

System Development Life Cycle (SDLC)

Represented by:

Abdallah Mohammed Hegazy 2205228

Ziad Mahmmoud Abdeljwad 2205021

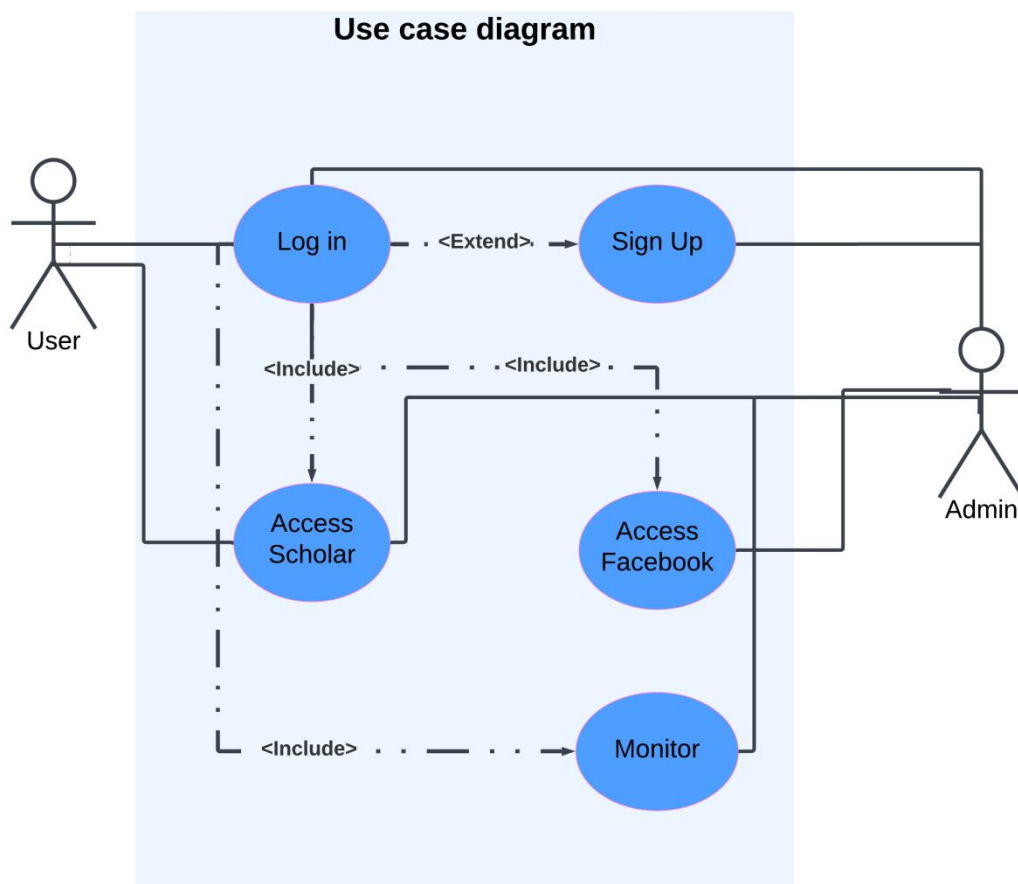
Youssef Saeed Thabet 2205064

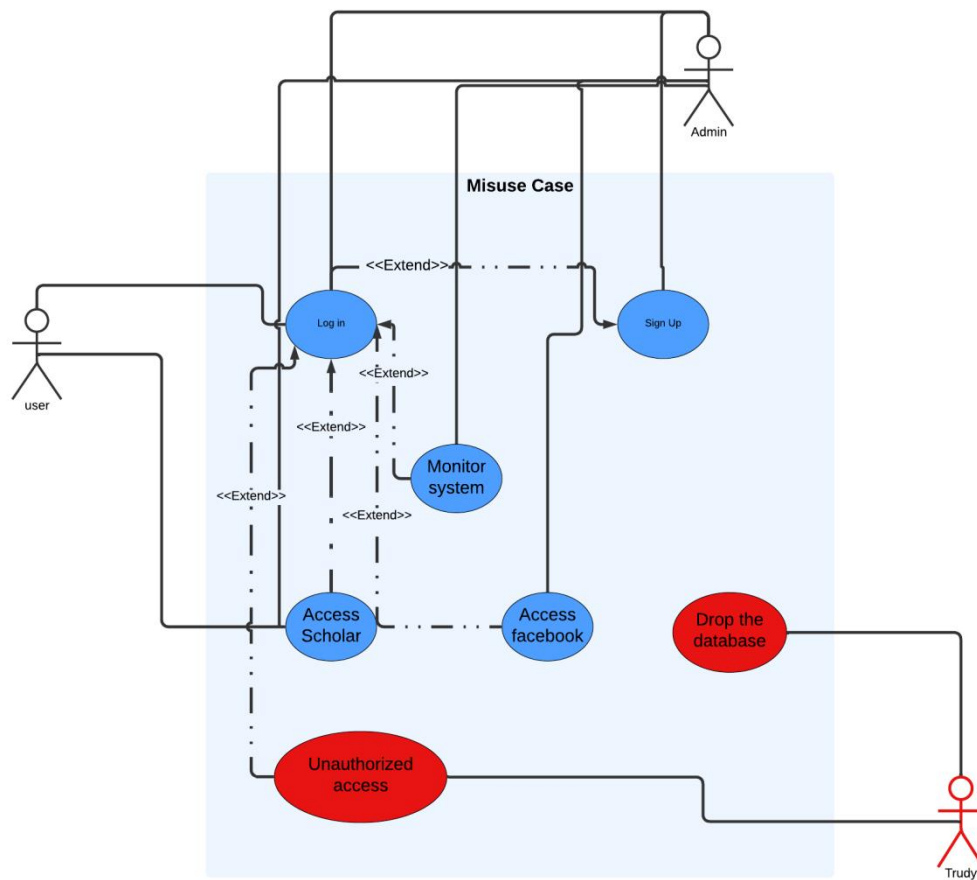
Mohammed Hani Khatab 2205053

1- Planning:

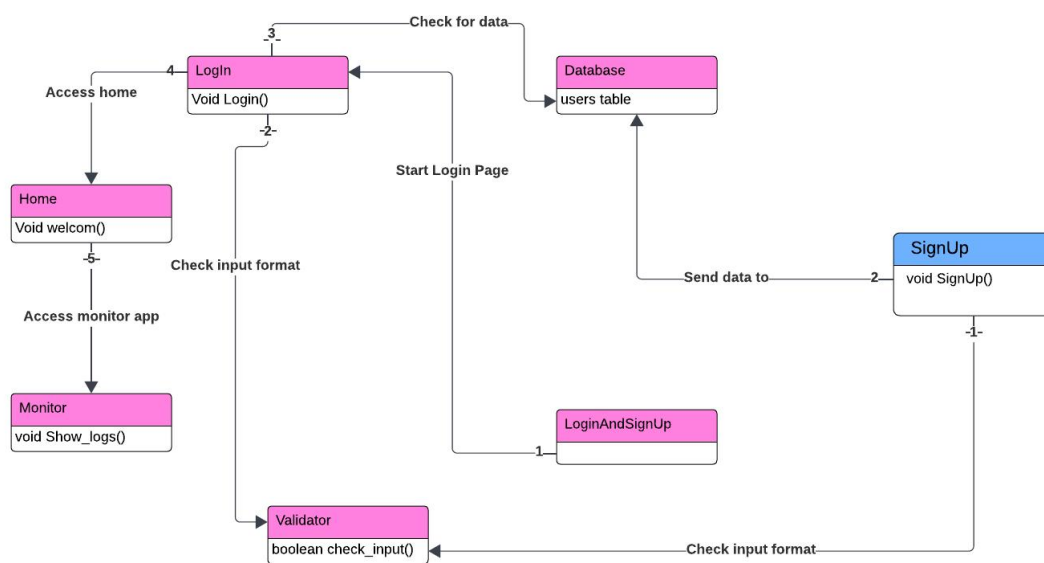
We intend to create a system that user can access some sites via it as a website shortcut. System will have a policies that control user site access.

2- Requirements:





3- Design:



4- Implementation:

a) LoginAndSignUp class:

The main class that used to run the system.

b) Login class:

User and admin used this class to access the home page. This page has 3 main functions:

i. generateToken():

Used to generate a random number used to modify the user when logging in as a MFA.

ii. isMaliciousInput():

Used to check the confidentiality of the input to avoid SQL injection attack.

iii. LoginBtnActionPerformed():

That class is the one used to connect to the database to search for email and password of the user, check for the validation of the password that it must have an uppercase letter, lower case letter, special character, a number, and it have to be at least 8 characters, and the last function is the input checker function.

c) Home class:

The home page has 3 buttons that access another pages and one for log out. Till now users can only access two sites one is open for all and the other is open for admins only. Admin also can access the monitor app that stores the logs of the system.

d) Validator class:

That class has all functions that used to check for input validation like password format, email format, and if the field is empty or not.

e) Monitor class:

Monitor class used to:

- i. Monitor users actions (Login, SignUp)
- ii. Process Identification: depending on jps to find the correct PID for the java process.
- iii. Error handling: exceptions are logged and displayed in the output field.
- iv. UI Interaction: users can perform different operations by clicking buttons corresponding to the desired function.

f) SignUp class:

Users can't sign up and add their emails, as a policy admin is the one that must perform it so SignUp class is isolated from the whole system. This class is the one that used to push data into database. We have 4 main information to be added as an input Name, Email, Password, and the Role. When admin click the sing up button, those data will be added to the database and user can use the system normally.

5- Maintenance:

As a future plan to upgrade the system we intend to add more sites that users can access, improve our monitor technology, and try to solve discovered vulnerabilities.