

Configuration Manual

MSc Research Project
Cloud Computing

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Project Submission Sheet
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Configuration Manual

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1 Introduction

This document contains an overview of the requirements that need to be satisfied in order to properly carry out the project in both the local and cloud-based settings. To get this project up and running on localhost, we will need to satisfy a number of requirements, and in the following part, we will explore how to migrate the application from localhost to the web services provided by Microsoft Azure.

2 Prerequisites

1. Hardware requirements

- (a) Min 2 GB of RAM; 8 GB of RAM recommended.
- (b) Hard disk space: Minimum of 800MB up to 210 GB of available space, depending on features installed; typical installations require 20-50 GB of free space.
- (c) Hard disk speed: to improve performance, install Windows and Visual Studio on a solid-state drive (SSD).
- (d) Video card that supports a minimum display resolution of 720p.
- (e) Visual Studio will work best at a resolution of WXGA (1366 by 768) or higher.

2. Software Requirements

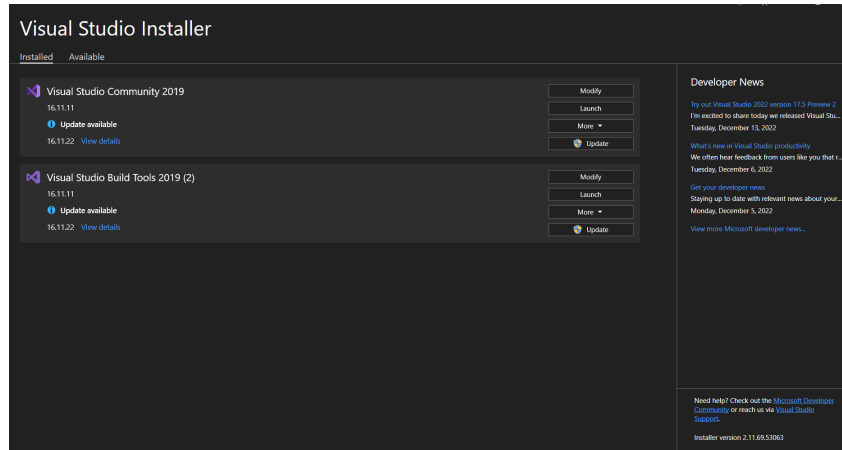
- (a) Visual Studio Community 2019
- (b) Microsoft SQL Server Management Studio 2018

3. Cloud requirements

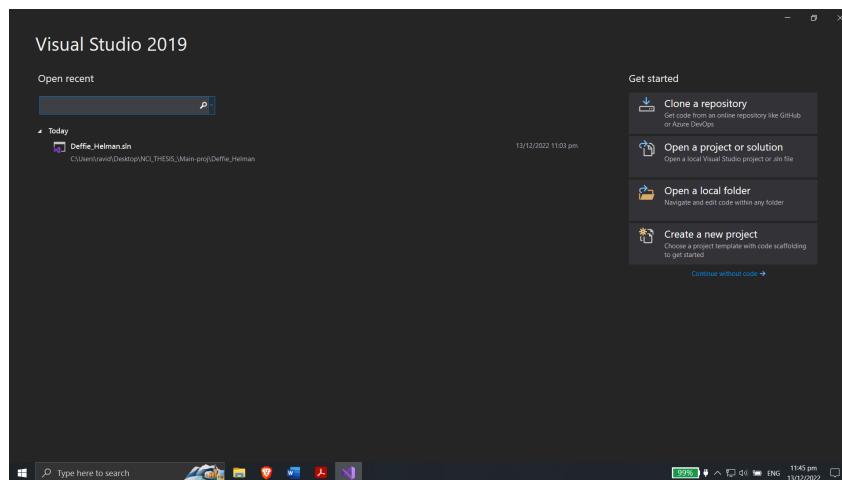
- (a) Azure Cloud Account

3 Implementation on localhost

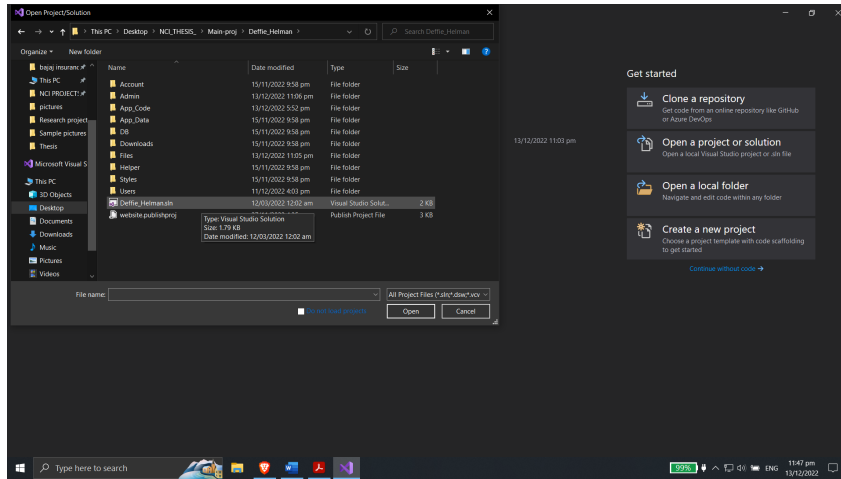
1. Once the visual studio installer is downloaded, the user can click on the install button and after the successful installation, visual studio 2019 can be launched.



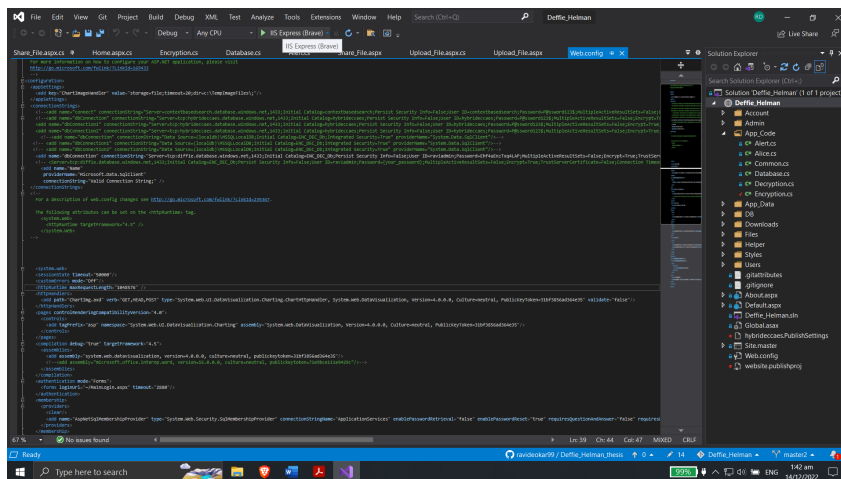
2. Once the application is launched, the user can open the project or solution tab from the right side to open the Project application.



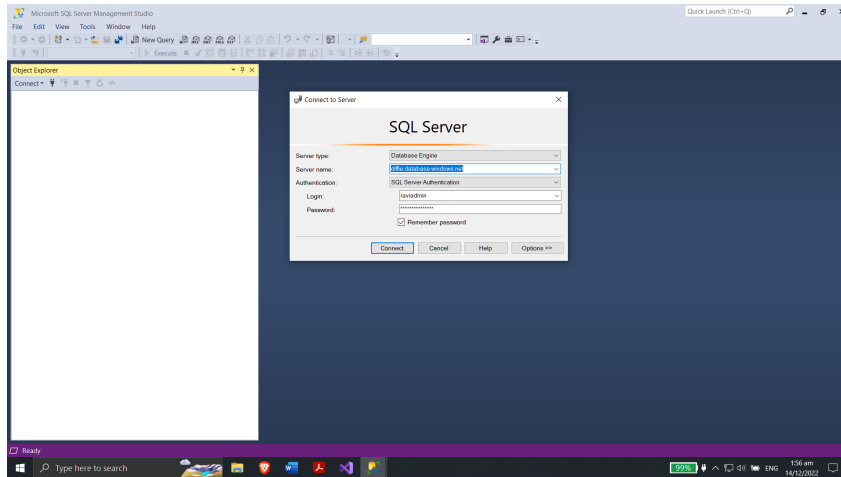
3. After we have extracted the project from the zip file, we will be able to execute the application on the localhost while the database is being deployed on the Azure SQL server.



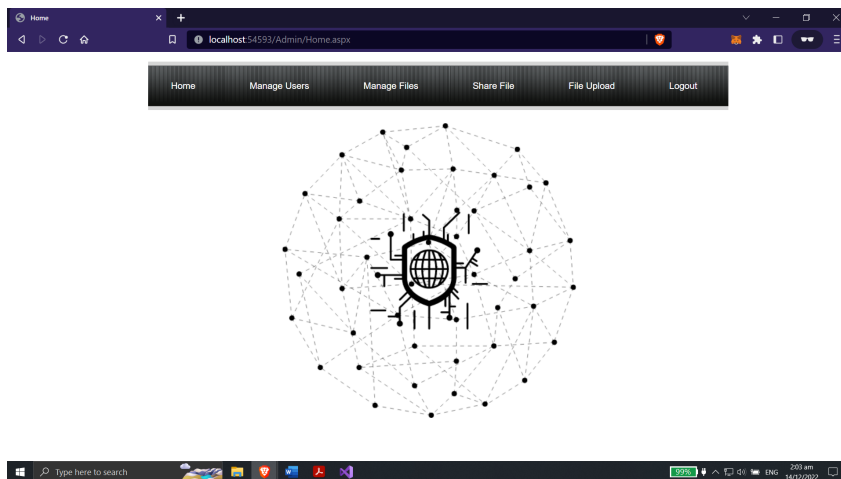
4. Because the program does not rely on any external dependencies, and because Visual Studio includes all of its libraries by default, it is possible for us to immediately begin using the application once the solution has been launched.



5. To begin work on the project, all that is required of us once the solution has been opened is a click on the "debug" button. Since the database is already linked to the SQL server in Azure, there is no need for us to setup the database.
6. But in order to connect to the database, we will need to install Microsoft SQL Server Management Studio 2018, which is required for the connection.
7. Following the completion of the SQL Server Management studio 2018 installation, all that is required of us is to enter our credentials.
8. After the server has been successfully connected, we may, if required, walk through the tables.



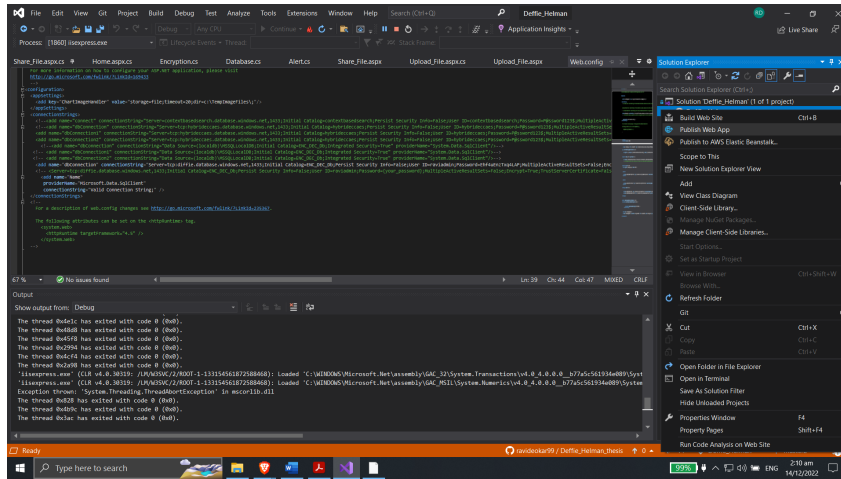
9. Once we've confirmed that everything is operating correctly with the SQL Server, we can go on to debugging the application. The credentials for the SQL server is server name: 'diffie.database.windows.net', login: 'raviadmin' and password: 'Ehf4uEnzTxq4LAP'.



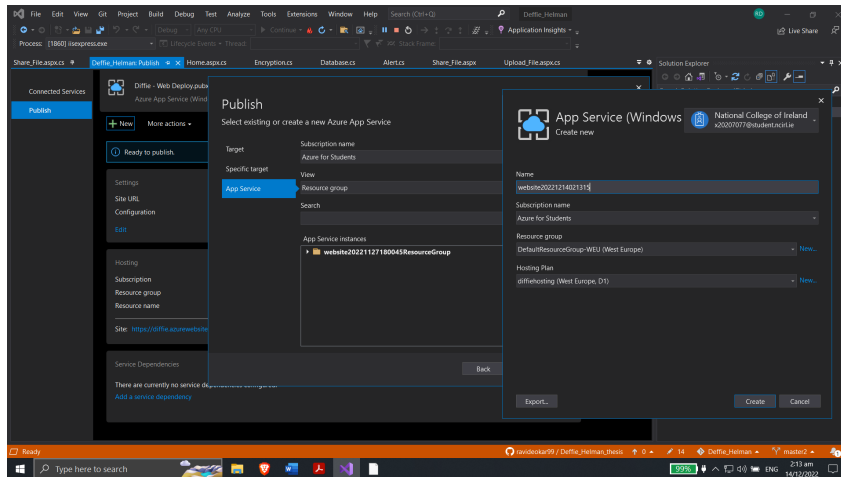
10. Because our application is meant to operate on the cloud, we have to deploy it in the Azure cloud server in order for it to happen. So in the next steps we will deploy the app in the Azure cloud.

4 Deployment on Azure cloud

1. The first thing that we need in order to deploy anything is an Azure account, so when you have logged into your Azure account, follow these steps.
2. Therefore, to begin the process of deployment, we go to the Visual Studio file explorer, pick the solution, and then click the Publish button.
3. The choice will become available, at which point you must pick Azure from the list that appears, and after that you must select Azure app service, which is Azure's deployment service.



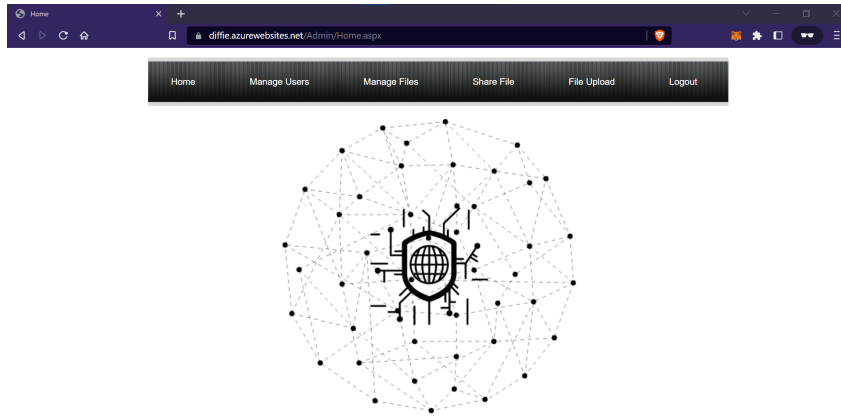
- Following that, you will be prompted to choose a resource group; hence, it is necessary for us to establish a resource group dedicated to the hosting.



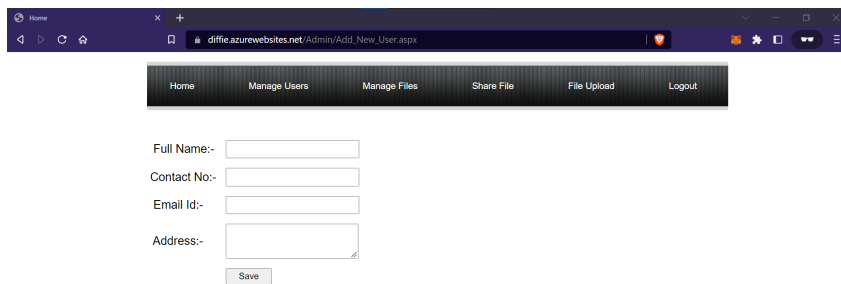
- Following the steps of building and choosing the location for your hosting, choose the app service, and then proceed to examine your application. After that, we are able to launch our site by clicking on the publish button.
- After the site has been properly deployed, we will be able to see the application while it is operating on the cloud servers. The URL that you will see is your application's domain name. <https://diffie.azurewebsites.net>

5 Application insights

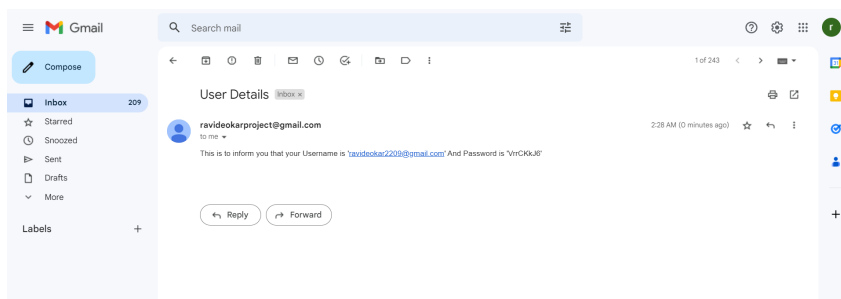
- After successfully logging in, we are able to view the initial page, which is the homepage of the website. The site has been successfully deployed, and we can now begin encrypting our files. The credentials for the login in the admin portal is 'x20207077' and the password is 'x20207077@student.ncirl.ie'
- Multiple options, including "Add a User," "Manage the Files," "Share the Files," and "Upload a File," are shown for us to peruse here.



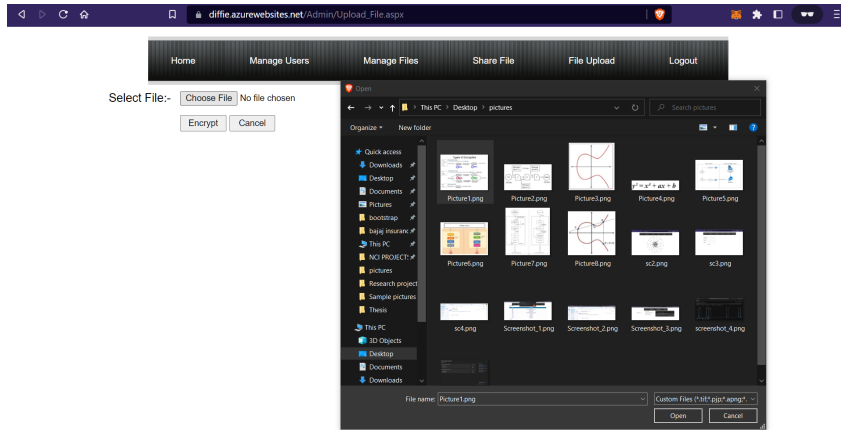
3. Within the manage users page, we have the ability to add a user by simply filling out the required information and the mail ID. At this point, a password is created for the user to use when logging in to the user side portal. Once you have logged in to the user site, you will have the option to change your password.



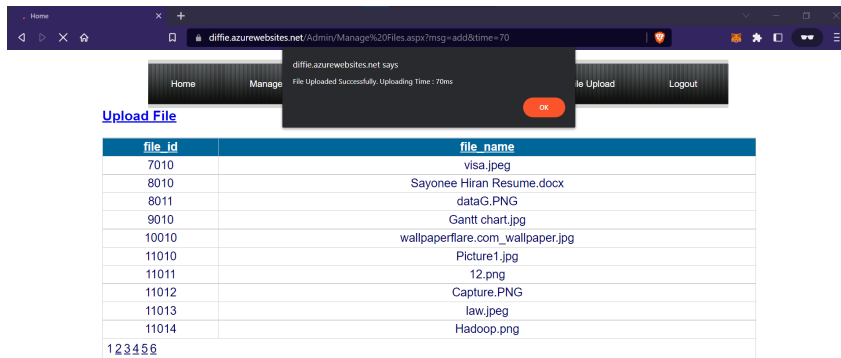
4. Following successful completion of the registration form, an email with the user's login credentials will be sent to the address provided.



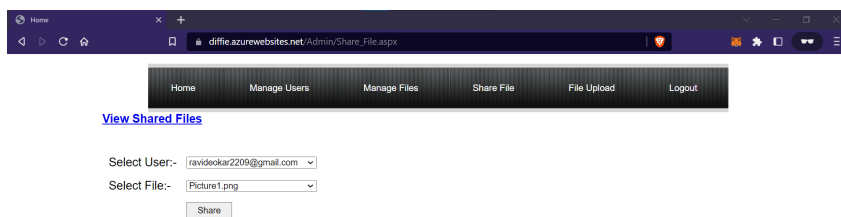
5. We can see the file upload input for the encryption by going to the area labeled "File Upload." The process of encrypting the data begins whenever we upload a new file via the file explorer.



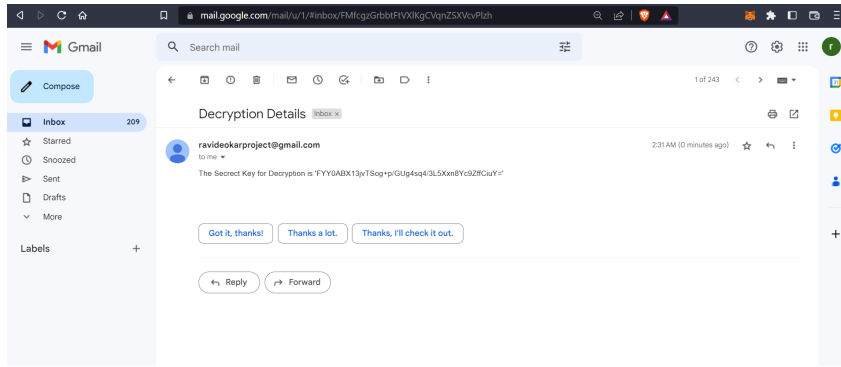
- When the file has been successfully uploaded, a list of files that have been encrypted in the past, beginning with the most recent file, will be presented. It is advised that you upload files that are less than 2 mb in size since the server capacity is limited. The time when the encryption was performed is indicated at the very top.



- We are able to share the ECC key that is created for a file using the Share file menu tab. This key will be shared with the user for whom we previously signed up or with whomever is selected from the drop-down menu.

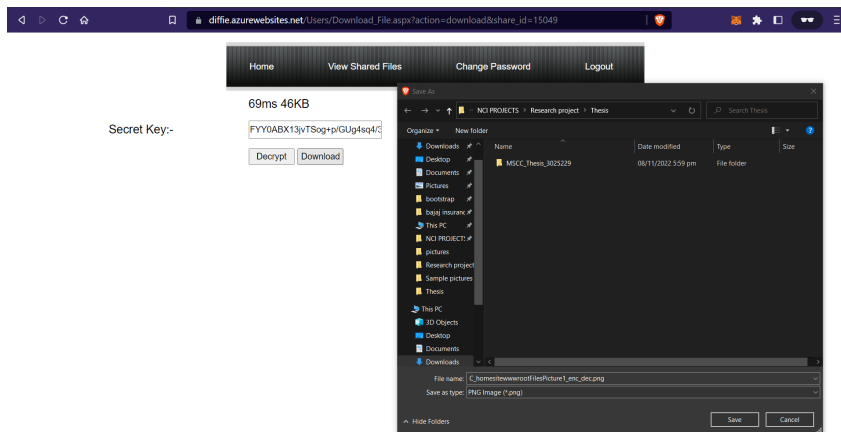


- The key that is shown in the picture is the decryption key for the file that you have chosen to share with others.
- Now that we have shared the file, we may log out of the admin site and utilize the user login credentials that were previously sent to user. These credentials can be found in the original email from earlier.



File Id	File Name	Action
15013	12.png	Download
15015	dataG.PNG	Download
15047	Ravi-Deokar_Grad_CV.doc	Download
15049	Picture1.png	Download

10. After we see the file in the shared section , we just need decryption key which was sent earlier while sharing the file and we can download the file.



References