Project Station

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1. Introduction

Every year our university students make many projects with very good ideas, and most students don't know that many different types of projects were done by our juniors or seniors. So we decided to make one website/Application so students can upload their projects of different subjects so faculties and students can know what types of projects were done by students. Faculties can also review the projects and show the activities to the student/s who have uploaded projects.

1.1 Purpose of document

This requirements understanding document will provide a detailed description of the requirements for the project station. What all functions and facilities are to be incorporated in the system and at what depth will be collected and specified in this document. Clear understanding of all requirements and functions will help in making a software which is designed with all these functionality. Document contains various diagrams also to represent all the requirements and functionalities in various orientations.

1.2 Scope of the Project

An educational institution has a requirement of a portal where users can upload their projects along with documentation and also view the project of different users. Users are basically university students and faculty. An admin creates a repository for all branches offered by university in which different users can upload their projects. Non-university users are not allowed to log in. Admin controls login permissions and users can change the default password after first login. Users(students and faculties) upload their projects under their respective courses along with abstract, code(if applicable) ,videos and documentation. The user can view projects, download projects, bookmark projects, can comment on the project and also ask and reply to the project's question. Users can also extend their project if they have done more work on the previously done projects or they can also update their project using the delete and add new file features. Admin can create other admins for handling the work. Faculty have a special right to give remarks to a project. Portal also allows searching projects based on branches, courses and better reviews.

2.Overall Description

2.1 Product Perspective

The project station is a website that will be produced by the project team. It will help students and faculty to know what kind of projects can be done in university. It is very user friendly and students can easily upload their projects and also discuss the questions on uploaded projects and faculties can also remark the projects of students. And this website also motivates students to come up with different project ideas and share the project with the university.

2.2 Product Functions

1. View Project
2. Search Project
3. Upload Project
4. Update Project
5. Download Project
6. Bookmark Project
7. Remark Project
8. Report Bug
9. View Profile
10. Edit Profile
11. Delete comments
12. Delete QnAs
13. Manage Users
14. Manage Repositories
15. Help

2.3 User Characteristics

2.3.1 Admin:

Admin of our system can monitor the task and handle the system. Admin has to create a repository so the projects can be submitted in that particular repository and admin have permission to handle login permission so admin creates a login dataset for this system.

2.3.2 User(Student & Faculty):

Users can login to the system and users can submit their projects to our system and they can also bookmark or download projects and they can also view profile or edit profile and view project . Users can also ask questions on different projects but the project owner has to reply to those questions and also users can comment on different projects so they can give suggestions also. And faculty is also our user and faculty can also remark on the projects.

2.3.3 Assumption:

The system is not as such dependent on any other system.However for databases it will be dependent on the SQL servers and the other dependency is Internet based servers for its web-based features to be displayed over the website. Also users should have basic information and knowledge of how to connect to an Internet and go to a website.

3. Requirement Understanding

3.1 Functional Requirements

- User should login first to access project files
- User can upload project files and details
- User add other participants and faculty of project
- Admin add new admin
- Add new user and verify user through email
- View user/faculty profile
- Edit/Remove uploaded projects by authenticated user
- Add / Delete comment on projects
- Post /Edit FAQs
- Faculty add remark on projects
- Download project related files
- Projects must have at least 1 abstract , 1 report , 1 faculty or student engaged with project
- Search Project (by course/ faculty /department/tags)
- Provide Q&A platform
- Faculty post project definitions and students can enroll in project
- Follow other users.

3.2 Non Functional Requirements

- Security Requirements
- Reliability
- Maintainability
- Portability
- Performance
- Robustness
- UI and UX experience
- Other Requirements

4. Non Functional Requirements

1. Safety Requirements

Access to the various projects will be protected by a user login screen that requires a username and password. This gives different views and accessible functions of user levels through the system. Maintaining backups ensure the system database security.

2. Security Requirements

Users have the maximum privilege to all his projects. Other students or faculty may not have access to view/add/delete project files,documents . Access to the various projects will be protected by a user login screen that requires a username and password.

3. Reliability

Reliability testing is defined as a software testing type that checks whether the software can perform a failure-free operation for a specified period of time in a specified environment. This means it must provide the same output each time it performs a particular function.Popular Projects may have many users accessing at a same time , which is why software needs reliability.

4. Maintainability

Maintainability is the ability of the application to go through changes with a fair degree of effortlessness. This attribute is the flexibility with which the application can be modified, for fixing issues, or to add new functionality with a degree of ease. These changes could impact components, services, functionality, and interfaces when modifying for fixing issues, or to meet future demands.

5. Portability

Project inventory systems must have the ability of the system to run under different computing environments hardware(servers), OS, languages, versions, a combination of these.

6. Performance

Performance requirements concern the speed of operation of a system. Majorly, the performance testing deals with:

1. Response time
2. Throughput
3. Resource utilization
4. Workload.

7. Robustness

This is necessary because if errors occur in the site, it must be able to cope up with it and respond accordingly.

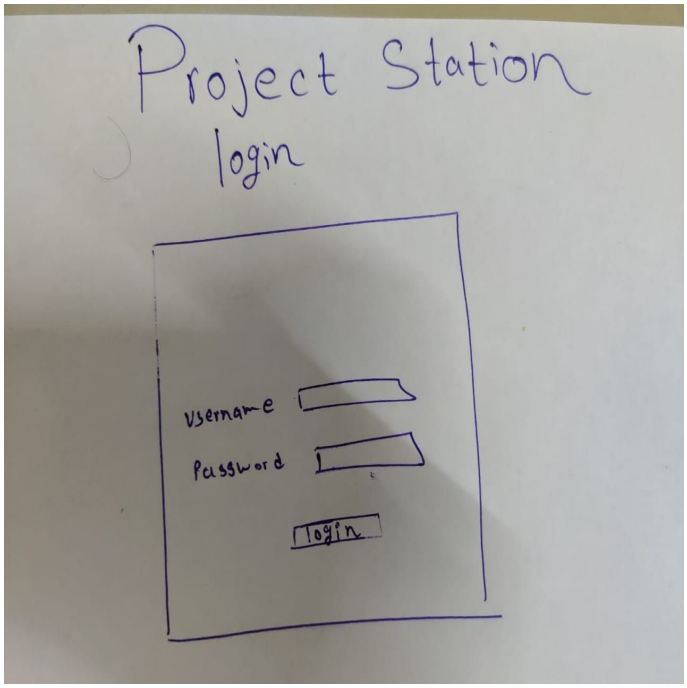
8. UI & User-Experience:

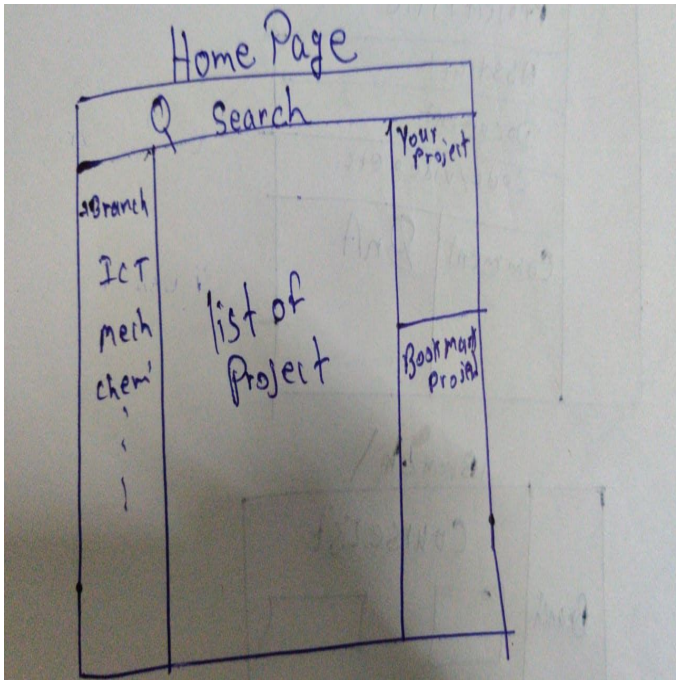
How end users perceive the product.Software should be easy to use and easy to understand.

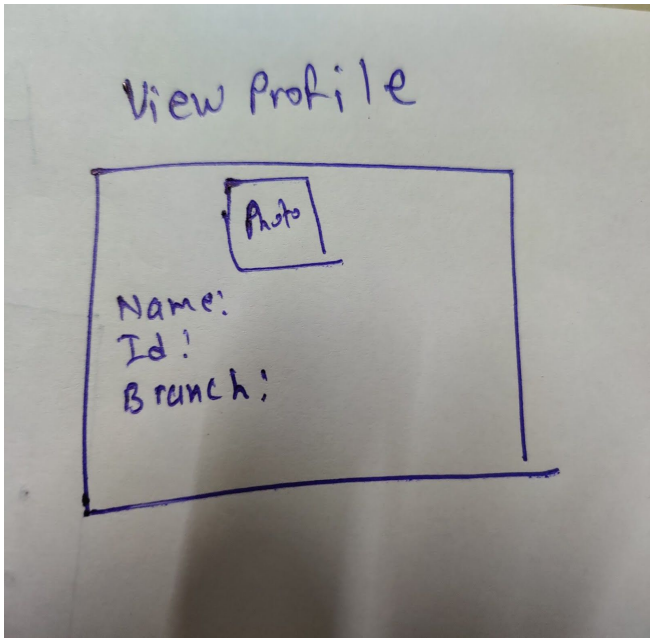
9. Other Requirements:

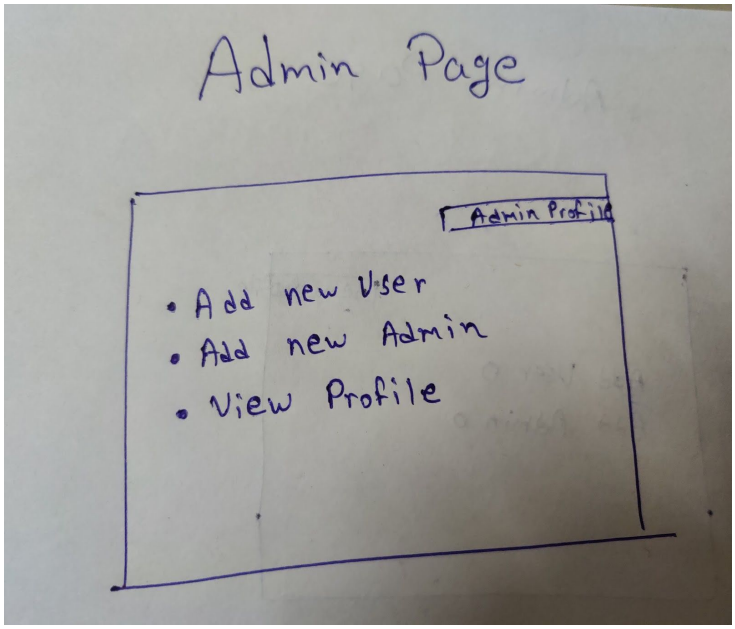
- Sort projects (by course/faculty/department/tags/popularity/remarks/date)
- Report bugs and projects to admin
- Maximum words limit in Abstract.
- Upload size limit of documents in projects
- Provide help section
- Sharing project links to other platforms

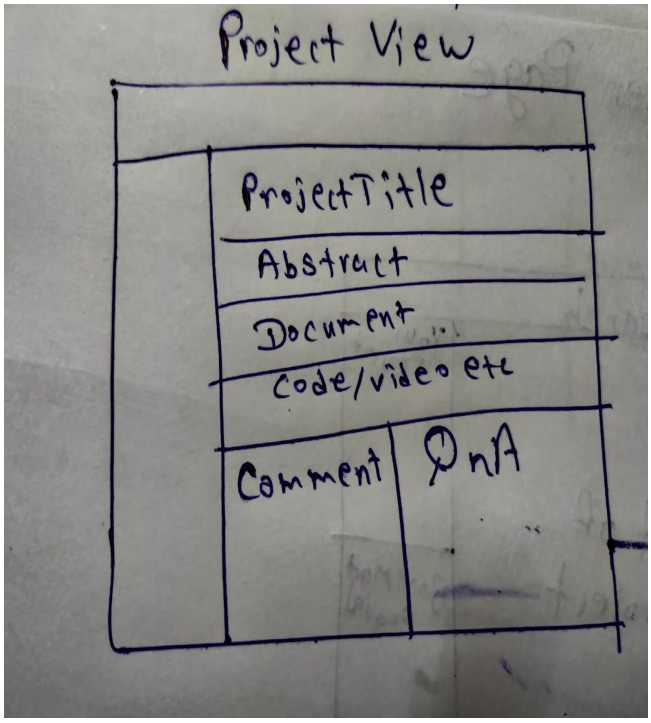
5. External Interface

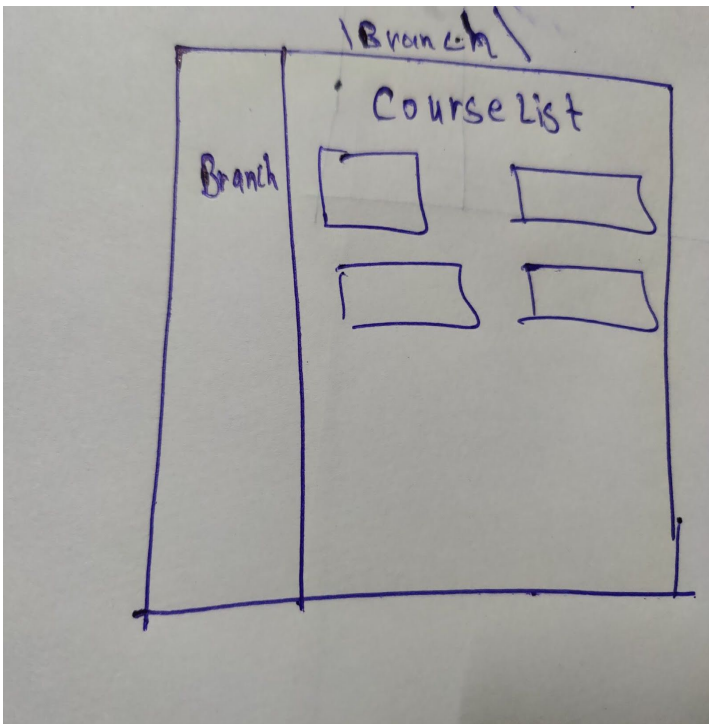


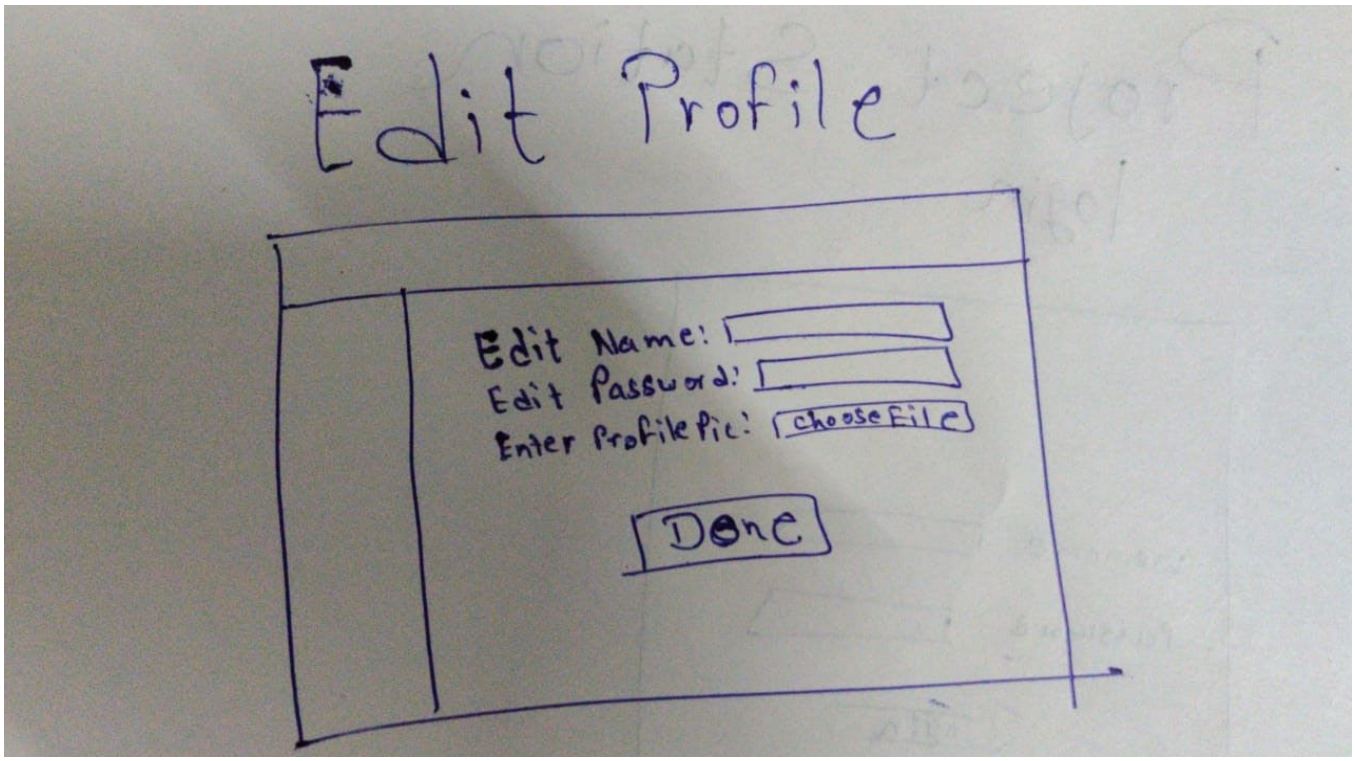




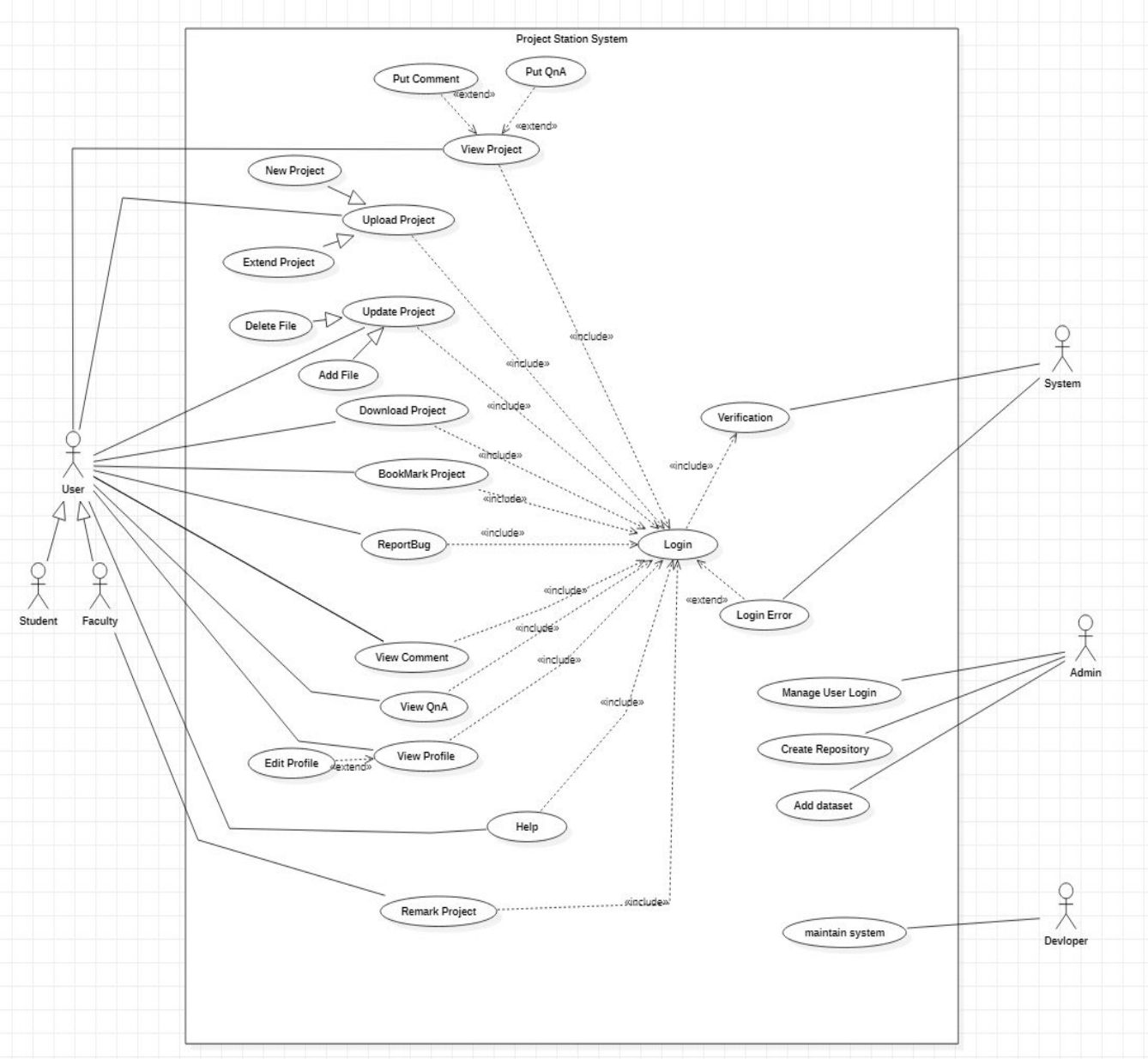



Project View
ProjectTitle
Abstract
Document
Code/video etc
Comment
QnA

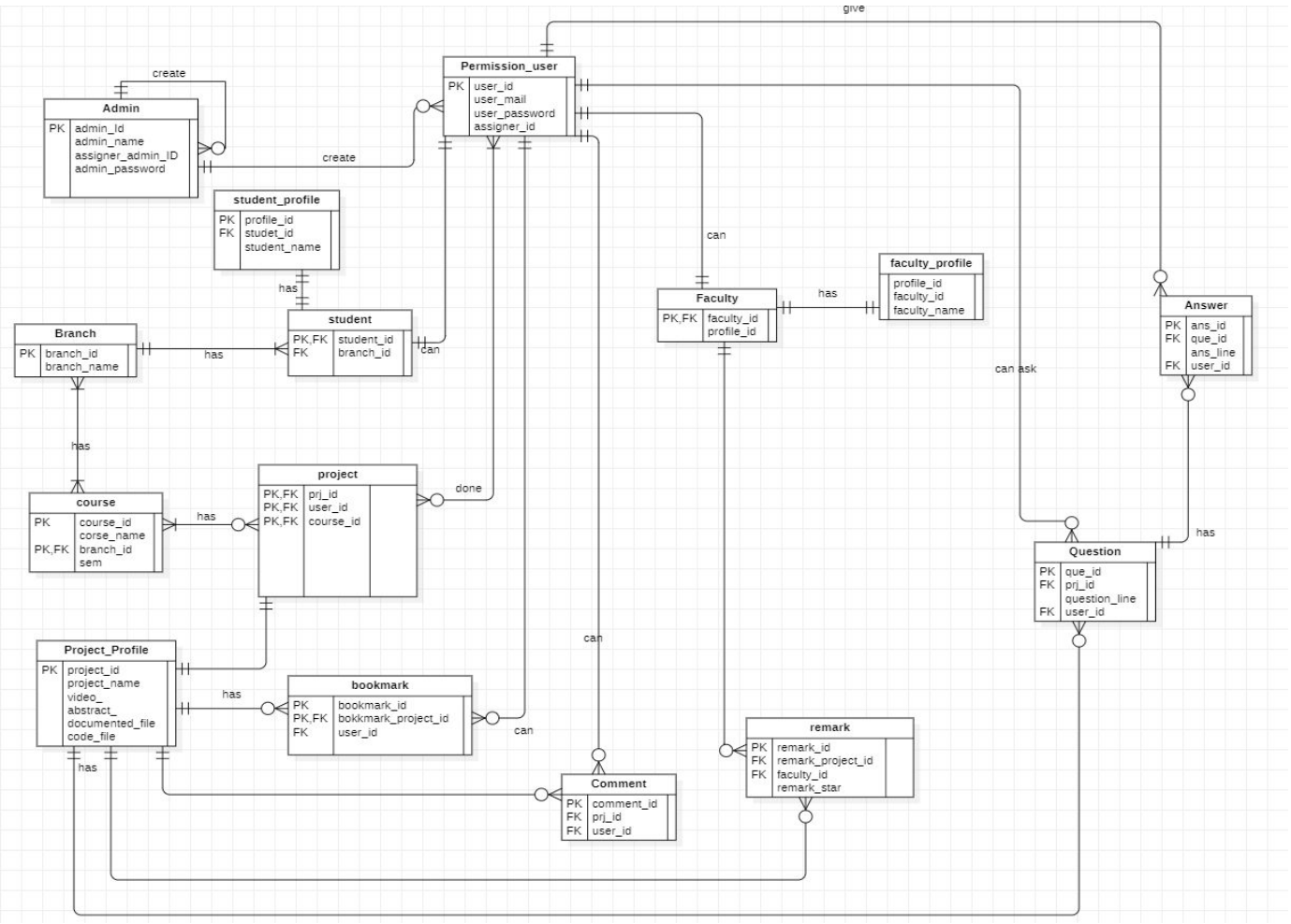

Branch
Course List
Branch


Edit Profile
Edit Name:
Edit Password:
Enter Profile Pic:
Choose File
Done

6. Use Case Diagram



7. ER Diagram


give
create
Admin
PK admin_Id
admin_name
assigner_admin_ID
admin_password
create
Permission_user
PK user_id
user_mail
user_password
assigner_id
student_profile
PK profile_id
FK studet_id
student_name
has
student
PK,FK student_id
FK branch_id
can
Branch
PK branch_id
branch_name
has
can
Faculty
PK,FK faculty_id
profile_id
has
faculty_profile
profile_id
faculty_id
faculty_name
Answer
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FK que_id
ans_line
FK user_id
can ask
has
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corse_name
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video_
abstract_
documented_file
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can
can
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remark_star
has
Comment
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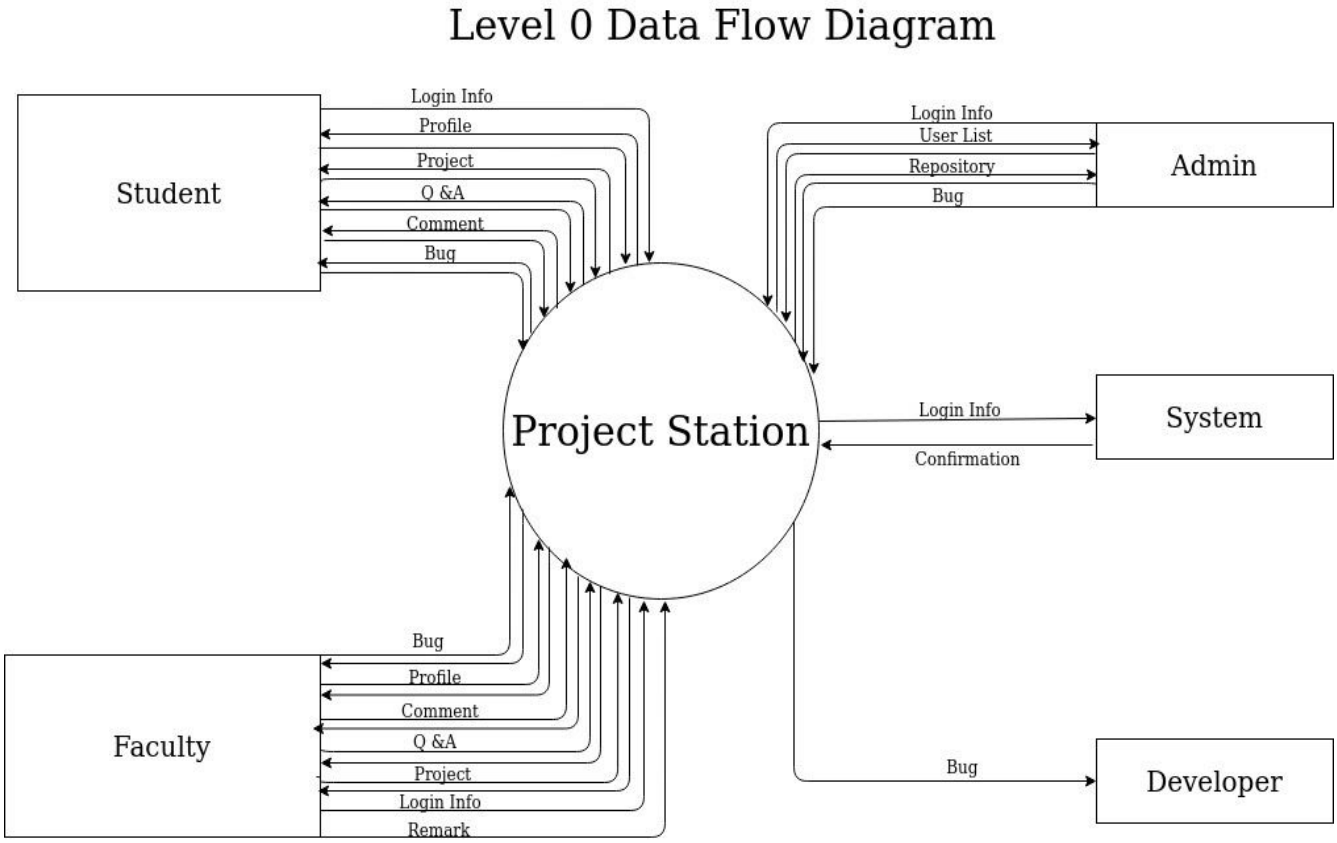
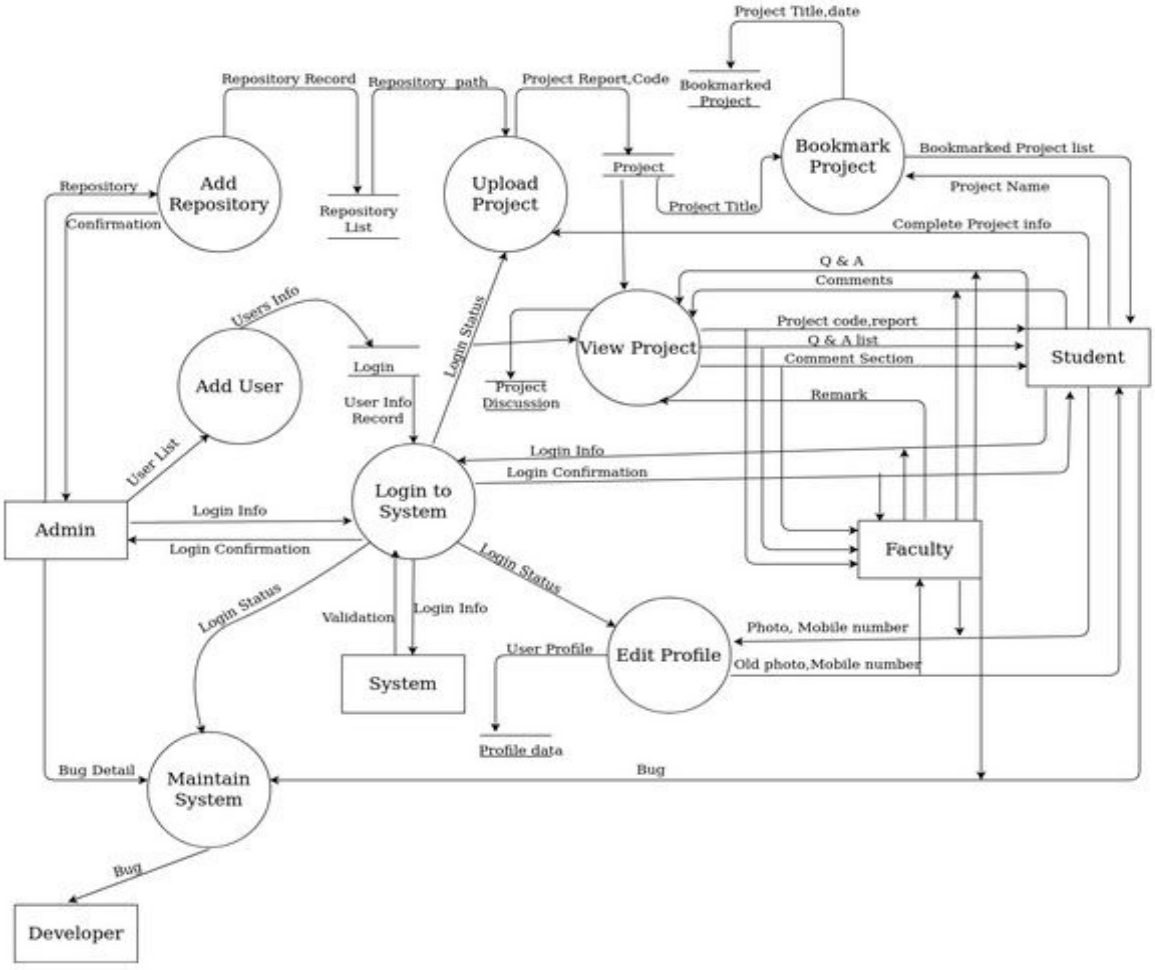
FK user_id

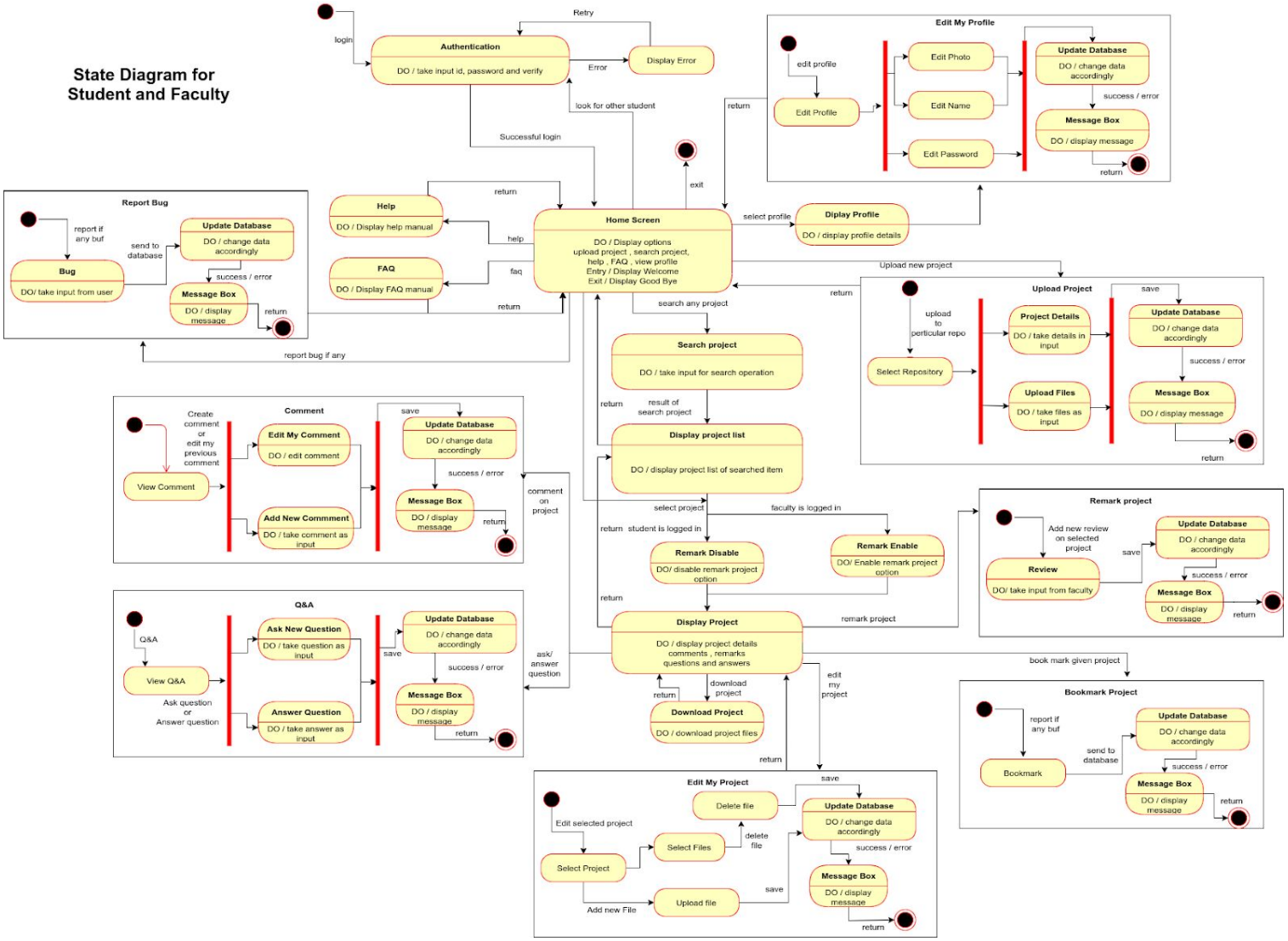
8. Data Flow Diagram



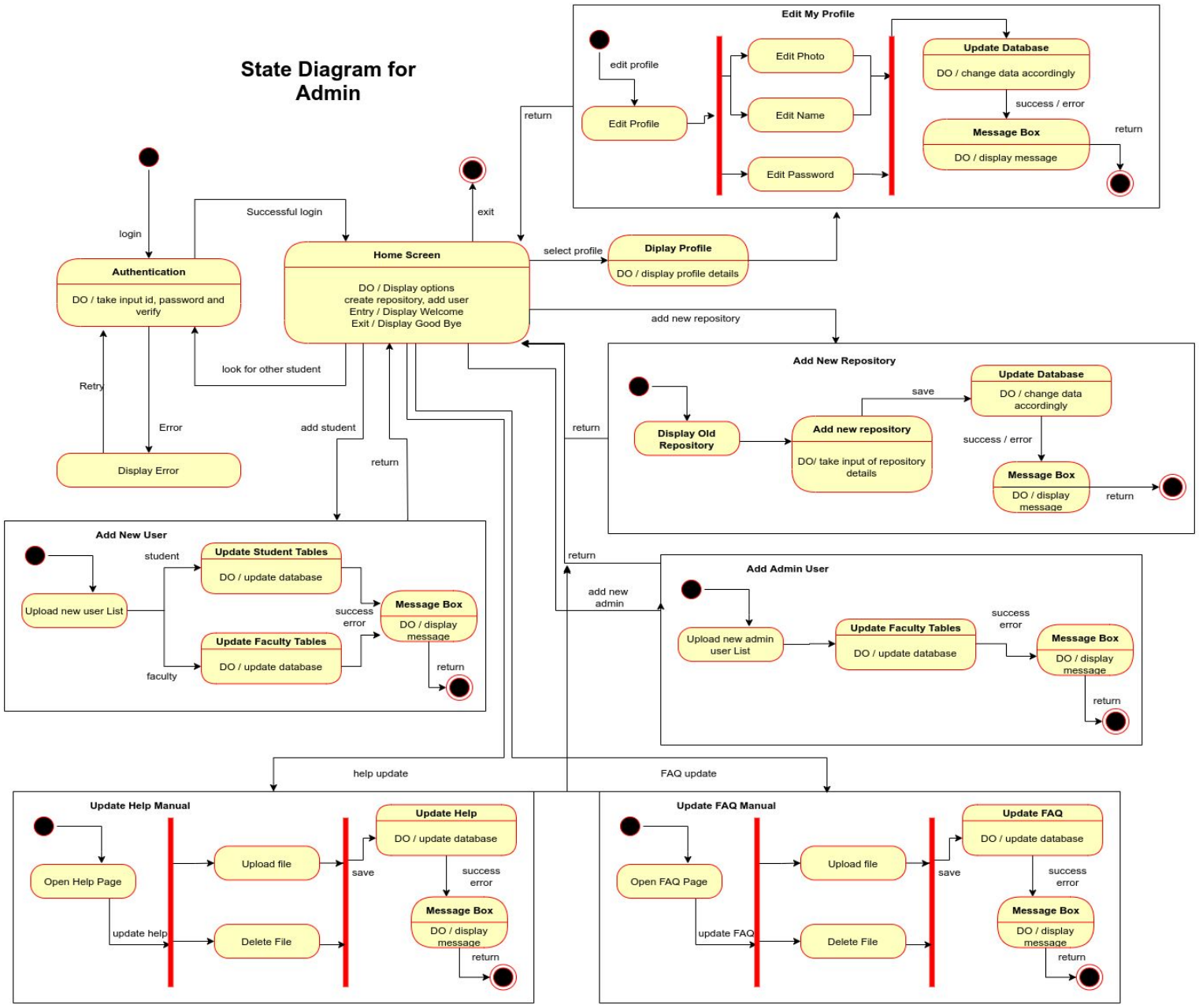
Level 1Dataflow Diagram



9. State Diagram

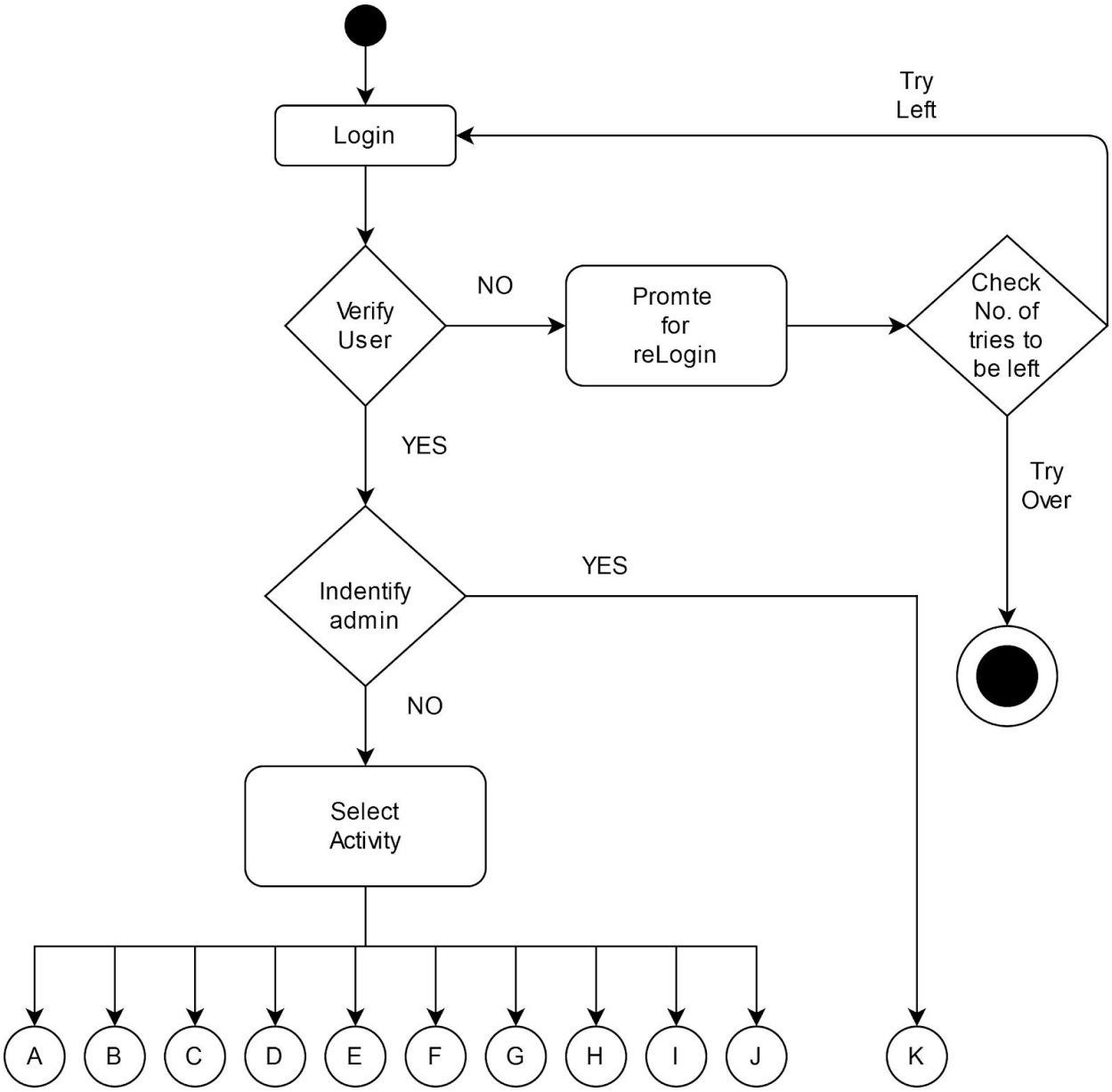


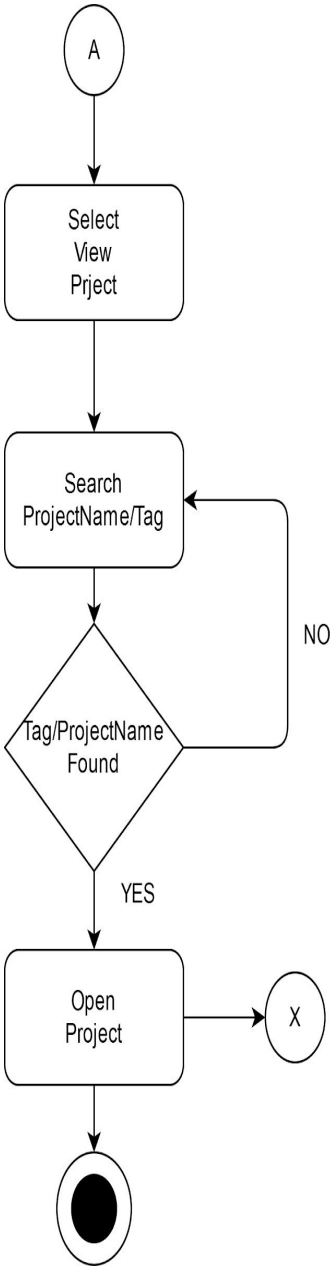
State Diagram for Admin



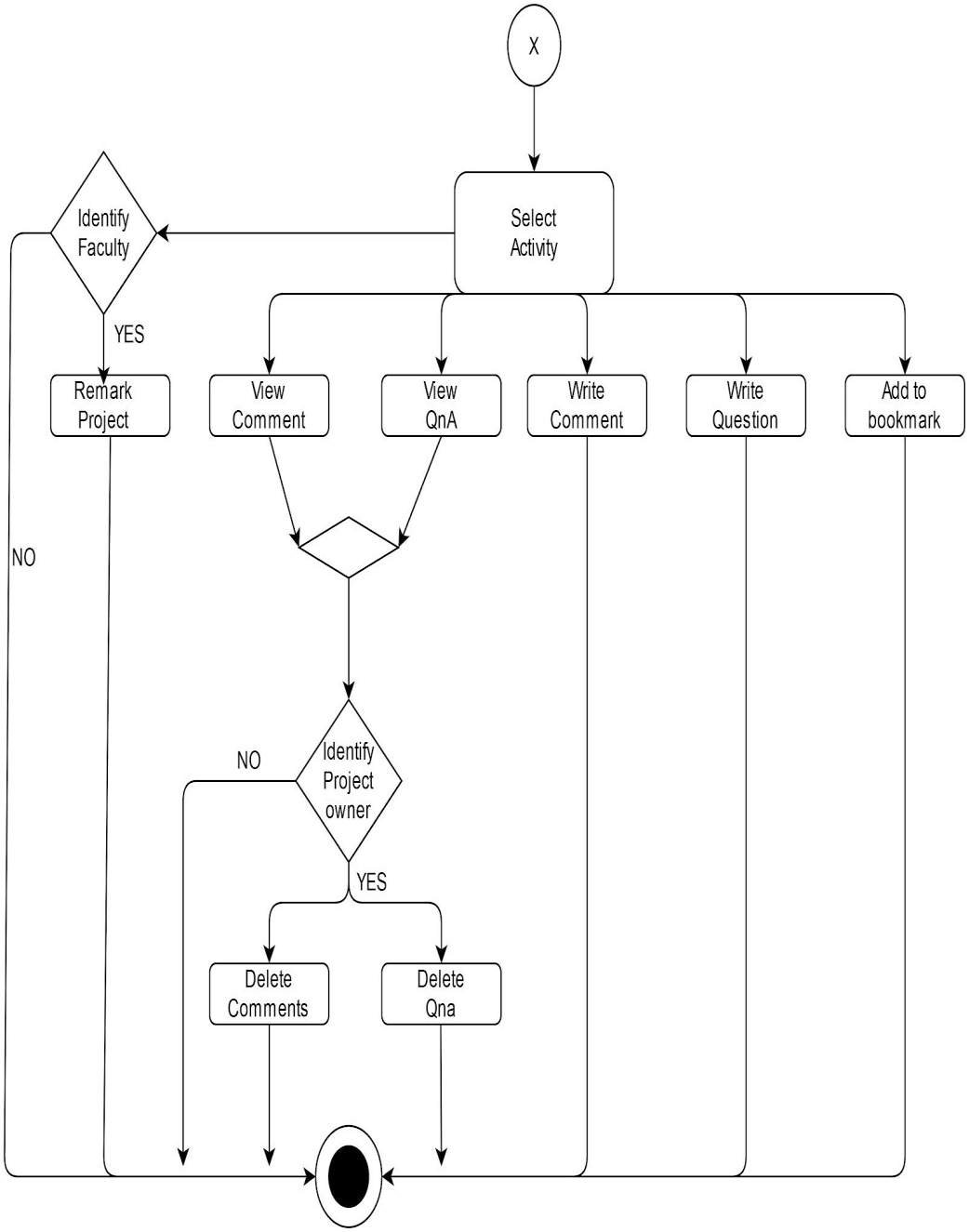
10. Activity Diagram

Login Activity



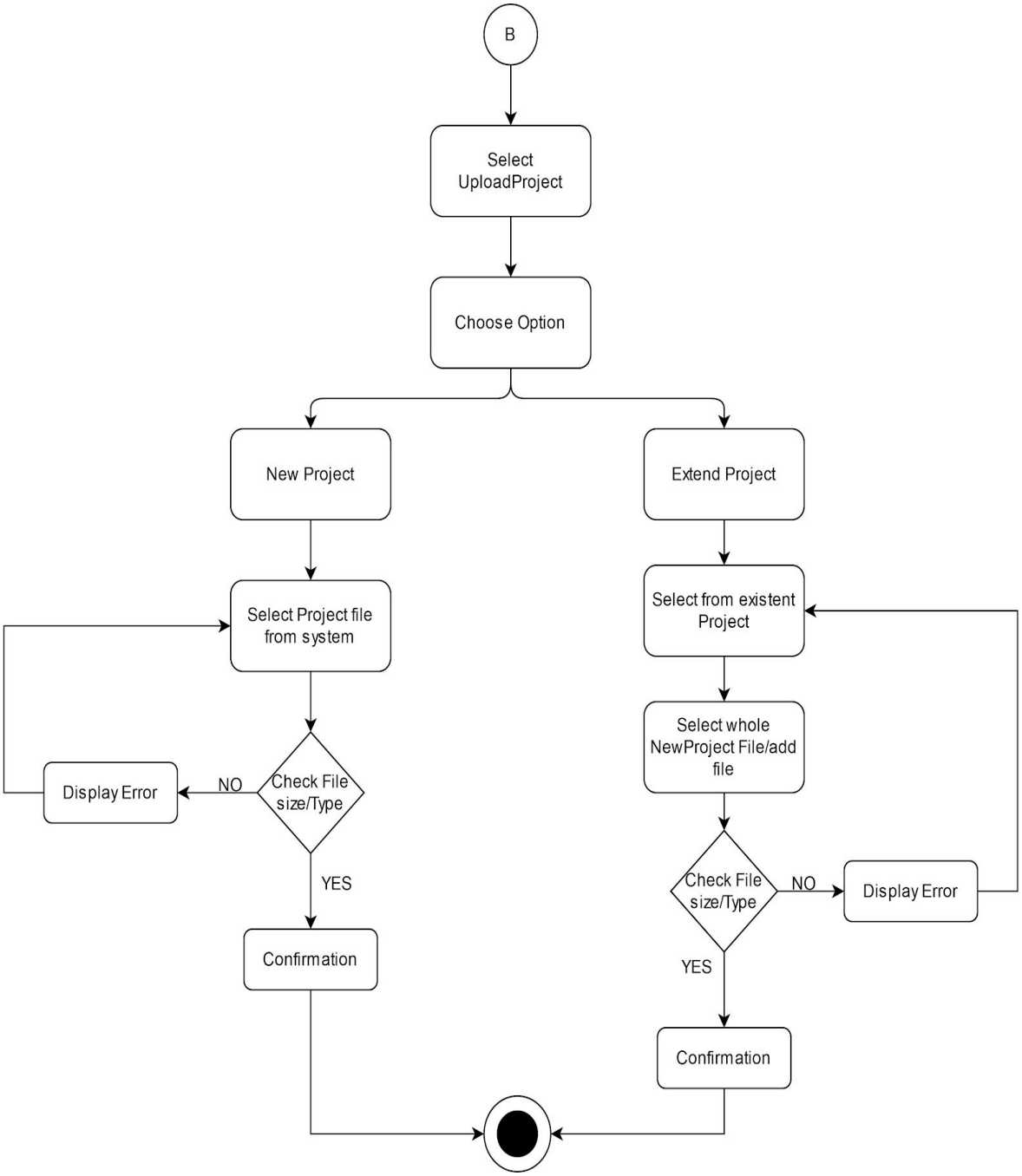


View Project Activity

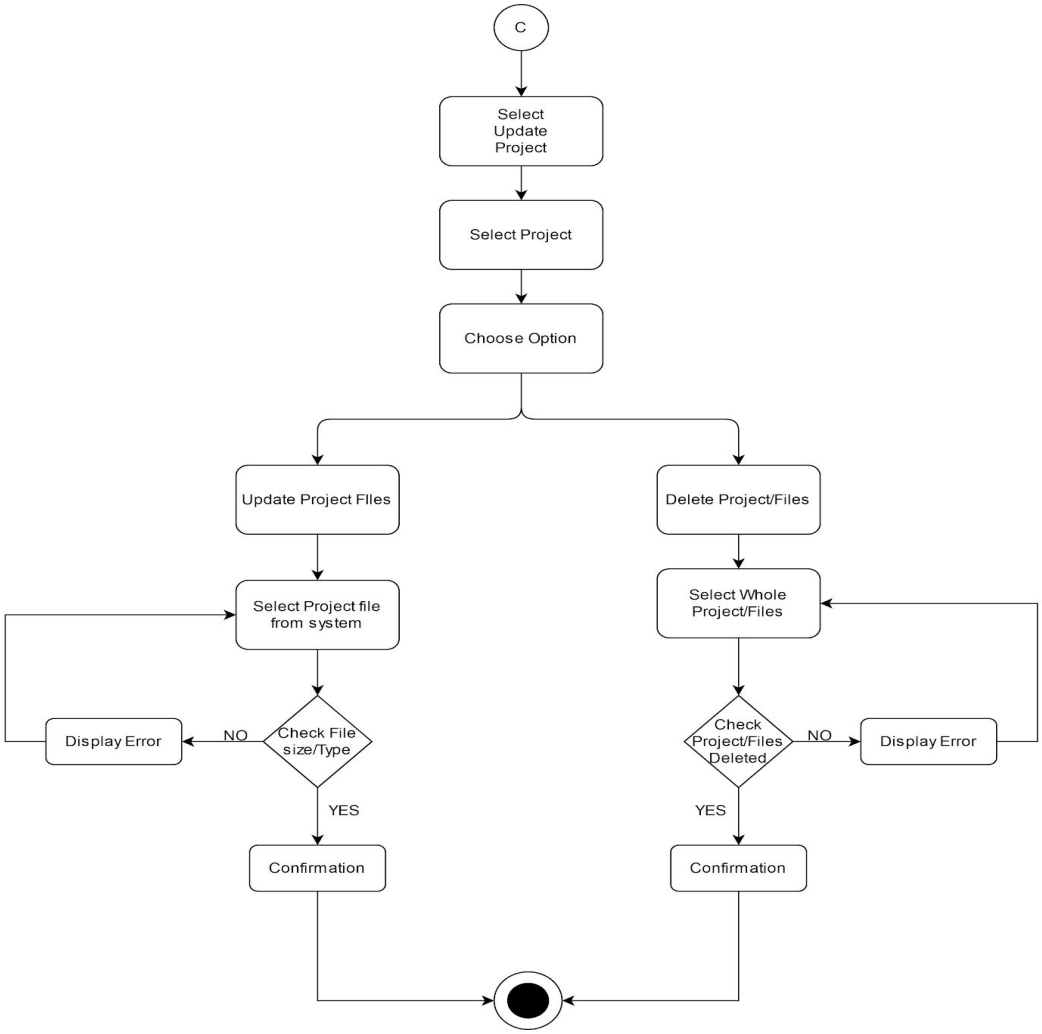


Project Discussion (Q&A,comment) Activity

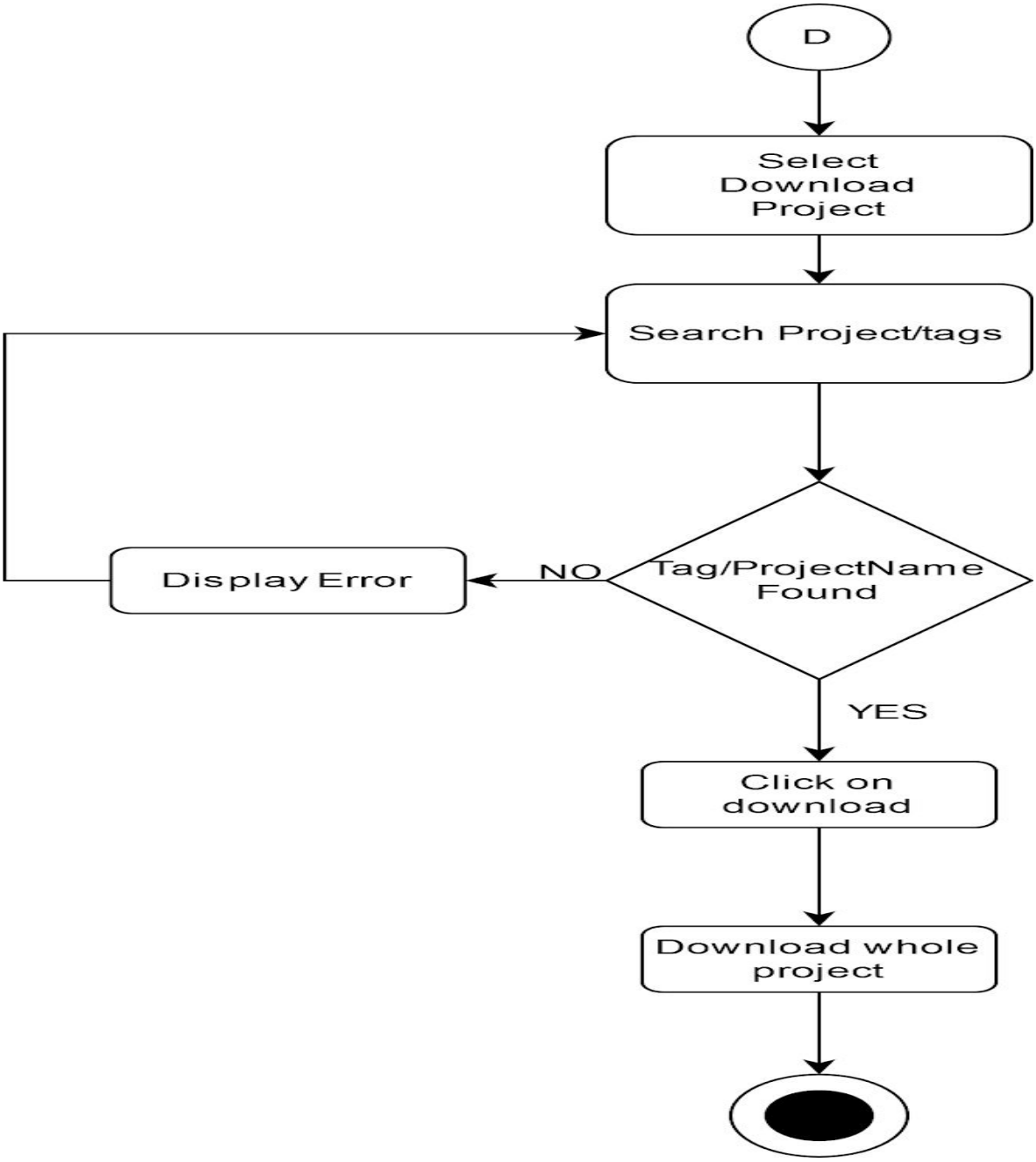
Upload Project Activity



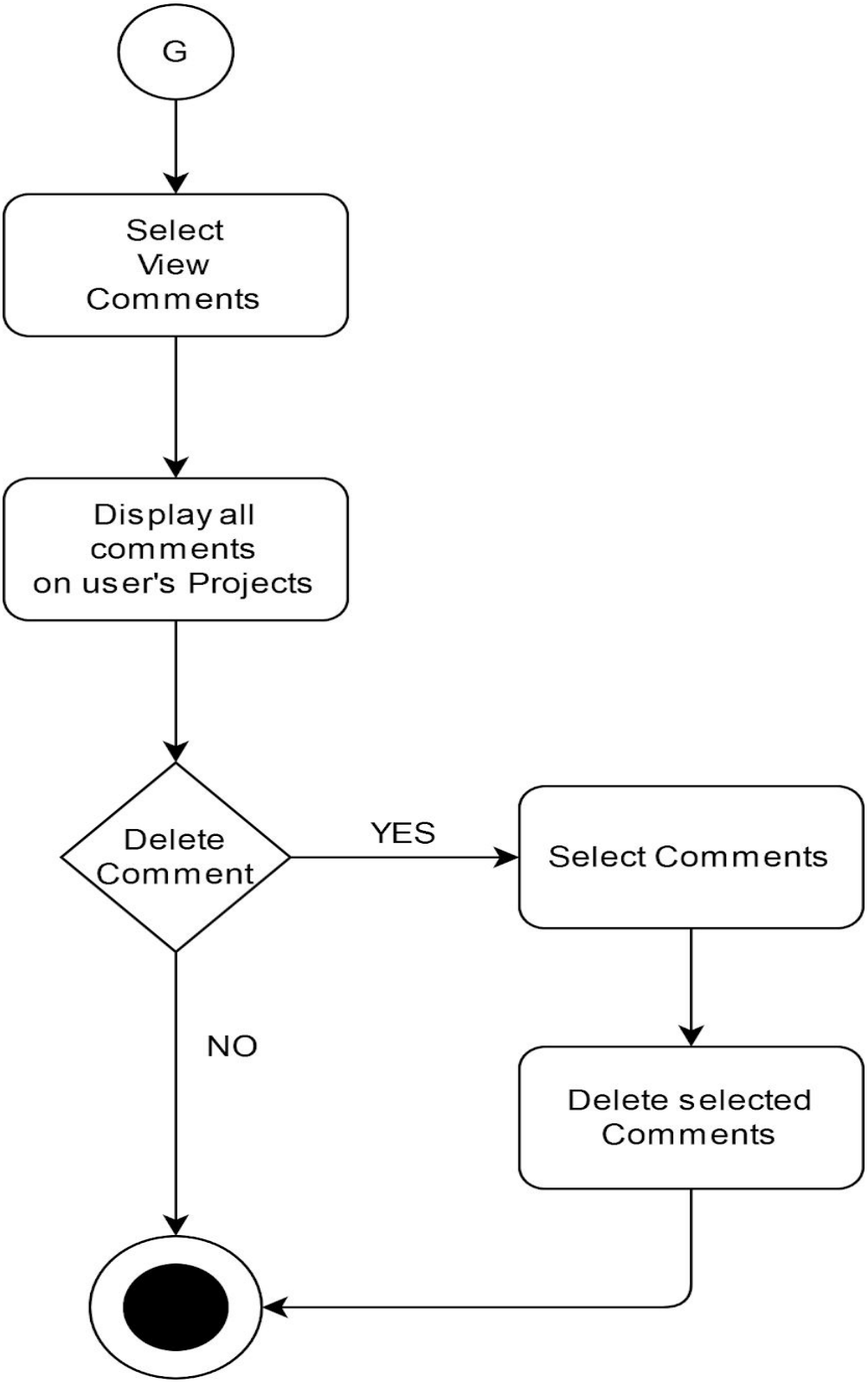
Update Project Activity



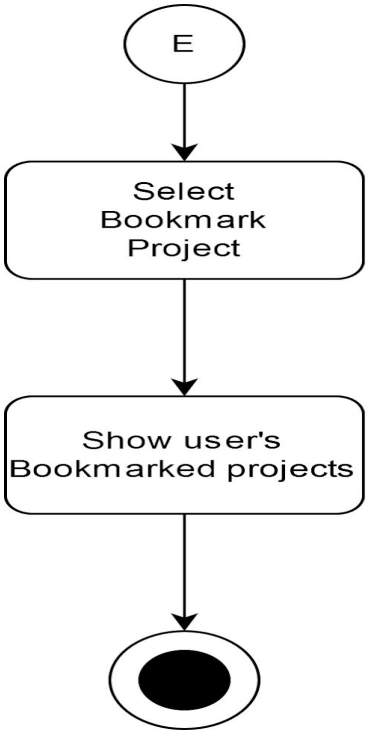
Download Project Activity



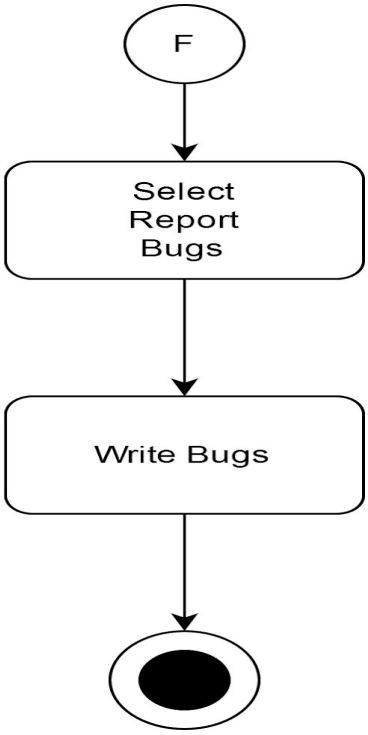
Comment Project Activity



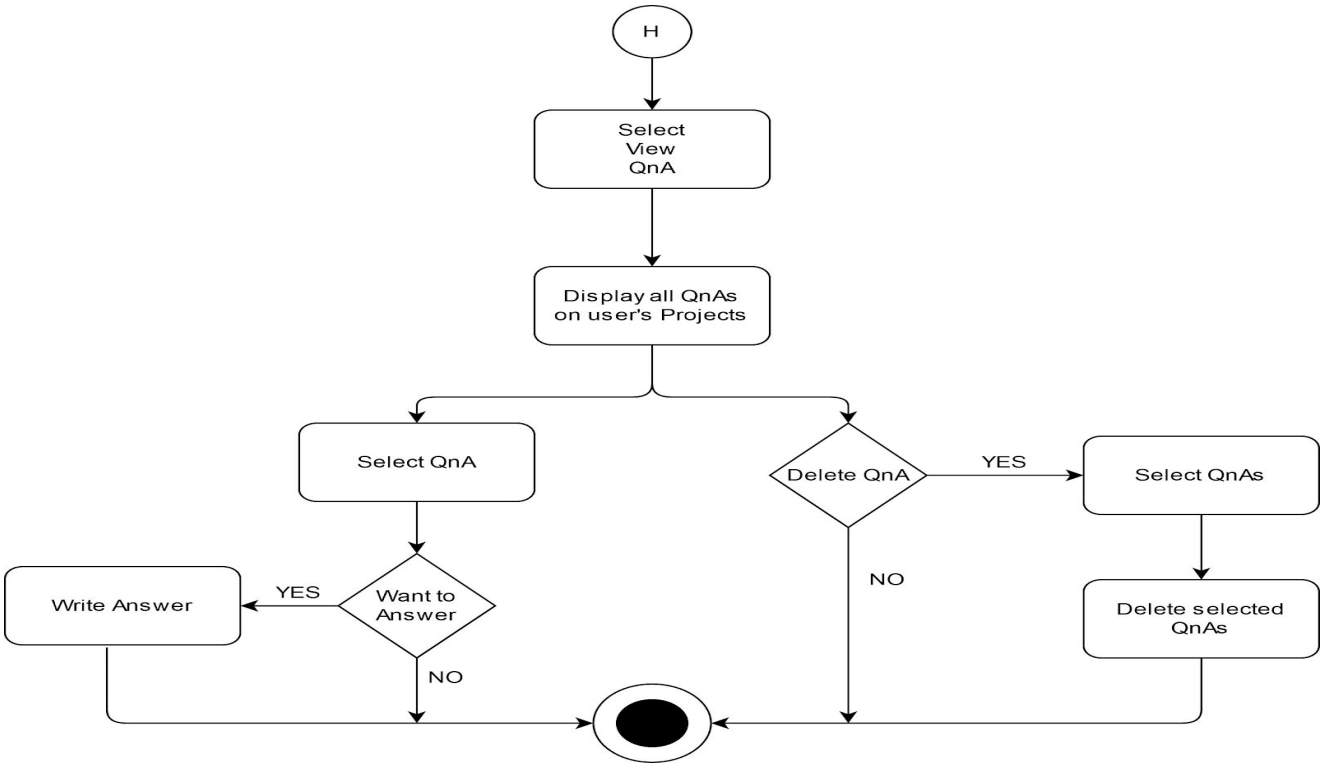
Bookmark Project Activity



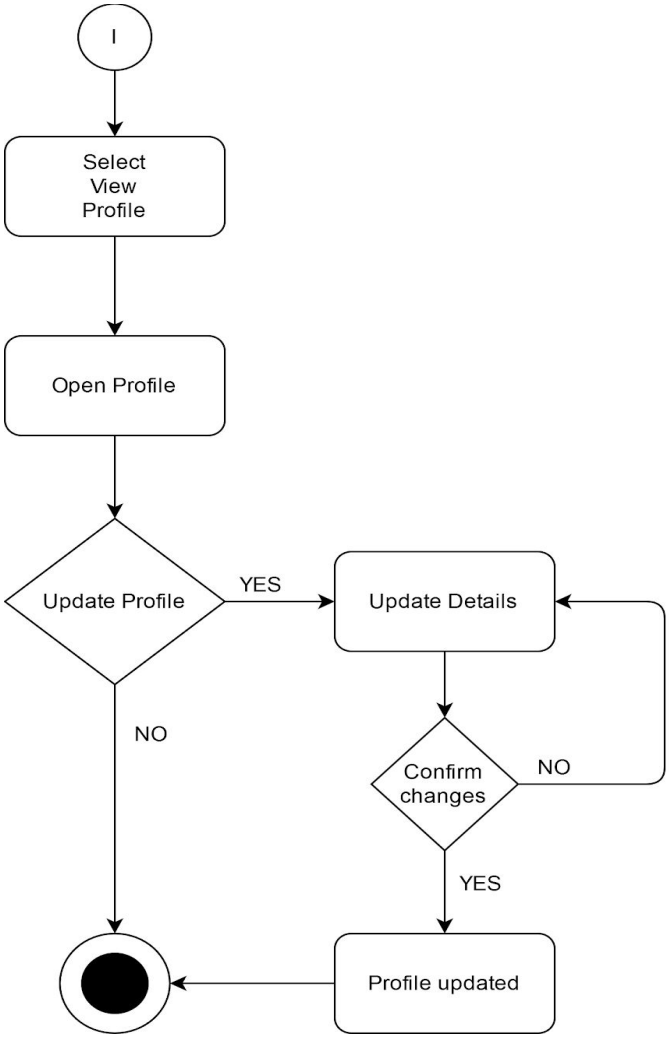
Report Bug Activity



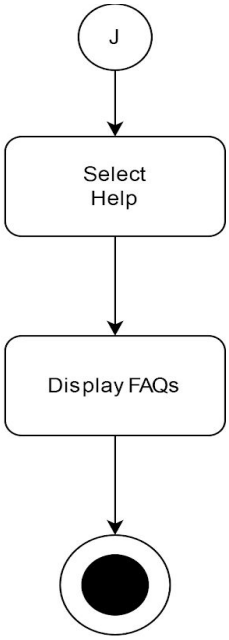
Q & A Activity



Edit Profile Activity



Help



Activity of Admin