SOFTWARE ENGINEERING

SOFTWARE REQUIREMENT SPECIFICATION
(SRS)

DISCUSSION PORTAL
WEB APPLICATION

By:-

PUJA KUMARI	IIT2018191
NEHAL SINGH	IIT2018119
PALAK MITTAL	IIT2018117
PRABHA KUMARI	IIT2018195

1. Introduction:

This is basically a web application.
This is a Student discussion Portal where Students i.e USERS can post questions/Queries,
Reply to Each Others questions.

1.1 Purpose:

To provide ease of teaching for teachers and for students on how they can post their queries,
help others, raise doubts etc.

1.2 Scope:

We describe what features are in the scope of the software and what are not in the scope of the
software to be developed.

In Scope:
a. Application for the students of IIIT Allahabad.
b. Students can retrieve information regarding Assignments/Homework.
c. Communication about the class related news to Students using the app.
Out of Scope:
a. There is no communication among the IIIT Allahabad and other colleges via this application.

1.3 Definitions, Acronyms, and Abbreviations:

Acronyms and Abbreviations:
a. SRS: Software Requirement Specification

Definitions:

a. This is an web Application for IIIT Allahabad's Students and Faculty for effective
   administration
and management of the Academic related issues.

1.4 References:
IEEE SRS Format

1.5 Overview:
The rest of this SRS is organized as follows:
   Section 2 gives an overall description of the software. It gives what level of proficiency is
   expected of the user, some general constraints while making the software and some
   assumptions and dependencies that are assumed. Section 3 gives specific requirements which
   the software is expected to deliver. Functional requirements are given by various use cases.
   Some performance requirements and design constraints are also given.

2. Overall Description:
2.1 Product Perspective:
This is a Student discussion Portal. Where Students i.e USERS can post
questions/Queries, Reply to Each Others questions.
Teacher i.e SYSTEM USERS can control profiles of Users, upload important
Documents such as Homework/Assignments for Users, Reply to their queries.
All of them will be controlled by A SYSTEM ADMIN, who can add the users, delete
their profiles and Also Manage Backup and Database.

2.2 Product Functions:
This application supports the following use cases:

Use cases	Description of use cases

Admin:	
Authorized login/logout	Allows Admin to login/logout.
Add	Add User or System User
Manage Database	Manage and Restore ,Backup of Application
Manage Users/Forums	System Admin can manage/delete/view the users profiles and forum pages.
Change Password	Allows to Change passwords.
Post & Reply	Admin can Reply to commands and queries of Users & Resolve Them
SYSTEM USER	
Authorized Login/Logout	Allows System User to login/logout
Change Password	Allows to change password
Announcements	Make Announcements acc. And class schedules
Assessments	Held Online Test, Post Assignments and upload Marks.
Homework	Publish Homework/Daily Attendance.
Manage Post/forum	View previous posts, students profile, delete old posts etc.
Message (personal)/Comments/Replies	Most important part of this portal, System User can reply to comments of users/students & solve Their doubts.

Update Profile	Add new Things to your profile like New subjects.
Manage Registration	Register new users
USER(STUDENT)	
Authorized Login	Allows System User to login/logout
Change Password	Allows to change password
Update Profile	Add new Things to your profile like New subjects/classes.
View other user's profile	View others user's profile and msg them
Add comments	Add comments on H.W/Assignments posted by System User
Search Topics	Search from already existing queries.
Create Topics	Post New questions and queries
View Announcements	Posted by System User

2.3 User Characteristics:
a. The user should be familiar with the operation of web Applications.
2.4 Principal Actors:
The three principal actors in this application are "Admin","Users" and "System Users".
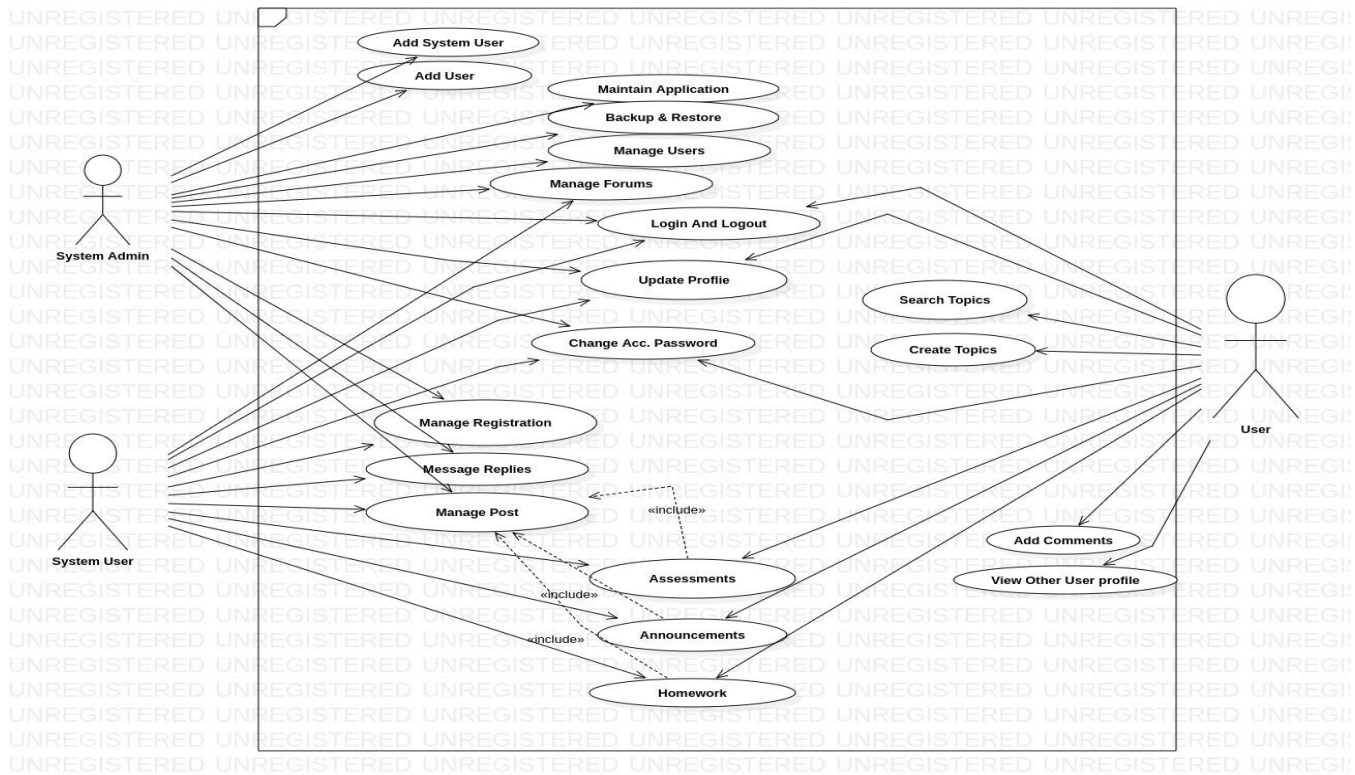### 2.5 General Constraints:
b. Working on this application requires Internet connection.

c.This is a single-user Application. Every student must have this application on their device.

2.4 Assumptions and Dependencies:

a. Working on a discussion forum is dependent on the availability of Internet connection.
b. Admin must be active to insert all the required information on the web application.

APPENDIX A: USE CASE DIAGRAM

3. Specific Requirements:

3.1 Functional Requirements:

We describe the functional requirements by giving various use cases.

Use Case 1:

Name: Authorized login / logout

Summary: Allows Admin to login / logout.

Actors: Admin

Pre-conditions:
- Internet connectivity.
- Only for allowed mail ids.

Main success scenario:
- Admin clicks on the login button.
- This checks for the authorization of login

Extension:
Id or password incorrect. Shows error dialog box.

Post-condition:
Admin can now access all features .

Use Case 2:

Name: Add

Summary: Add User or System User

Actors: Admin

Pre-conditions:
Internet connectivity.
Only for registered students and faculty.

Main success scenario:
- Admin clicks on the login button.
- App checks for the authorization of registered Students and Faculty.

Extension:
If students and Faculty are not registered ,then do not add them.

Post-condition:

Admin can now access all details of Users(Students and Faculty).

Use case-3.
Name: Manage Database
Summary: Manage and Restore ,Backup of Application
Actors: Admin
Pre-condition:
Internet connectivity.
Only for registered students and faculty.
Only for allowed mail ids.
Main success scenario:
Manage all the operations of student and faculty class.
Manage all the operations of Feedback, faculty and student descriptions.
Extension:
Admin can not restore the data that is not registered and show errors.
Post-condition:
Admin login to the system, control and restore the data and backup of application.

Use case-4
Name: Manage Users/Forums
Summary: System Admin can manage/delete/view the users profiles and forum pages.
Actors: Admin
Pre-condition:
Internet connectivity.
Only for registered students and faculty.
Main success scenario:
It authenticate users and also handles the user management activities such as crea
-ting new user accounts, removing accounts from the system etc.
Admin user can search student,view description of a selected student,add student,
Update student, and delete student.

Extension:

If there are any errors in this component implements "control access privilege matrix

Post-condition:

Admin logins to the system and manages all the functionalities of students and faculty.

Use case- 5

Name: Change password

Summary: Allows Admin to change password

Actors: Admin

Pre-conditions:

• Internet connectivity.

• Requires system Admin to login.

Main success scenario:

• Clicking on the change password option will send a reset password link through the email.

• This checks for the authorization to change password.

Extension:

New password needs to be different from the old password and it's logged out from all devices after the password is changed.

Post-condition:

Admin can now safely access the app.

Use case-6:

Name: Post & Reply

Summary: Admin can Reply to commands and queries of Users & Resolve Them

Actors: Admin

Pre-conditions:

• Internet connectivity.

• Requires system Admin to login.

Main success scenario:

• Reply the students queries if having any problem then resolve them

• Adding and storing the data in a database table because if same type queries comes again then see the solutions.

Extension:

• If students are not registered then not give the reply.

Post-condition:

Students and faculty find their solutions to their queries.

Use Case 7:

Name: Authorized login / logout

Summary: Allows System User (Teacher)to login / logout.

Actors: System User

Pre-conditions:

• Internet connectivity.

• Requires faculty id to login.

Main success scenario:

• System User clicks on the login button.

• App checks for the authorization of login.

Extension:

Id or password incorrect.

Shows error dialog box.

Post-condition:

System User can now access all features of the app.

Use Case 8 :

Name: Change password

Summary: Allows System User(Faculty) to change password

Actors: System User(Faculty)

Pre-conditions:
  • Internet connectivity.
  • Requires system User(Faculty) to login.

Main success scenario:
  • Clicking on change password option will send a reset password link through the email.
  • App checks for the authorization to change password.

Extension:
   New password needs to be different than the old password and its logged out from all devices after the password is changed.

Post-condition:
   System User(faculty) can now safely access the app.

Use Case 9:

Name: Announcements

Summary: Make Announcements acc. And class schedules.

Actors: System User(Teacher)

Pre-conditions:
  • Internet connectivity.
  • Only for allowed mail ids.

Main success scenario:
  • System User clicks on announcement button and the announcement will seen to
    all the   users .
 • Rescheduled class timing and venue will also be reflected in this section.

 Extension:
    Faculty can also email those announcements to students.

 Post-condition:
   He/She can either edit or remove the announcement in case of any disperacy.

Use Case 10:

Name: Assessments
Summary: Help Online Test ,Post Assignment and Upload marks.
Actors: System User(Teacher)
Pre-conditions:
  • Internet connectivity.
  • Only for allowed mail ids.
Main success scenario:
 • Faculty can upload the assignment and student and submit their assignment by
   clicking on the upload button.
 • System users(faculty) can help users(students) on online tests.
 Extension:
 • Faculty can set the deadline and after the deadline assignment will not be accepted.
 • In case of lab test ,faculty can set time in hour .After that duration assignment will not
    be accepted.
 Post-condition:
   He/She can either edit or remove the announcement in case of any discrepancy.

Use Case 11 :

Name: Homework
Summary: Publish homework and daily attendance.
Actors: System User(Teacher)
Pre-conditions:
  • Internet connectivity.
  • Only for allowed mail ids.
Main success scenario:
 • Faculty can upload attendance by clicking on upload button and the user(Student)
   can view their attendance and also can raise a query in case of wrong attendance.
 • Faculty can upload the homework for only practice purpose and student can ask
   query regarding those homework.

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Use case 12:

Name: Manage Users/Forums

Summary: View previous posts , student profile ,delete old pots etc.

Actors: System User(Teacher)

Pre-condition:

  Internet connectivity.

  Only for registered faculty.

Main success scenario:

  Faculty can see their previous posts and can delete their posts.

  And also faculty can see the profile of any student .

Use Case 13 :

Name: Message (personal) /Comments /Replies

Summary: Most important part of this portal ,System User can reply to comments
             of users/students and solve their doubts.

Actors: System users(Faculty)

Pre-conditions:

  • Internet connectivity.

  • Users should be part of that course.

Main success scenario:

  • Everyone is able to view the comment and reply under it.

  • Faculty can comments on or reply to the students queries if having any problem
     then resolve them

Post-condition:

  Students can openly communicate and there can be healthy discussion regarding
     any topic.

Use Case 14:

Name: Update profile

Summary: Add new things to your profile like new subjects.

Actors: System users(Faculty)

Pre-conditions:
- Internet connectivity.
- Faculty click on update profile tab.

Main success scenario:
- Faculty click on update profile tab.
- Faculty can also add new subject to their profile and make announcement of new subject to student by clicking on the announcement section..
- Faculty are able to view the uploaded profile..
- Faculty fills the updated profile details.
- Faculty returns back to the home screen.

Post-condition:
Faculty has successfully updated the profile and viewed it.

USERS(Student)

Use Case 15:

Name: Student Login/Logout

Summary: Allows Students to login / logout.

Actors: Users(Students)

Pre-conditions:
- Internet connectivity.
- Requires student id to login.

Main success scenario:
- Student click on the login button and after login users are redirected to the home page.
- This checks for the authorization of login

Extension:
Id or password incorrect. Shows error dialog box.

Post-condition:
Students can now access all features of the app.

Use Case 16:

    Name: Change password
    Summary: Allows Students to change password
    Actors: Users(Students)
    Pre-conditions:
      • Internet connectivity.
      • Requires student id to login.
    Main success scenario:
      • Clicking on change password option will send a reset password link through the email.
      • App checks for the authorization to change password.
    Extension:
     New password needs to be different from the old password and its logged out from all devices after the password is changed.
    Post-condition:
     Students can now safely access the app.

Use Case 17:

    Name: View/Update profile
    Summary: Allows Students to view and update profile.
    Actors: Users(Students)
    Pre-conditions:
      • Internet connectivity.
      • Students click on the view/update profile tab.
    Main success scenario:
      • Students clicks on view/update profile tab.
      • Students are able to view the uploaded profile..
      • Students fills the updated profile details.
      • Student returns back to the home screen.
    Post-condition:
     Student has successfully updated the profile and viewed it.

Use Case 18:

Name: View other users profile
Summary: View others user's profile and message them
Actors: Users(Students)
Pre-conditions:
  • Internet connectivity.
Main success scenario:
  • Clicking on the other users icon, one can view the other users profile
  • Users can send messages to each other.
Post-condition:
  Students can view each other's profile and can communicate with each other.

Use Case 19:

Name: Add comments
Summary: Add comments on H.W/Assignments posted by System User
Actors: Users(Students)
Pre-conditions:
  • Internet connectivity.
  • User should be part of that course.
Main success scenario:
  • Everyone is able to view the comment and reply under it.
Post-condition:
  Students can openly communicate and there can be healthy discussion regarding any topic.

Use Case 20:

Name: Search topics
Summary: Search from already existing queries.

Actors: Users(Students)

Pre-conditions:

   • Internet connectivity.

   • User should be logged in.

   • Search bar at the top.

Main success scenario:

   • Searching from the search bar would search any query from all the accessible data to that user.

Post-condition:

   Students need not to do the manual searching of the topics and thus it would save time.

Use Case 21:

Name: Create topics

Summary: Post New questions and queries

Actors: Users(Students)

Pre-conditions:

   • Internet connectivity.

   • Users should be logged in.

Main success scenario:

   •Under the add new topic section, students can add topics or discussion or a blog which could be helpful for the course.

Post-condition:

   App will become more useful since it would contain the contributions from the user side as well.

Use Case 22:

Name: View announcements

Summary: Posted by System User

Actors: Users(Students)

Pre-conditions:

   • Internet connectivity.

• Requires student id to login.
Main success scenario:
• Users will receive the notification as soon as the announcement is made.
Post-condition:
   Users can then easily get updates of what is class timing shifted to, or if there is going to be an assessment or evaluation in a sorted way, that is categorised by course name.

Non-Functional Requirements:

Future Aspect:
• **Dashboard and feedback**
• **Restriction in login: student login with college mail id and admin login with pre-registered mail ids only.**
• **Admin should be able to push notifications to be shown on the student's interface, about any specific requirements/demand from any specific student.**
• **Admin can remove forcefully any users in case of any unwanted activity done by him/her.**

Hardware Requirements:
• **Should run on a web browser. This application requires 2 main software(XAMPP and PHPmyadmin) to run.So the system should have those much of space to download and install those sotfware.**

Software Requirements:
- **XAMPP version 5.6**
- **PHPmyadmin version 5.6**
- **starUML**
- **SmartDraw**
- **Sublime Text Editor**