SECURE LOGIN AUTHENTICATION SYSTEM

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ABSTRACT:

The security of our data on the Internet is MYTH now a day’s. Regularly we are using lots of services and applications to accomplish small tasks or work. Like converting documents to PDF, and playing online games knowingly / unknowingly we are giving permissions to those apps for accessing our data by using options like the sign in with Google or signing in with Facebook. Most people are not aware that these apps can access all the information available on that particular platform of this user and they can use it for customizing applications and to provide a better experience to the user.In some cases, the app does not require all the information about the user but collects it. And users don't want to share the information with a particular website or app which they don't trust. So to overcome the scenario we came up with a user verification alternative (Secure Login Authentication System). Where the user can provide his full name, mobile number, email address, date of birth, and password. Apart from this, we will not collect any other information so that if that app tries to access the information it will be available on the server. Users who don't like to share their information online can use this alternative (Secure Login Authentication System) to verify themselves and share as much as less data.

1.INTRODUCTION:

Secure Login Authentication System is a web application through which users can create an account and access the applications. Through this users can access any web applications by signing in with this account. usually, nowadays everything is dependent on online regularly we are using many applications so it is difficult to say that our data is protected online. Many of us do not know how the data is being hacked or accessed. Most of the applications access personal information for customizing and for providing a better experience to the user. may everyone be not aware of this? So to overcome this scenario we are using a protected account, instead of using the sign-in with google and sign-in with Facebook users can sign in with this protected account (i.e. EAZY USER) where users will provide their name, e-mail address, mobile number, and password. Apart from this, we will not collect any other information so that if that applies to access the information it will be available on the server.

3.PROPOSED SYSTEM:

As the advancement of technology is increasing gradually, the threat of data to users is also increasing. regularly we are seeing many problems with privacy theft and data hacking. Taking motivation from these conventional systems and their drawbacks and inspiration from the existing system, I decided to develop “EAZY USER”. In the proposed system we are trying to develop a web application that reduces challenges for users to find data protection. We aim at reducing the challenges by providing data protection to the user's account. Here the user can sign up by providing his full name, e-mail address, mobile number, and password. Apart from this, we are not going to collect any personal information. After filling in the required details, it creates an account (i.e.EASY USER). Users can log in through this account and can access any application. Authentication plays a major role in this process authorized only can access the account. This is a protected account there will be no personal information to access through the account except e-mail address and mobile number it cannot be accessed as it is available on the server.

Functionalities Of The Product:

SIGN UP

LOGIN

DISPLAY PROFILE

UPDATE MOBILE NUMBER

RESET PASSWORD

LOGOUT

➢ some of the applications do not require all the information about the user but collects it.

➢ The users who don’t want to share the information with a particular website or app which they don't trust can access through this account.

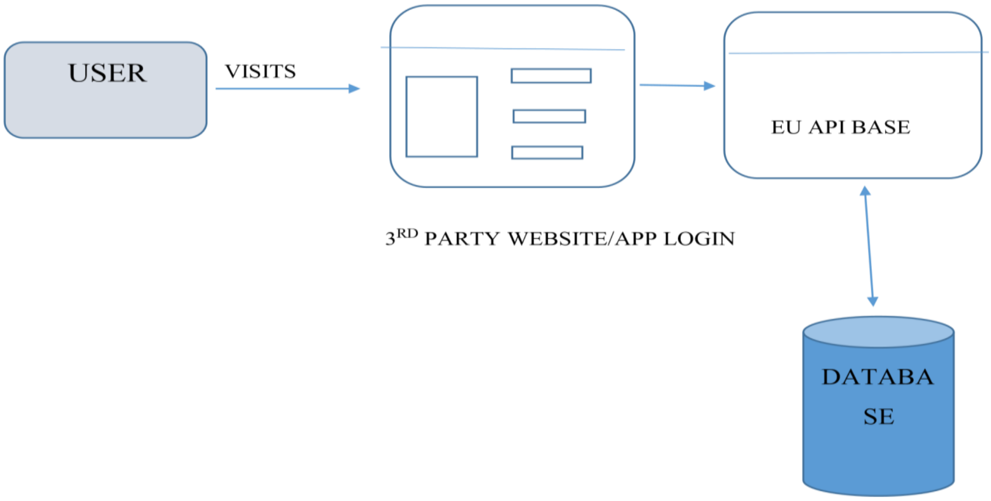
➢ Here the user’s Information will be stored like email-address, mobile number, name and password.

➢ Apart from this, we will not collect any other information so that if that app tries to access the information it will be available on the server.

3.LITERARTURE SURVEY:

Secure Login Authentication System is an application that refers to the user's information which is to be protected. When a user registers for an account, the user must create an USER ID and key that will allow them to access their account later on. Generally, a username and password are used as the ID and key, but the credentials can include other forms of keys as well. To gain access, users must prove to the website that they are who they say they are. The ID and key are enough to confirm the user’s identity, which will allow the system to authorize. Regularly we are using lots of services and applications to accomplish a small task or works. knowingly /unknowingly we are giving permissions to those apps for accessing our data. In this project, we came up with a protected user account, where the user accesses the particular application with the credentials without sharing the irrelevant data. In [1] the user will key in the username then the password will be obtained. The server will generate a random key with 40 characters in the form of QR code. The phone will then scan the QR code to obtain the random key. The password will then combines the random key and hash. Both of these hash value generated will take the first 6 character as the OTP. Once it is both matches, the login is success. In [2] CaRP System with valid authentication and enhance the Security by using login details send to emails of three layer of difficulty based on CaRP Technique with an animal grid as graphical password and generate the Login login details of time and date or otp system. Davis, et al.[3] worked on such a scheme and concluded that user’s password selection is affected by race and gender. This makes the Passfaces’s password somewhat predictable. Although a recognition-based graphical password seems to be easy to remember, which increases the usability, it is not completely secure. It needs several rounds of image recognition for authentication to provide a reasonably large password space, which is tedious et al.[3].

Block Diagram:



The below Figure shows the Block diagram of the proposed system

Software requirements:

Tools/Technology:

- **Front-end: HTML, CSS, JAVASCRIPT**
- **Web designing language: PHP**
- **Hashing Algorithm: MD5**
- **Server: EC2(AWS)**
- **Database: MYSQL**

The whole Project is divided in two parts the front end and the back end.

Front End:

The front end is an interface between the user and the back end. The front and back ends may be distributed amongst one or more systems.

Hyper Text Markup Language : (HTML) is the backbone of any website development process, without which a web page does not exist. Hypertext means that text has links, termed hyperlinks, embedded in it. When a user clicks on a word or a phrase that has a hyperlink, it will bring another web-page. It is the HTML code that provides an overall framework of how the site will look.

Cascading Style Sheets : (CSS) controls the presentation aspect of the site andallows your site to have its own unique look. It does this by maintaining style sheets which sit on top of other style rules and are triggered based on other inputs, such as device screen size and resolution. CSS is designed to enable the separation of presentation and content, including layouts, colors, and fonts.

JavaScript : is an event-based imperative programming language that is used to transform a static HTML page into a dynamic interface. JavaScript code can use the [Document Object Model] (DOM), provided by the HTML standard, to manipulate a web page in response to events, like user input. Using a technique called AJAX, JavaScript code can also actively retrieve content from the web (independent of the original HTML page retrieval), and also react to server-side events as well, adding a truly dynamic nature to the web page experience. These days, front-end development refers to the part of the web users interact with. In the past, web development consisted of people who worked with Photoshop and those who could code HTML and CSS. Now, developers need a handle of programs like Photoshop and be able to code not only in HTML and CSS, but also JavaScript or jQuery, which is a compiled library of JavaScript. Most of everything you see on any website is a mixture of HTML, CSS, and JavaScript, which are all controlled by the browser. For example, if you’re using Google Chrome or Firefox, the browser is what translates all of the code in a manner for you to see and with which to interact, such as fonts, colors, drop-down menus, sliders, forms, etc. In order for all of this to work, though, there has to be something to support the front-end; this is where the backend comes into play.

Web Designing Language:

PHP : PHP is now officially known as “**PHP: Hypertext Preprocessor**”. It is a server-side scripting language usually written in an HTML context. Unlike an ordinary HTML page, a PHP script is not sent directly to a client by the server; instead, it is parsed by the PHP binary or module, which is server-side installed. HTML elements in the script are left alone, but PHP code is interpreted and executed. PHP code in a script can query databases, create images, read and write files, talk to remote servers – the possibilities is endless. The output from PHP code is combined with the HTML in the script and the result sent to the user’s web-browser, therefore it can never tell the user whether the web-server uses PHP or not, because the entire browser sees is HTML. PHP’s support for Apache and MySQL further increases its popularity. Apache is now the most-used web-server in the world, and PHP can be compiled as an Apache module. MySQL is a powerful free SQL database, and PHP provides a comprehensive set of functions for working with it. The combination of Apache, MySQL and PHP is all but unbeatable. That doesn’t mean that PHP cannot work in other environments or with other tools. In fact, PHP supports an extensive list of databases and web-servers. While in the mid1990s it was ok to build sites, even relatively large sites, with hundreds of individual hardcoded HTML pages, today’s webmasters are making the most of the power of databases to manage their content more effectively and to personalize their sites according to individual user preferences.

Hash Function: Hashing is a step that will use a hash algorithm such as the MD5 to turn a password into a long random string which consists of letters and numbers. The hashes are the opposite of encryption which is not reversible to be the original text. There is no algorithm exist to reverse back the hashes. However, the attackers can try the different combination of the password in order to match the user password. The combination password hashes are then collected to store into the rainbow table. This method will be very time exhausting.

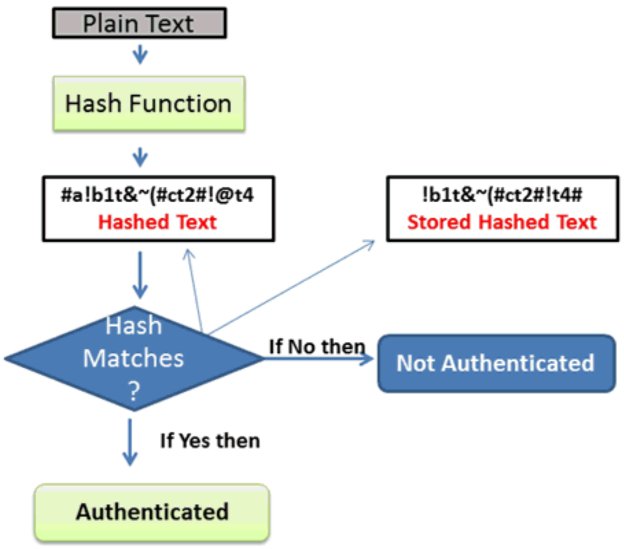


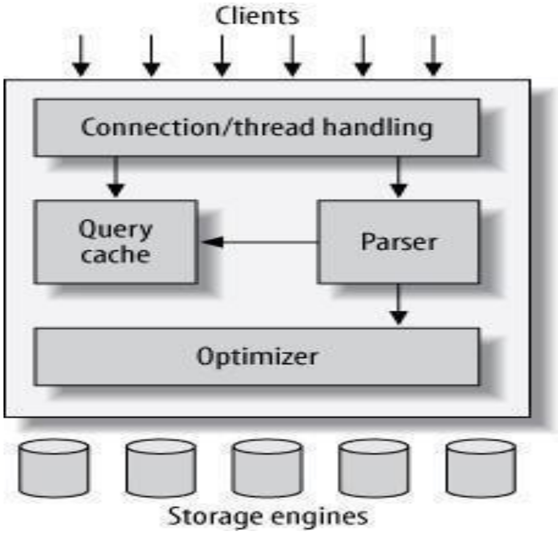
Fig : Flow Chart Example of Hash work

Back End:

In a previous blog, we talked about how web programmers are concerned with launching websites, updates, and maintenance, among other things. All of that works to support the frontend of the website. The back-end has three parts to it: server, application, and database.

MySQL's Logical Architecture:

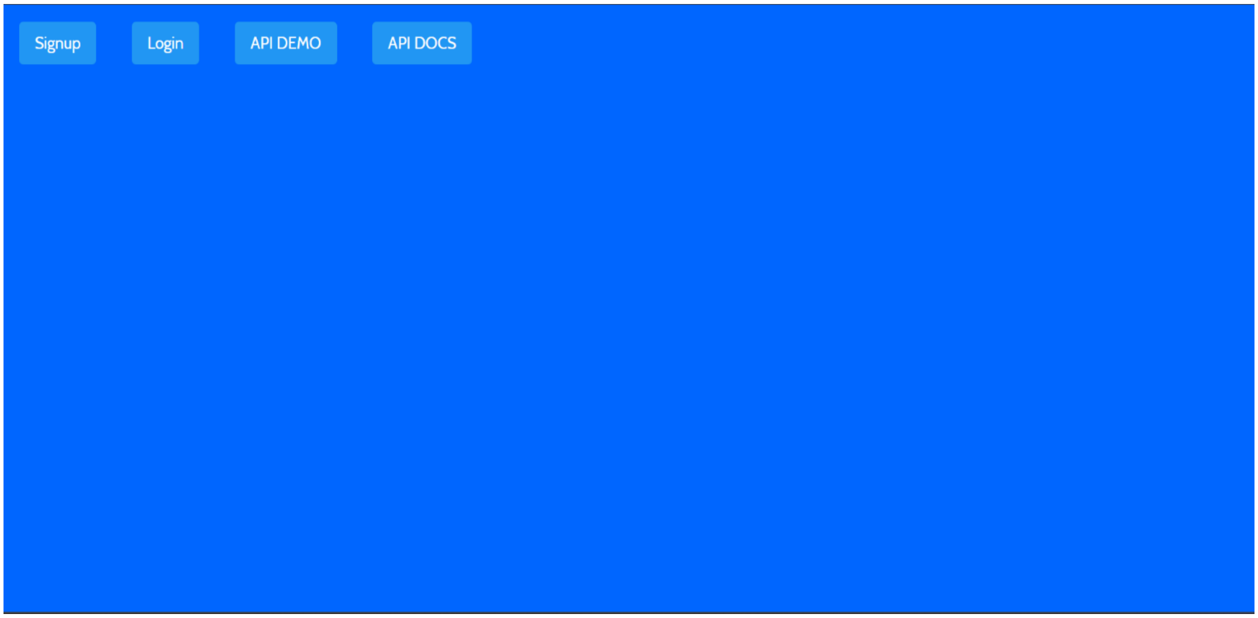
The topmost layer contains the services that aren't unique to MySQL. They're services most network-based client/server tools or servers need: connection handling, authentication, security, and so forth.



One of the fastest SQL (Structured Query Language) database servers currently on the market is the MySQL server, developed by T.c.X. DataKonsultAB. MySQL, available for download at www.mysql.com, offers the database programmer with an array of options and capabilities rarely seen in other database servers. MySQL is free of charge for those wishing to use it for private and commercial use. Those wishing to develop applications specifically using MySQL should consult MySQL's licensing section.

Implementation and Testing:

Here we can see how the project works. By clicking the website www.eazyuser.ga . The following page will be appear



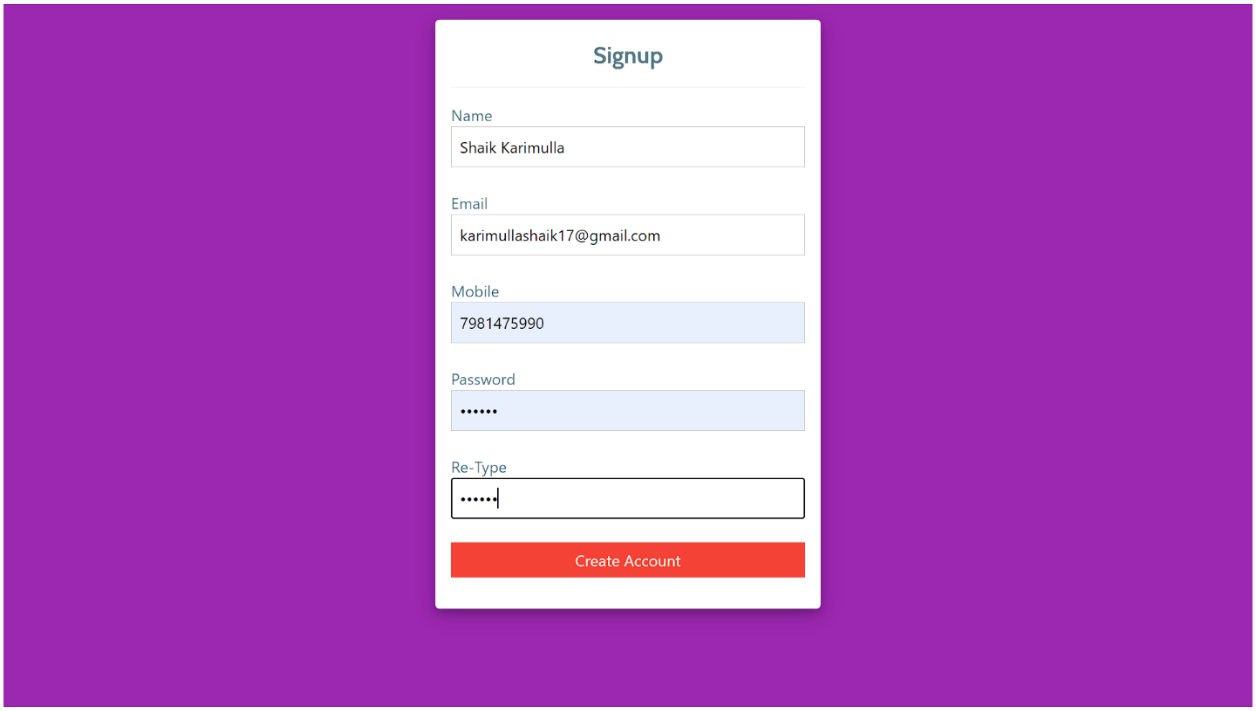
The above page is the view page of the website. Here, user will click the signup

button and creates an account with eazy user.

Sign-Up Module:

A **Signup page** (also known as a **registration page**) enables users and organizations to independently **register** and gain access to your Smart Simple instance. It is common to have multiple **signup pages** depending on the types of people and organizations you want to **register** and the languages your community speaks.

The signup page is as follows



Name
Shaik Karimulla

Email
karimullashaik17@gmail.com

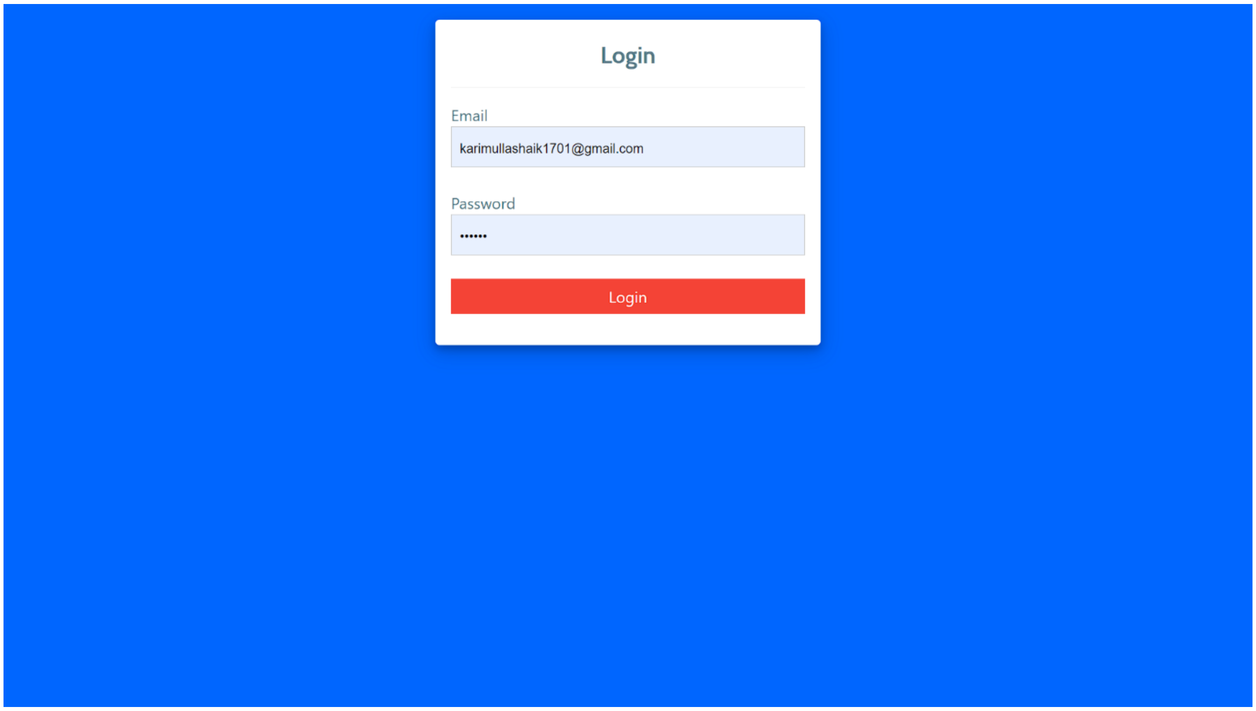
Mobile
7981475990

Password
••••••

Re-Type
••••••

Login Module :

After creating an account, user can login the account through their Email address(username) and password.



Email

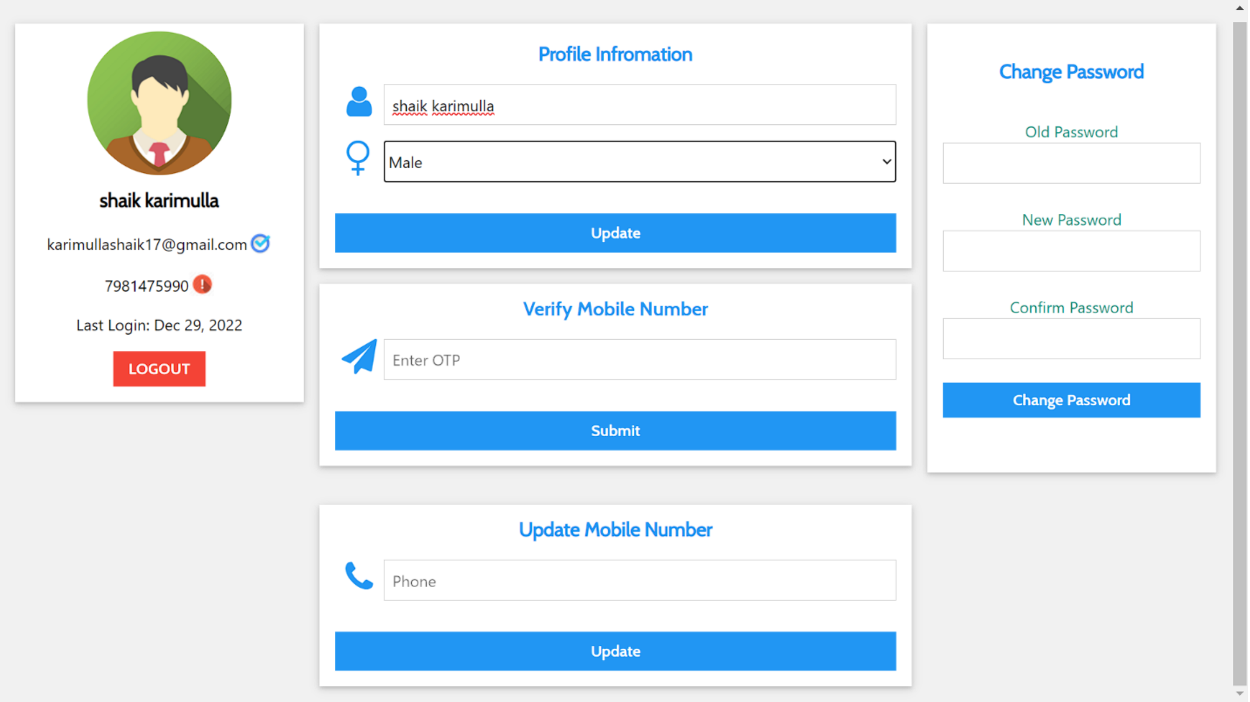
karimullashaik1701@gmail.com

Password

••••••

Profile Page:

When username and password are matched. Then the profile page is created for the particular user.



shaik karimulla

karimullashaik17@gmail.com

7981475990

Last Login: Dec 29, 2022

Profile Infromation

shaik karimulla

Male

Verify Mobile Number

Enter OTP

Update Mobile Number

Phone

Change Password

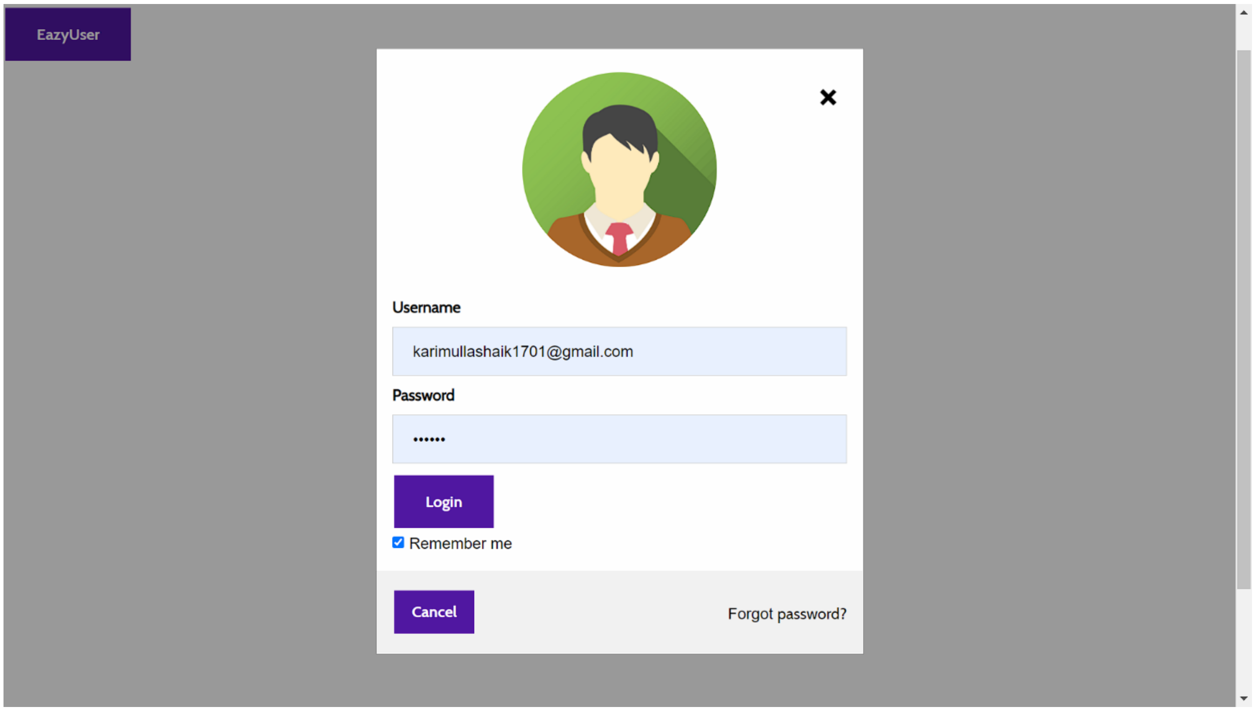
Old Password

New Password

Confirm Password

API Demo :

Here we can see how the API works.



Username

karimullashaik1701@gmail.com

Password

••••••

☑ Remember me

Security Testing:

Security Testing attempts to verify protection mechanism built into a system will in fact protect it from improper penetration. Security is provided for each user by giving them login name and password. Security testing was done, as any other anonymous user can't log in with a user password if the user is already logged in.

Performance Testing:

Performance Testing is designed to test run time performance of software within the context of an integrated system. Performance Testing occurs throughout all steps in the testing process. Performance tests are often coupled with stress testing and often require both hardware and software instrumentation. That is it is often necessary to measure resource utilization in an exacting fashion. External instrumentation can monitor execution intervals, log events as they occur, and sample machines take on a regular basis. By instrumenting a system the tester can uncover situations that lead to degradation and possible system failure.

4.CONCLUSION:

In this paper, The Secure Login Authentication System allows the users to create an account with the required credentials. It is a protected account that any personal will not be taken by the user. users can access any application through this account. This project helps to access the application without sharing personal information. It is applicable for all applications. The main purpose of this project is data protection and has user-friendly interface. There will be no chance for privacy theft. It is very difficult to say that our data is protected online. Even Most people are not aware that these apps can access all the information. Throughout the project, the focus has been on protecting the personal information in an easy and intelligible manner. The project is very useful for users who don't like to share their personal information online can access the app through this protected account.

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