilized by administrators, managers, and employers for any company; also it will be unique in that it will feature an administrator who can ask questions concerning employee voting, and I will be using new methods to make voting easier for the staff to use and work. Additionally, it will be different because my application will collect all the data for the administrator, count the total number of votes, and provide the admin with a report at the end that will resolve all issues for the employer and provide the admin with all the information they need to

My web application will be designed to be eye-catching and unique, and I may incorporate security and privacy features. For instance, the report will only be accessible to the administrator and not to voters, and only the admin will be able to add queries for votes. Once the app is developed, I will make sure that every function is clear.

## 18.0 Technical Approach

It will be a Web application system for all web browsers, so I will be using Notepad ++ to develop it. I intend to use Java, which I am more familiar with than any other programming language. I will identify all the requirements while I am developing the application as that will be the time when I will face all issue which arises. The application will allow an admin to choose any queries and a topic so that the workers can vote. The admin then wants to get the result with a report of the casting voting, to make it easy to follow the voting system, I am going to initially plan to construct a class diagram for my app and then extend it with an ERD diagram. After that, I will start my project and work through all the requirements step-by-step, using my class and ERD diagrams as a guide.

I researched my ideas and my project although there are a few application websites that are used for voting where there are votes for the county, countries which mine will be used for business, company, staff workers etc some applications are paid and also will not be simple than this website and they also do not give feedback which this will, therefore are few web application that has similarity such login, the below are some website is used for voting.

I'll be using Notepad ++ as Principal libraries, and I'll be implementing them with MySQL for the primary database and Java for the application. The crucial algorithms are those for programming the application; I'll dissect it piece by piece, employ my diagram, and adhere to my plans after using all the qualifications. This web application also requires a network or 4G to use and you need to staff workers in the company where the admin user is aware of

the user. I might also go further to search more to make this web application very standard and I may later an App of it.

## 19.0 Special Resources Required

HTML Bootstrap, CSS, Python and MySQL.

## 20.0 Project Plan

	A	B	C	D	E
1	Task Name:	Duration	Start	Finish	
2	Project Idea	week			
3	Project Pitch video			19/11/2023	
4	Project Proposal	ongoing	08/11/2023		
5	Starting Proposal		08/11/2023		
6	Reflective Journal	1 day	24-Oct-23	25-Oct-23	
7	Reflective Journal submission		25/10/2023		
8	Project Proposal submission	two weeks		21/11/2023	
9	Creating few WireFrame	weeks			
10	Reflective Journal		28/10/2023		
11	Reflective Journal submission	3-4 days		01/11/2023	
12	Creating use cases	5 days	22/11/2023		
13	stating Technical report	8 days	05/12/2023	13/12/2023	
14	starting Midpoint preparation	ongoing	18/12/2023		
15	creating power point slide	1 day	19/12/2023		
16	preparing for presentation		02/01/1900		
17	Recording persentation	1 day	22/122023	22/12/2023	
18	Demo	3-4 days	17/12/2023	22/12/2023	
19	Midpoint submission	1 day		22/12/2023	
20					

Focus	TimeLine	Deadline
Downloading all the software that is needed/starting wireframe/completing ERD Diagram /choosing what language I may use. /	6-10days	30/11/2023
Start project	10 days	10/12/2023
Continuing with my pages and designing	25-30 days	10/01/2024

principle / adding login authentication /Developing a dashboard that allows the admin to add the issue or any topic /voting interface giving an action button for the dashboard/login in detail username and password		
Finalising all votes and gathering all the information in the database	15-20 days	28/02/2024
Add the report to give information to admin back of casting votes	15-20 days	15/03/2024

Reflective journal :

#### Supervision & Reflection Template

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<b>Supervisor</b>	Frances Sheridan

**Month:** October

#### What?

Reflect on what has happened in your project this month.

I noticed that my project idea was rejected, but I saw that after I submitted my previous reflective journal, so I am having my October reflective journal here. I searched and came up with another few ideas to be done for my project. I spent researching different ideas, which was to develop a car website before I made my pitch video. I also had a meeting with My supervisor, and she advised me to come up with different ideas because there are a lot of car websites and that's what changes I will if I do the car website. She helped and talked to me about what kind of websites I like and what prefer most apps or websites., She provided me with two options for my project, using my interests as inspiration and that which can help me to choose one.

#### So What?

Consider what that meant for your project progress. What were your successes? What challenges remain?

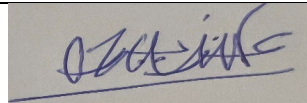
The challenges that I faced were that I had to come up with a new idea for my project, and I had to do my pitch video again along with my proposal.

**Now What?**

What can you do to address outstanding challenges?

I chose one of the ideas that my supervisor introduced to me, I did good research on the idea that I chose and settled myself for my project, I created a new pitch video and I also started my proposal again.

**Student Signature**



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**Month:** November

**What?**

Reflect on what has happened in your project this month.

I decided to choose a voting system application for my project. I completed and sent in my proposal, submitted my pitch video, and attended my supervisor's weekly meetings. For my application, I made a frame/ layout, an ERD Diagram, and a class diagram. I downloaded the software I would need for my project and decided to choose the language to develop my project.

**So What?**

Consider what that meant for your project progress. What were your successes? What challenges remain?

The success: I finished my pitch video, proposal report, ERD Diagram, Class Diagram and Frame/ Layout for my project.

My challenges are:

How will I develop my project and what software can I use for my application?

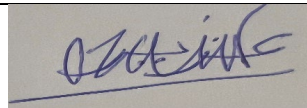
What language may I use for my front and back ends?

**Now What?**

What can you do to address outstanding challenges?

I can develop my proposal and add more to it, also following the feedback that I get from my supervisor and working through my weakness part.

**Student Signature**



<b>Supervision &amp; Reflection Template</b>
--

<b>Student Name</b>	Ahmed Ozair Chakari
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<b>Course</b>	Computing
<b>Supervisor</b>	Frances Sheridan

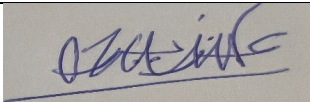
**Month:** December

**What?**

Unlike other months this month I was quite busy working with the CAs and Exam TABAs, with the Computing Project Module and another module too, I did finish my midpoint and submitted it, which was worth 25% overall and I have done the following this month,

- Presentation
- Proposal
- Planning for Project



<ul style="list-style-type: none"> <li>• Technical Report</li> <li>• Use Cases Diagram</li> </ul>	
<p><b>So What?</b></p> <p>Consider what that meant for your project progress. What were your successes? What challenges remain?</p> <p>The challenge that I faced this month was to finish all my midpoints I tried to complete most of the requirements for the midpoint submission.</p>	
<p><b>Now What?</b></p> <p>What can you do to address outstanding challenges?</p> <p>Starting the front end of my project, which I have planned and executed in February and January and am eager to complete as much as I can, which is my next task in January.</p>	
Student Signature	

### Supervision & Reflection Template

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Course	Computing
Supervisor	Frances Sheridan

**Month:** January

**What?**

Reflect on what has happened in your project this month.

This month, I got a few days off after completing my module exam. I next went back to my computer project, which I have been gradually building and developing. I am working on the project's front end. I have begun coding and have made it clear to myself what needs to be done next. I have created a page with a navigation bar and other pages linked to it, but I have not added any content yet. I also created sign-in and registration icons, which I need to fix to enable them to function. I will be continuing working on all of my front-end pages through February and will proceed more to implement my web application.

**So What?**

Consider what that meant for your project progress. What were your successes? What challenges remain?

The success: I believe that starting a project and trying to do something which it includes your project itself is a success, though now as I said creating the navigation bar with pages in it and signing in and registering is what I am doing now and will be going furthermore in commons weeks.

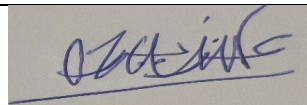
My challenges are: developing so far I have gone through challenges getting my nav bar the I want which took time and adding my logo and styling my web application now.

**Now What?**

What can you do to address outstanding challenges?

As of now, my challenges are to get my registration, login, and sign-up working and test them for someone to go to my web application they should be able to log in and create or register to the web I will continue to complete this challenge and test my web registration will allow me to know that I have the pages whether it is functioning or not functioning if in case if it is not working I need to find the solution to make function

**Student Signature**



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**Student Name**

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**Month:** February

**What?**

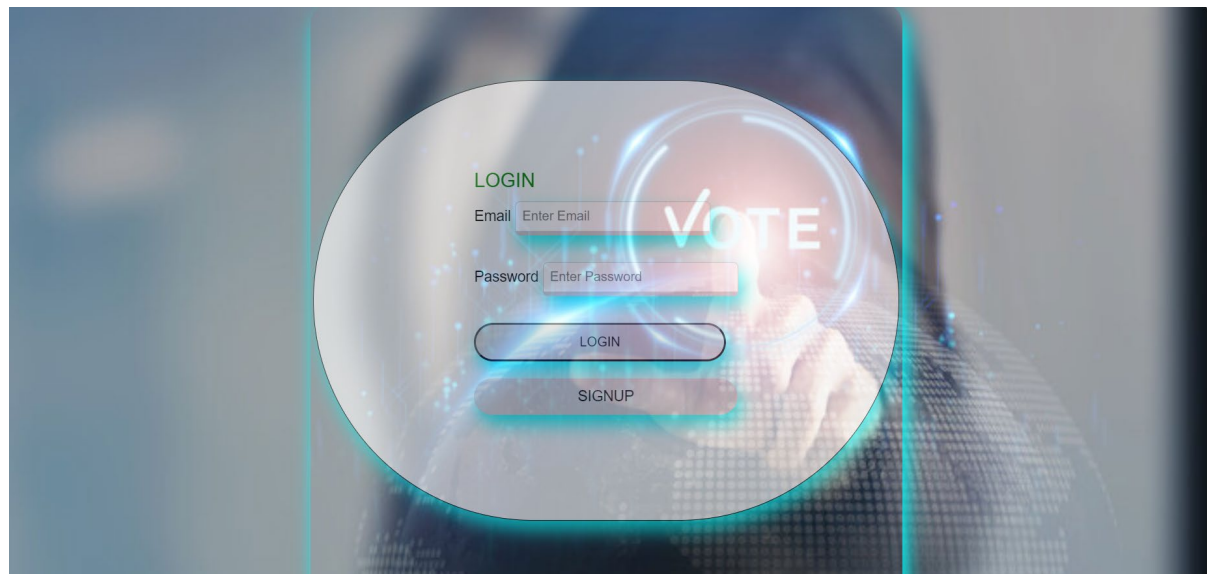
I developed my sign-up, login, contract, admin, vote, setting, and user pages in Visual Studio and I also connected my register and login pages with my MySQL. I am still working on all my pages to input more functions and fix errors that I get unlike other months this month I was more focused on my Computing Project modules and will continue working on my web app. I also had meetings with my supervisor weekly.

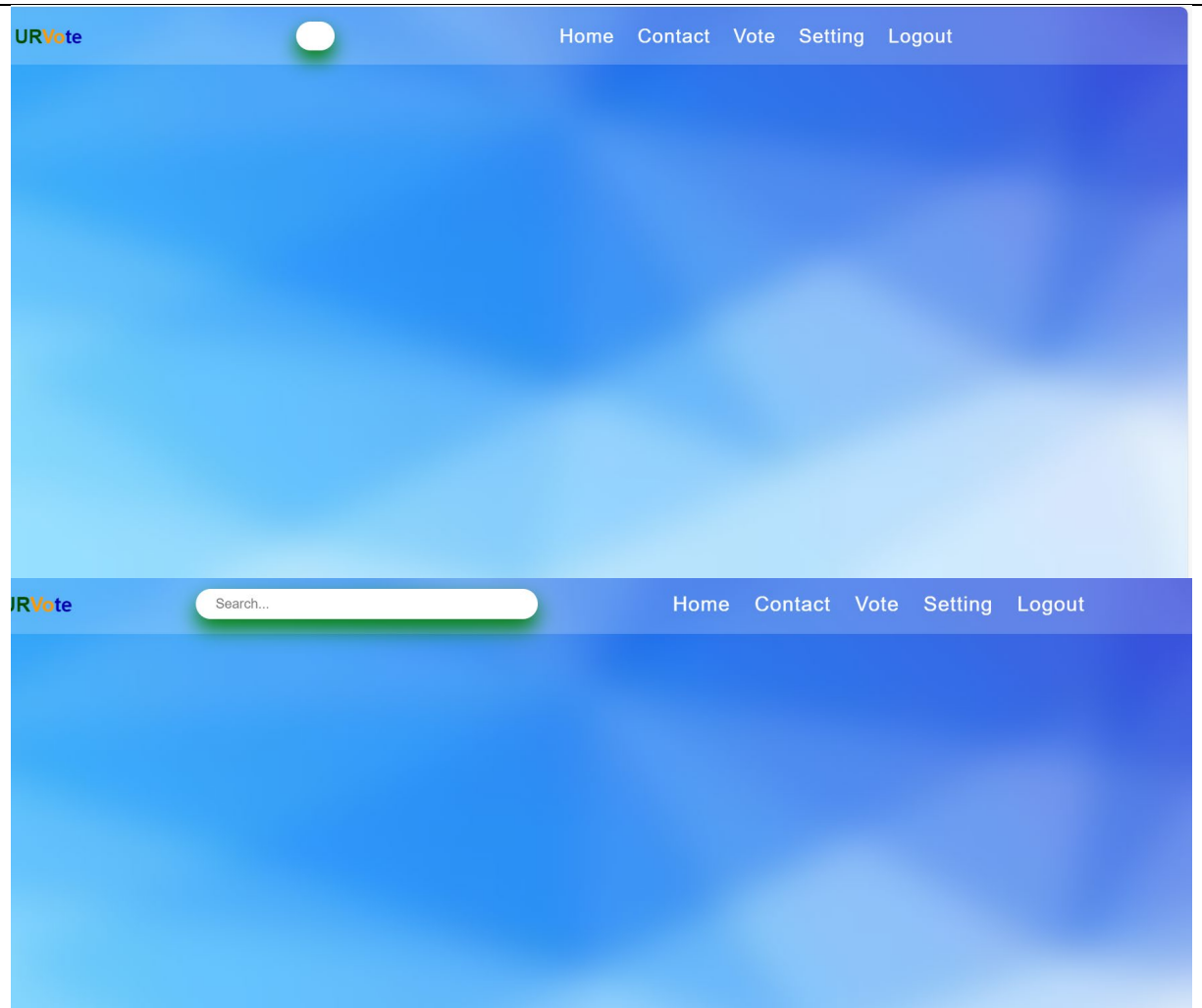
**So What?**

Consider what that meant for your project progress. What were your successes? What challenges remain?

The challenge that I faced this month was getting errors on my pages and having a connection with the database, which took a lot of time and let me focus on the project, there are more challenges left and remain that I may face on the voting page. I aim to get the vote page working with the result in a report therefore why I may face more challenges in the next common month.

screenshots.





### Now What?

What can you do to address outstanding challenges?

Developing my website front was interesting and difficult but also enjoyable for me. I am trying my best on my project ahead, I want to say that I started my project now I feel that I have something which I need to do as homework, I am more interested in working on a project than working on my other modules. I am now challenged on the vote page where I need an admin to input questions for users and then get the result on report pages.

**Student Signature**

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**Month:** march

#### **What?**

Finishing question page  
Create a form.  
Create a table  
Used PHP to connect my form with my PHP table database  
Creating a function to send my vote to vote page

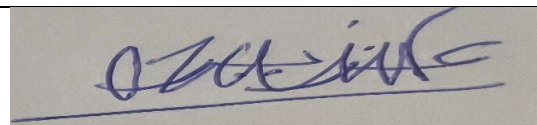
#### **So What?**

The question is submitted by Dmin for a vote  
The user can vote once  
Getting message vote submitted

#### **Now What?**

Research how to find solutions to get results in the chart, table and percentage,  
How to generate a report for the vote question to help the admin understand the vote result

#### **Student Signature**



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**Month: April**

**What?**

After long research findings to view the report on the table,  
Create a report page.  
Selecting my vote\_question using PHP  
Creating a data point for the chart.

**So What?**

Completing receiving results in chart and table

**Now What?**

Working and completing the report page and finishing my project

**Student Signature**

