INTODUCTION

This document provides an overview of the login system implemented in C++. The system allows users to login, register, and recover forgotten passwords.

Code Structure

The program is structured into several key components:

- **Header Files**: Includes the necessary libraries.

- **Function Definitions**: Functions to perform specific tasks, such as login, registration, and password recovery.

- **Main Function**: The core of the program where the login system logic is implemented.

Header Files

1) **#include <iostream>**
2) **#include <fstream>**
3) **#include <string.h>**
4) **using namespace std;**

- **iostream:** Used for input and output operations.

- **fstream:** Provides functionalities to read from and write to files**.**

- **string.h:** Supports string manipulation functions.

Function Definitions

1. void login()

This function handles user login. It checks the entered credentials against stored records.

2. void registration()

This function allows new users to register by saving their credentials to a file.

3. void forgot()

This function helps users recover their passwords by searching for their username in the records.

Main Function

int main()

The main function serves as the entry point of the program. It presents the user with options to log in, register, or recover a password.

Steps

1. **Menu Display**: The program displays a menu to the user, allowing them to choose between login, registration, password recovery, and exit.

2. **User Input**: The user selects an option from the menu.

3. **Login**: If the user chooses to login, the **login()** function is called.

4. **Registration**: If the user chooses to register, the **registration()** function is called.

5. **Password Recovery**: If the user chooses to recover their password, the **forgot()** function is called.

6. **Exit**: If the user chooses to exit, the program terminates.

Sample Output

Login Scenario

Welcome Screen:

```
-------------------------------------------------------------------

                        welcome to the login page


        -----------------------          MENU          ---------------------------



| press 1 to LOGIN                      |
| press 2 to REGISTER                   |
| press 3 to if you forget your password |
| press 4 to EXIT                       |
                    please enter your choice  :
```

User Input: 1 (for LOGIN)

Login Screen:

```
        please enter the username and password :
        USERNAMErupesh10
        PASSWORD1030
```

If credentials are correct:

```
rupesh10
 your LOGIN is successful
 Thanks for logging in here
```

If credentials are incorrect:

```
                    please enter the username and password :
                    USERNAMEsdkfj
                    PASSWORD23

LOGIN ERROR
please check your username and password
```

Registration Scenario

User Input: 2 (for REGISTER)

Registration Screen:

```
             Enter the username :roman11
             Enter the password :5555



             Registration is successful
             ----------------------------------------------------------------
```

Password Recovery Scenario

User Input: 3 (for FORGOT PASSWORD)

Forgot Password Screen:

```
you forgot the password? No worries

press 1 to search your id by username

press 2 to go back to the main menu

Enter your choice:
```

User Input: 1

Search Username Screen:

```
Enter the username which you remembered: newUser
```

If the account is found:

```
your account is found:
your password is: ********
```

If the account is not found:

```
sorry! your account is not found!
```

User Input: 4 (for EXIT)

```
Thank you!
```

Conclusion

This C++ implementation of a login system provides a simple yet effective demonstration of fundamental programming concepts such as user interaction, file input/output, and conditional statements. The program can be extended with additional features, such as data encryption, password hashing, or a graphical user interface.