

Configuration Manual

MSc Research Project
Cybersecurity

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1. Introduction:

The configuration manual is divided into subsections. It will elaborate on the detailed implementation, specification, and working flow of the research project. It will also show what framework libraries are used for implementation. This manual will be helpful for the new researcher to rebuild this user authentication technique in future.

2. Hardware specification:


- a. System name: DESKTOP-ROVFI
- b. Processor: Intel(R) Core(TM) i5 8250U CPU @ 1.60GHz 1.80GHz
- c. RAM: 16 GB
- d. Operating System: Windows 10
- e. System: 64-bit operating system, x64-based processor

3. Libraries Used:

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using System.Data.SqlClient;
using System.IO;
using System.Text.RegularExpressions;
using System.Drawing.Imaging;
using System.Configuration;
```

Figure 1: Libraries


4. Environment Installation:



Visual Studio 2019 16.11.5

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Features:

Figure 2: Visual Studio Installation.

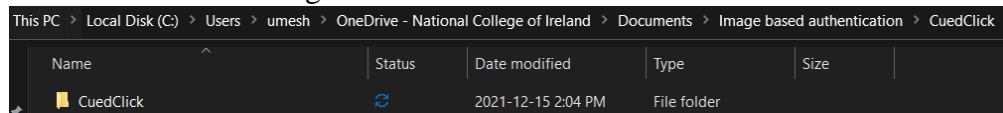


Figure 3: Path

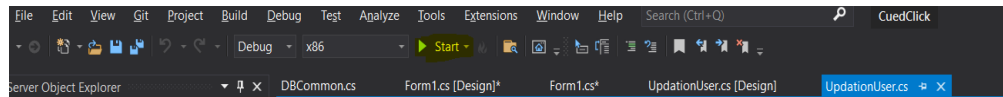


Figure 4: Run the Code

5. Registration Phase:

- User has to enter the username, name, Phone no, and email address.
- Once it done user has to click on register button, if the user has given details are in required format.

A screenshot of a web application window titled "Registration". The window has a red background. At the top right, there is a "Back" link. In the center, there is a white box with the title "User Registration". Below the title, there are four input fields: "Username:" with the value "Umesh00", "Name:" with the value "Umesh Salunkhe", "Phone No:" with the value "0897554689", and "Email Id:" with the value "umeshsalunkhe.ie@gmail.com". At the bottom of the white box, there is a green button with the text "REGISTER NOW".

Figure 5: Registration Window

- c. After click on register button, the image selection option will appear

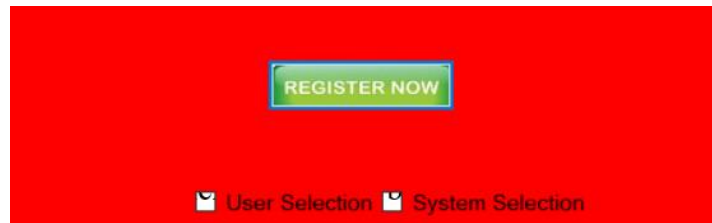


Figure 6: Option for Image selection

- d. The user has to select the option, first the user select, the user has to select from the own system. The window will pop-up with options like Browse, Refresh, Next. Browse button is used to load images from the system and refresh button is used to shuffle the location of click. Next button is used for the save the selected point.

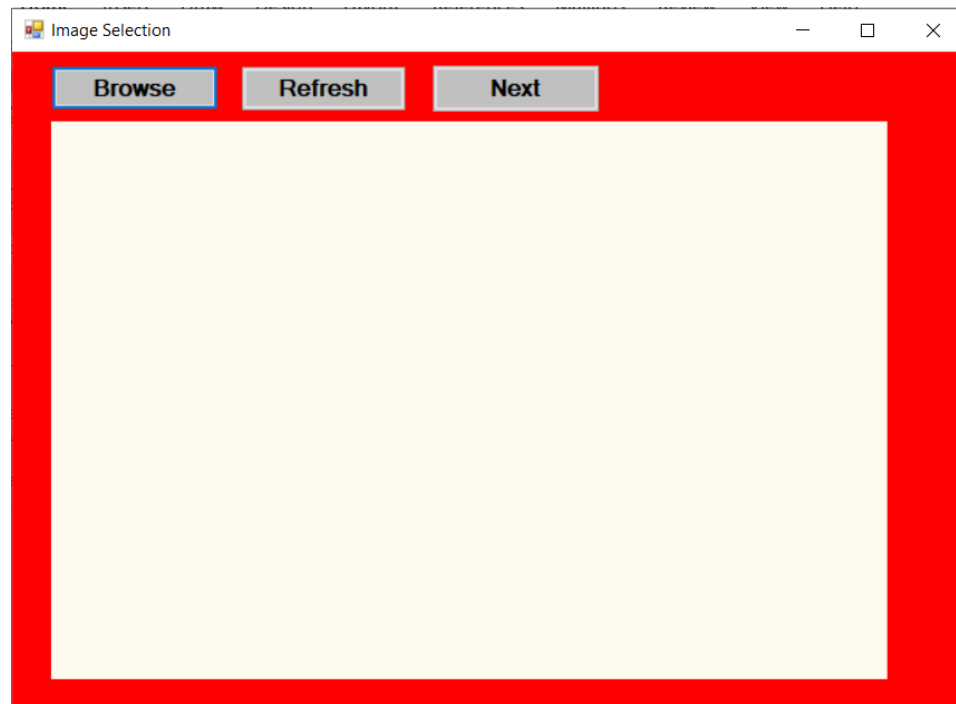


Figure 7: Image browsing window

- e. First image registration, red color box represents the cued click alteration.

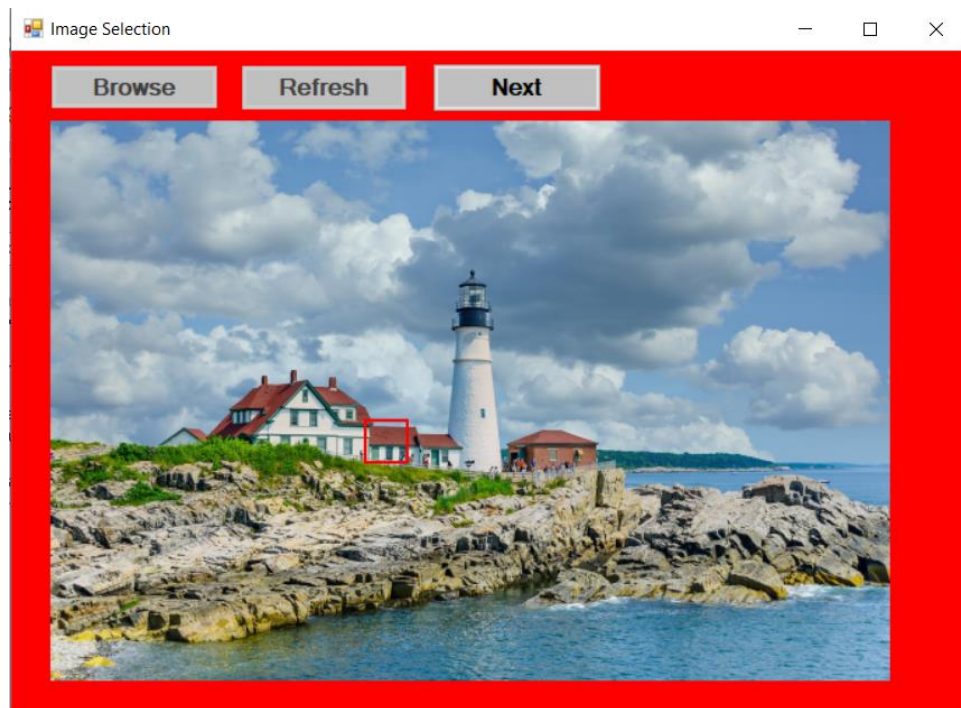


Figure 8: First Image

- f. After the click point is confirmed, the small window will occur as shown in below figure.

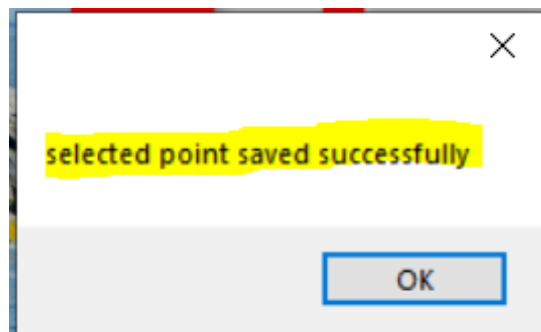


Figure 9: Pop Window for Save click point

- g. The same process will happen with the second and the third image.

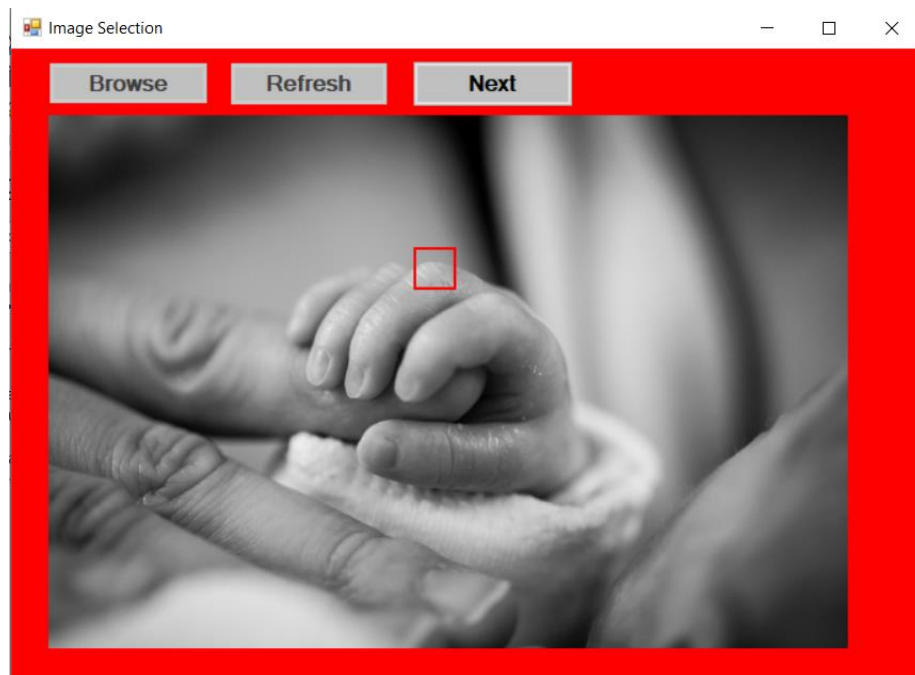


Figure 9: Second Image Registration

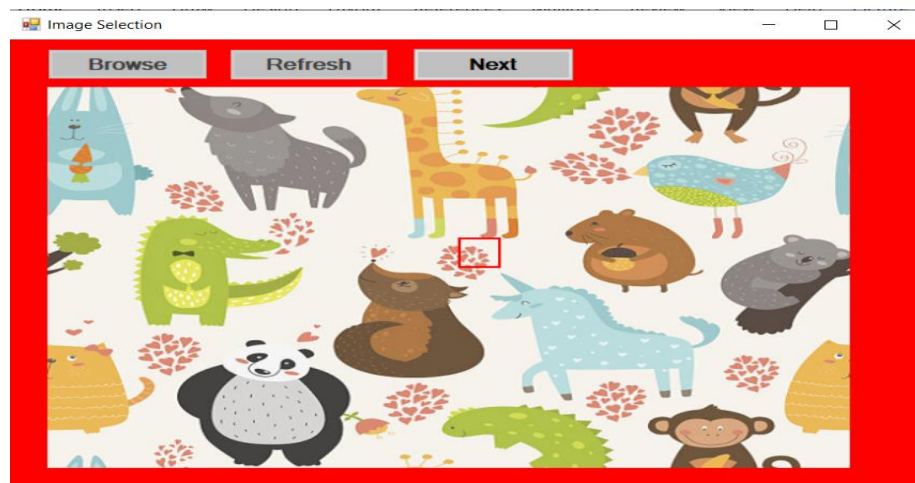


Figure 10: Third Image Registration

6. Login Phase:

- a. The user must enter the username and click on Login button.

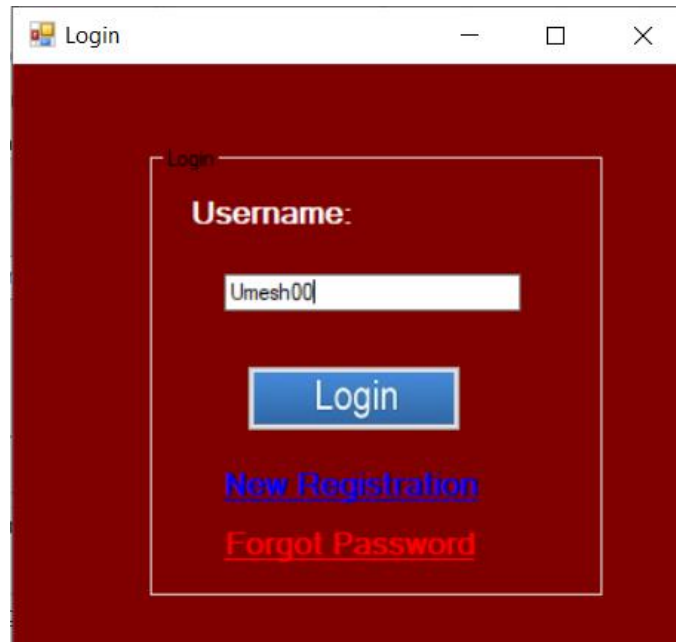


Figure 11: Login Window

- b. After entering the username the user will receive the Binary OTP as shown in figure.

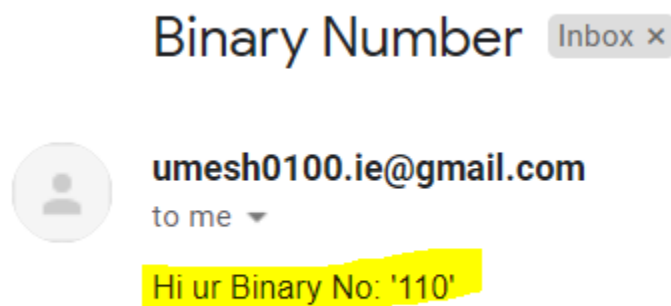


Figure 12: Binary OTP

- c. According to the received OTP, the user must click on the registered images. When the digit is 1, the user must do right click and when the digit is zero, the user has to do wrong click on the image. The OTP is “110” that means (**Right_click-Right_click-Wrong_click**)

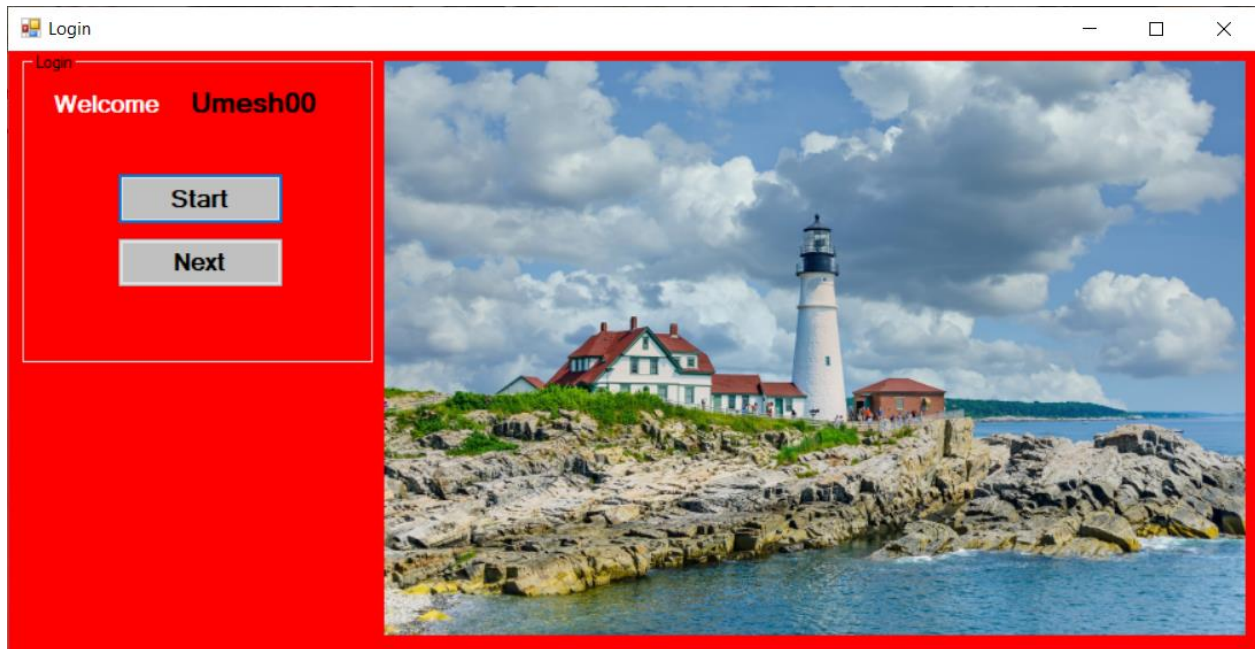


Figure 13: First image Click point verification

- d. The following correct images are occurred because the click has been done according to the binary OTP.



Figure 14: Second image Click point verification

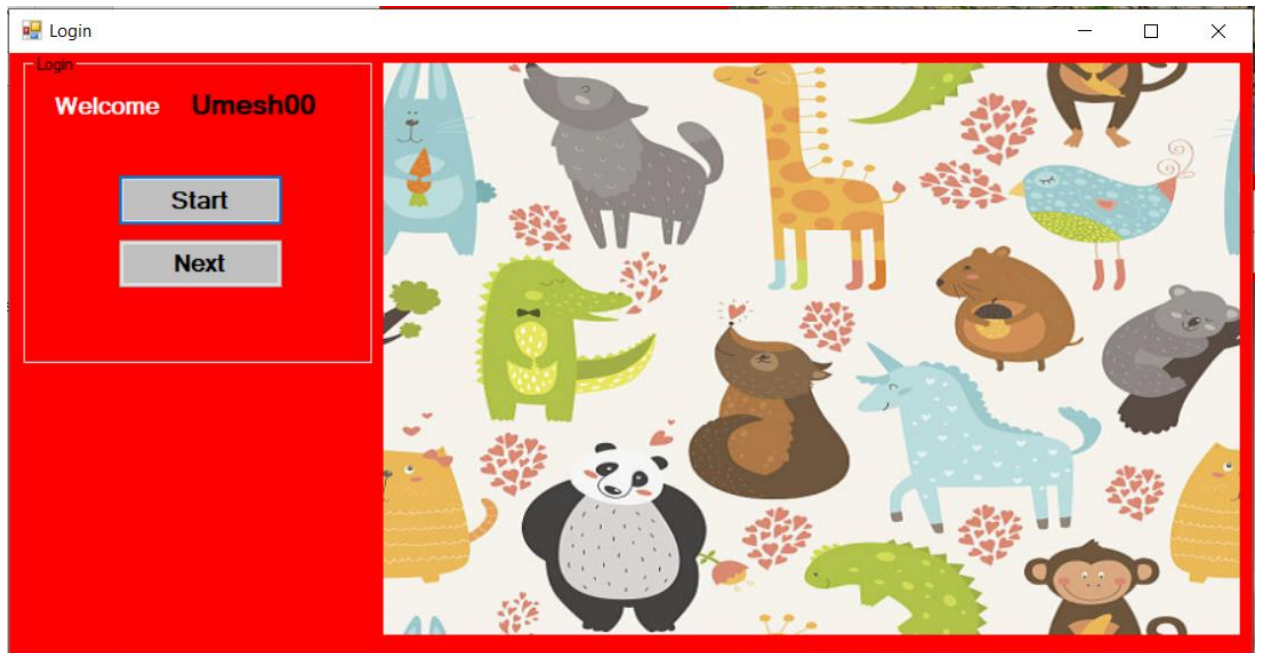


Figure 15: Third image Click point verification

- e. At last, the user performed the clicking activity as per the OTP. Authentication gets successful.

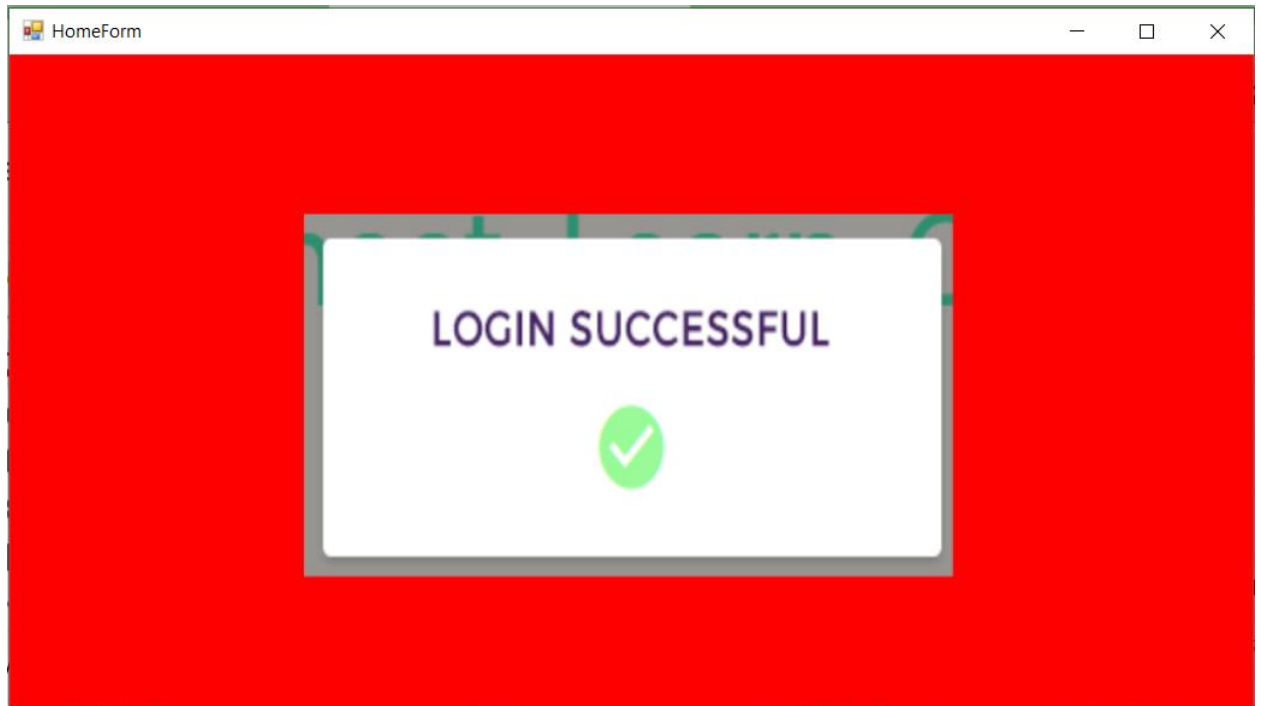


Figure 16: Login Window

- f. Suppose the user click on wrong position or click the region not according to OTP the random image will occur.



Figure 17: Window Occur after wrong click

7. Forgot Password:

- a. When user want to change the click points or user unable to remember the click point. There is a option called “Forgot Password”.

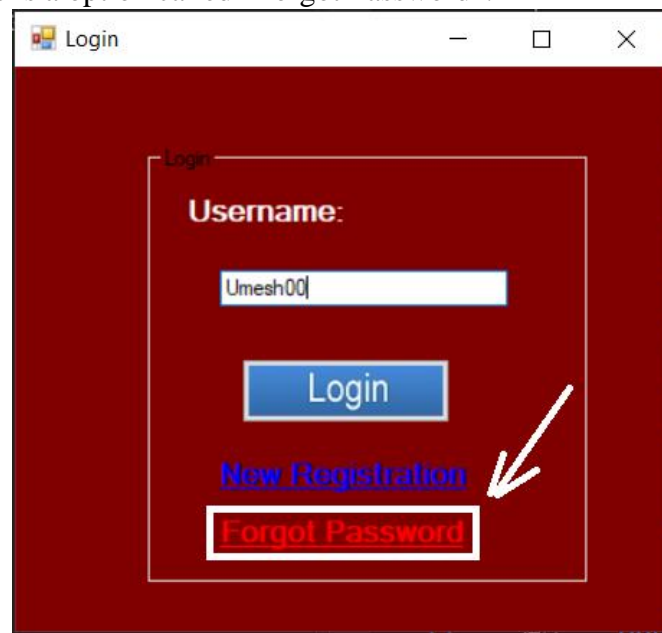


Figure 18: Forgot password Window

- b. When the user click on forgot password, user will received the five digits integer number for authorization.

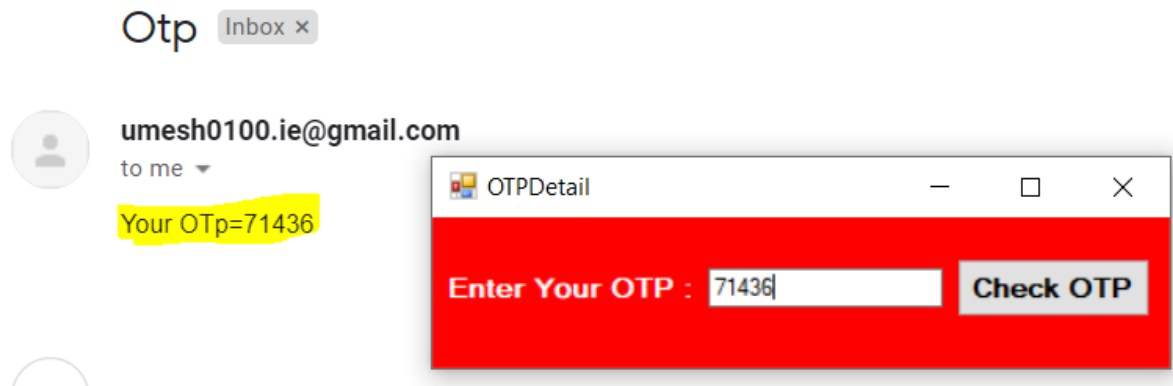


Figure 19: Integer OTP for forgot password.

- c. After the authorization, the new window will appear and user has to fill data data, generate new clicks and images. In short, in this user has to performe sames steps as registration stage.

The image shows a window titled 'UpdationUser' with a red background. On the left, there is a 'New Registration' form with the following fields: 'Username:' (Umesh), 'Name:' (Umesh P Salunkhe), 'Phone Number:' (0897554689), 'Email Id:' (umeshsalukhe.ie@gmail.com), and 'Password:' (represented by dots). A 'Register' button is at the bottom of the form. To the right of the form, there are three buttons: 'Browse Image', 'Refresh', and 'Next'.

Figure 18: Reset Click Window

