FORGOT PASSWORD MODULE

1. Description of the module:

The Forgot Password module is an essential component of our project. – "Mess charge deduction system". Its primary purpose is to provide a secure and user-friendly mechanism for users to reset their passwords in case they forget or need to change them. This module consists of two classes that handle resetting and changing a password .A brief overview of the module is given below.

Confirm Identity:

When users click on the "Forgot PassWord" button in the login page, they are taken to a page with three text fields. They are asked to enter their roll number in the first text field. After the user does so and clicks on "Get Your Question" button, the program checks for that roll number in the database. Once found, it fetches the corresponding security question and answer to the question of that roll number. It prints the question in the second text field. Then the user has to enter the answer to the question in the third text field. If the answer given by the user and the answer fetched by the program does not match, an error message is displayed. If and only if both answers match, does the program move forward.

Change Password:

After confirming the identity of the user, the user is greeted with page to change their password. It has two text fields – one for entering the new password and another for retyping the new password. After the user fills in both the fields, if both the passwords do not match, an error message is displayed. This extra precaution ensures that users do not make any mistakes when setting a new password. If the passwords match, the program accesses the database file and changes the password of the corresponding roll number.

Now the user has successfully changed their password and the program stops.

2. Motivation for the module:

The development of the Forgot Password module stems from the recognition of the importance of user convenience, data security, and overall system integrity within the project. I had many different motivations for implementing this module.

Improve user experience

One of the primary motivations for building the Forgot Password module is to enhance the overall user experience. Forgetting a password is a common occurrence, and providing users with a seamless and efficient password recovery mechanism demonstrates a commitment to user convenience and satisfaction. By allowing users to easily reset their passwords, we aim to reduce frustration and enable them to regain access to their accounts quickly, thereby fostering a positive user experience.

Ensure Data Security

Data security is a paramount concern for any system that deals with user accounts and sensitive information. Implementing a robust Forgot Password module contributes to the overall security posture of the "Mess charge deduction system." By implementing identity verification steps, we prioritize protecting user data and mitigating the risk of unauthorized access to user accounts. This commitment to data security instills user trust and confidence in the system.

Tailored for the consumer

Since this program is meant to be used mostly by students, a safety net to fall back on is always a good idea. Since this is would be an integral part of a student's day-to-day life, losing access to the same may prove troublesome. And in today's busy world, we can't expect students to always remember their passwords in the midst of everything else they have to remember. So, a recovery option will always be appreciated by the user contributing to overall user satisfaction.

3. Relevance of the module:

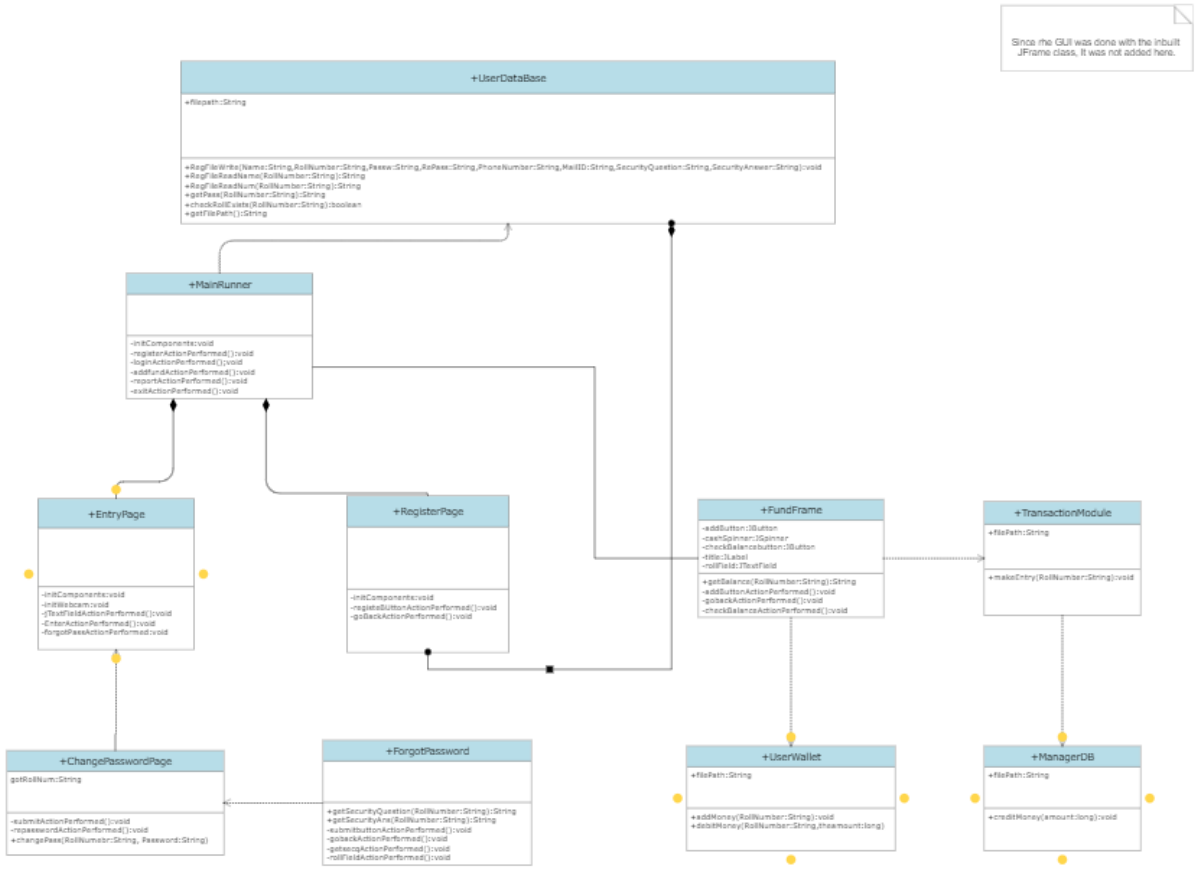
The project's general functionality and success are highly dependent on this module. By addressing important issues that affect the system's usability, security, and user happiness, its inclusion offers great value. The module directly relates to the management of user accounts within the system. It ensures that users can easily recover access to their accounts in case of forgotten passwords, promoting a positive user experience. By integrating this module, the project provides a comprehensive solution for password management and account safety.

At a time when data security is of utmost importance, a system equipped with proper security and safety features will always be better received than others. In summary, the module is of high relevance to not only this project but almost any project imaginable.

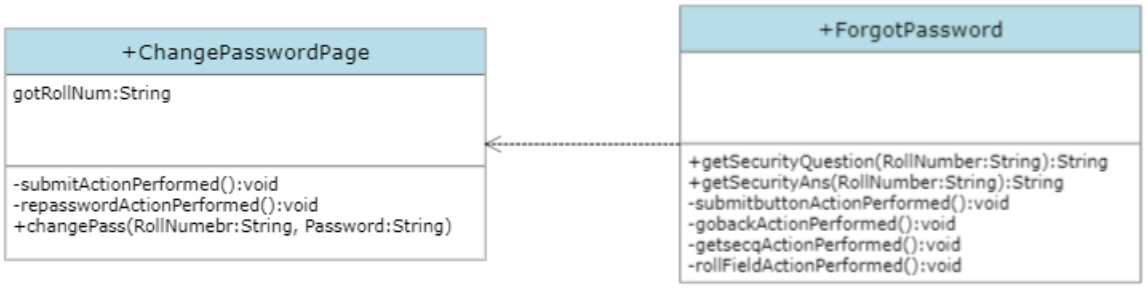
4. Appendix

UML diagrams are given below.

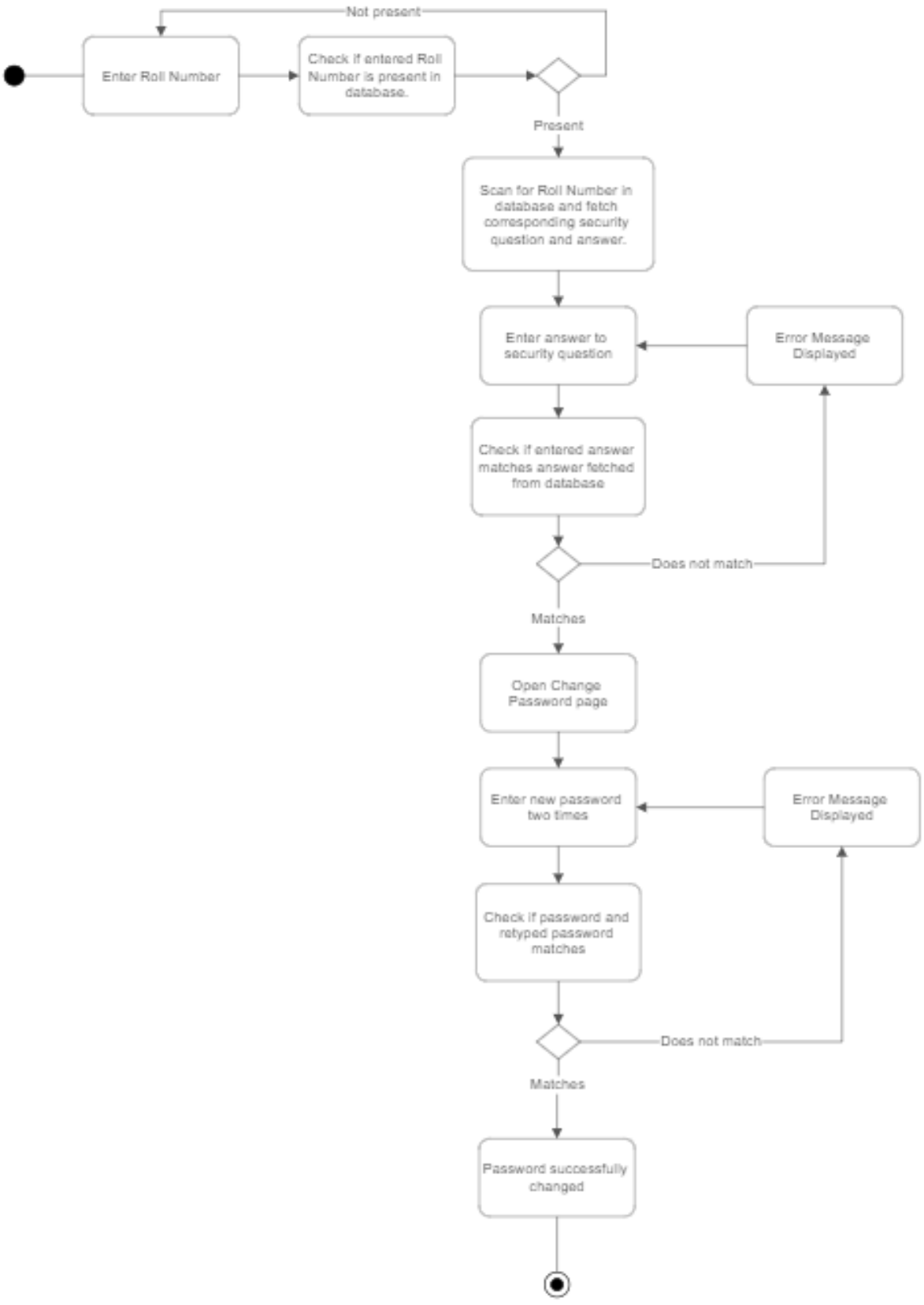
Class diagram of the whole project:



Class diagram of the module:

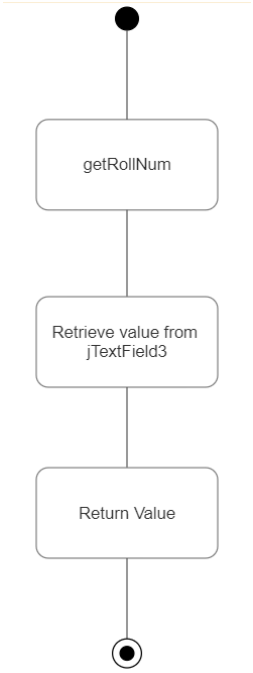


Activity diagram of the module:

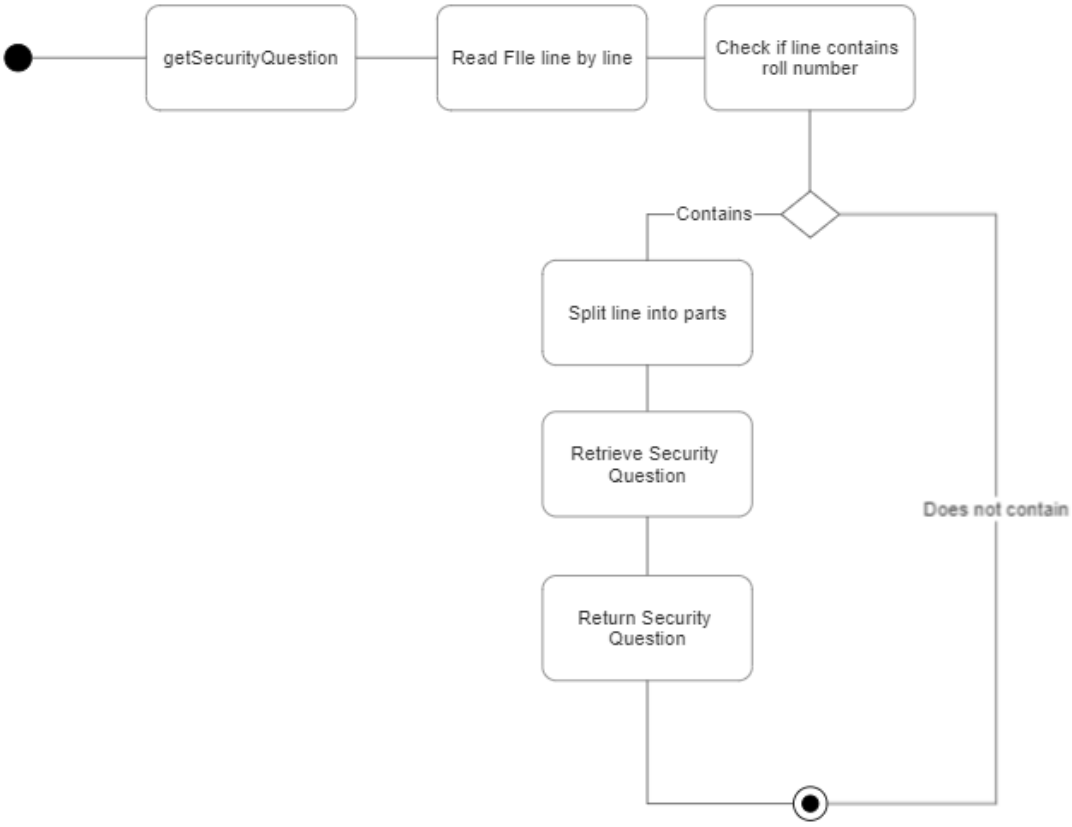


Activity diagrams of each function:

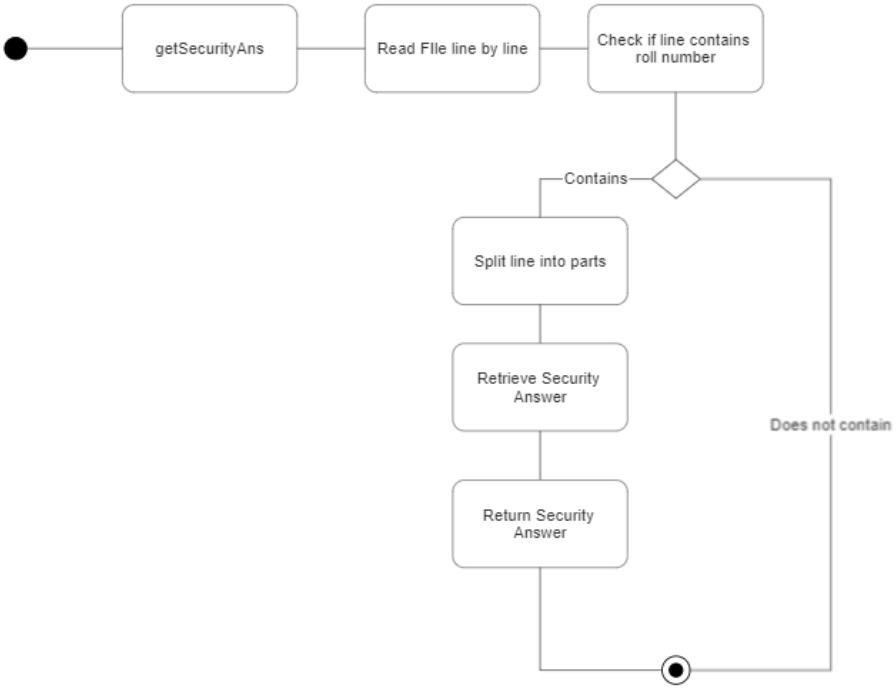
getRollNum:



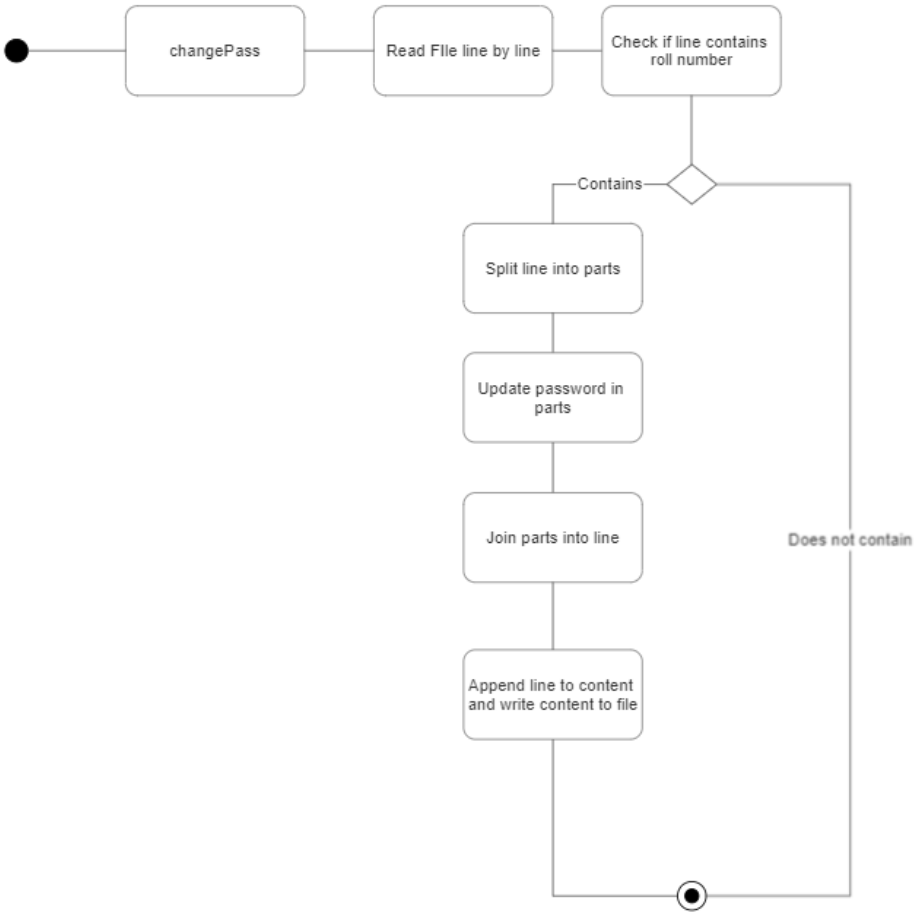
getSecurityQuestion:



getSecurityAns:



ChangePass:



Sequence diagrams of the module:

Login Page sequence: