SOFTWARE REQUIREMENTS SPECIFICATION

FOR

PROJECT SUBMISSION PORTAL

Indian Institute of Information Technology, Allahabad

Version 1.0

Under the Supervision of

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1. Introduction

1.1 Need and Purpose

In current education system projects play a major role in determining the students capabilities. In many educational institutions the course of project comes very early in their academic career. So, maintaining a database for all the projects developed by their students is important, as they may be used in future, for various purposes. And Plagiarism is also one of the important aspect which should be taken care of to maintain the originality of work.

Viewing through institution perspective, maintaining a projects database helps in getting the information about area of interest where most students are interested in working and encourage them accordingly.

From students perspective submission of their work and notifications regarding project status, keeps them much more updated.

A faculty who is guiding many teams may know the status of each projects and can easily interact or notify regarding any further updates regarding the project. He may also check if the students are not showing projects that are already submitted previously.

1.2 Intended Audience

This SRS would be used by the following persons:

Database Administrator: Admin is advised to read all the sections as to get an overall idea about the working and functionalities provided to each user.

Guides : Guides are advised to read the section of "Users classes and
         Characteristics" to get an overall idea of functionalities provided to them.

Students: Students are advised to read the section of "Users classes and Characteristics" as to understand, which functionalities they are provided.

Testers: It can be used as a documentation to know the interfaces.

1.3 Overview of Document

The first section of SRS gives a brief introduction on "**Project Submission Portal"** This section also provides the reference information for further study, intended audience and need & purpose of the product.

The second section provides an overall description of the application, product features & functions, users and operating environment(hardware, software and external).

The third section is about the specific requirements like external interfaces, performance requirements, design constraints and additional comments.

The Appendix section has definitions of some notations used in the document.

1.4 References

Internet Sources:

[1] www.stackoverflow.com   Date: 10/10/2016 Time: 4:00 P.M
[2] www.materializecss.com   Date: 15/10/2016 Time: 5:00 P.M
[3] www.w3schools.com   Date: 23/10/2016 Time: 4:20 P.M
[4] www.tutorialspoint.com   Date: 23/11/2016 Time: 5:30 P.M
[5] jplag.ipd.kit.edu   Date: 30/11/2016 Time: 6:30 P.M

Books Referred :

[1] Fundamentals of Database System, Sixth edition by Elmasri, Navathe.
[2] Build Your Own Database-Driven Website Using PHP & MySQL by Kevin Yank.
[3] Database System Concepts, fifth edition by Korth, Sudarshan.
[4] The Complete Reference JAVA, seventh edition by Schildt.

2. Description

2.1 Features and Functions

2.1.1 Features

**Project Submission Portal** can be used by Faculties who are guiding the students for projects and students depending on project status. For students it can be used to submit the project details, reports, presentations and codes of their projects. For guides it can used to see the status of each and every project under them. It can be accessed using any general web browser with graphical interface and satisfies the software requirements.

Our product mainly consists of three parts i.e. the _Admin Functionalities_, _Guide Functionalities_ and _User(Student) Functionalities_. The admin functionalities would mainly deal with the features like adding a new guide & editing a guide properties, adding a project member to already registered project & deleting a project member from existing project, deleting a project and checking for plagiarism. The Guide functionalities would mainly deal with features like locking a project, deleting a project, checking the project details and checking plagiarism. The Student would mainly deal with features like submitting the project details, reports, presentations, codes and knowing their current status.

All the three features connect to a main database server for storing retrieving the data of the projects.

2.1.2 Functions

Admin functionalities requires admin login credentials. It handles following :

- Adding a new guide & editing a guide properties.
- Adding a project member to already registered project.
- Adding a new keyword and editing keyword properties.
- Deleting a project member from existing project.
- Deleting a project.
- Plagiarism Check

Guide functionalities requires guide login credentials. It handles following :

- Locking a project.
- Deleting a project.
- Checking the project details.
- Updating availability status.
- Plagiarism Check

Student functionalities requires student login credentials. It handles following :

- Submitting project details.
- Submitting project report.
- Submitting project presentation.
- Submitting project code.
- Submitting SRS document of the project.
- Downloading the project properties.

## 2.2 Users classes and characteristics

Students : The students would be the main users of the Project Submission Portal. Once they login through their credentials they register themselves under a guide and submit project details. The guide has the control whether they can reject or accept the project according to their interest. Once the guide accept their project they need to submit presentation, report and code after completing them respectively.

Guides : Guides need to login through their credentials, they can reject or accept the projects of students who have registered under them. They have a notification system, when any of their project properties are updated they are notified. They have the control over their availability status. locking of projects is another feature provided to guides once the project is completed. The guide also has the option to check plagiarism over the submitted projects.

Admin : Admin has to login using their login credentials. Then have the control over all the database. If any faults occurred during the registration process or insufficient data availability, the admin has the functionalities to correct them. The admin has the control to check plagiarism over all the submitted projects.
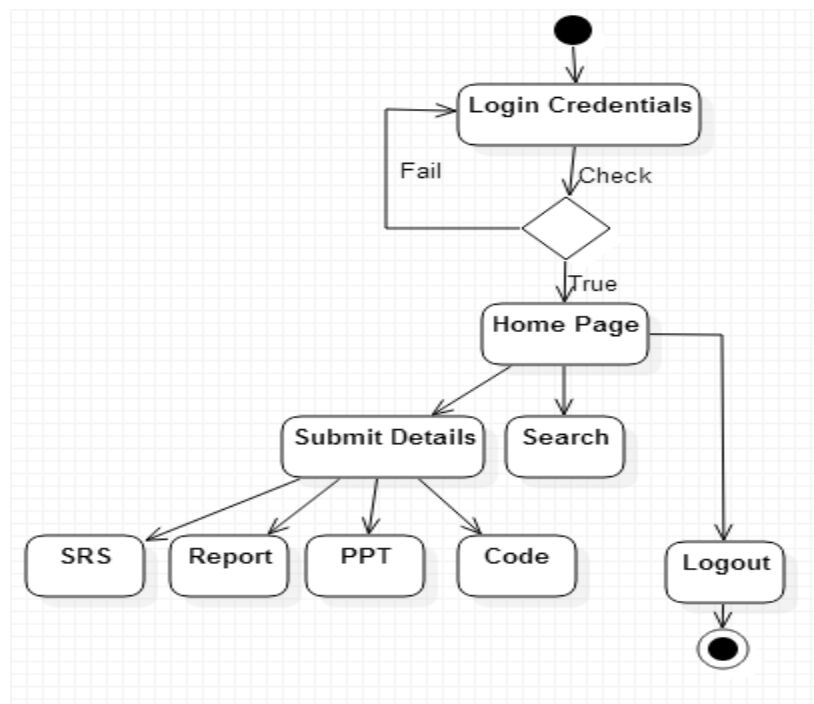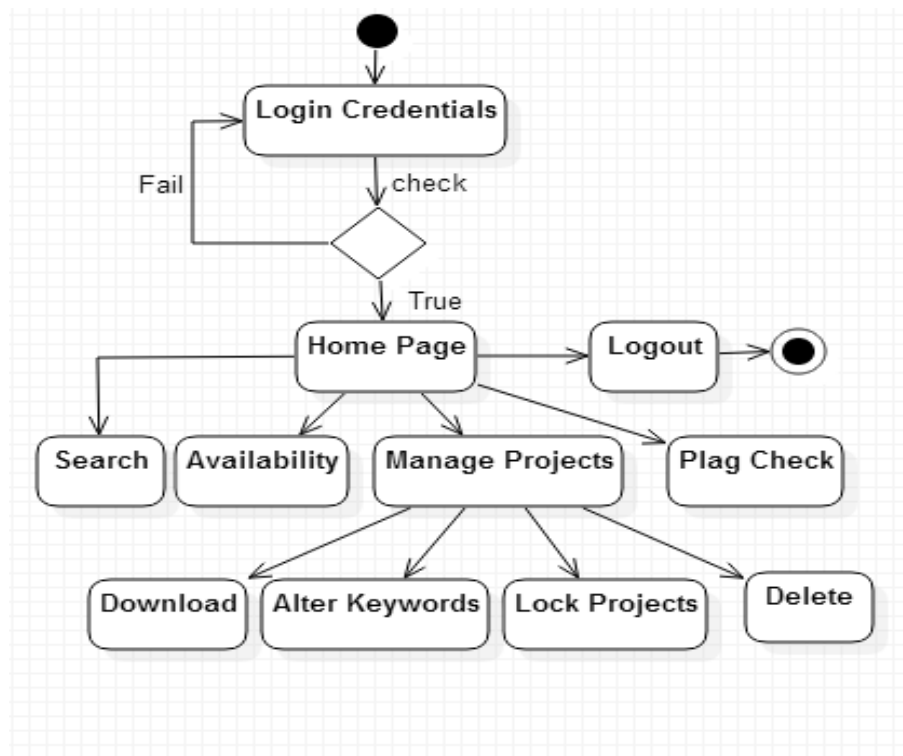
2.3 UML Diagrams
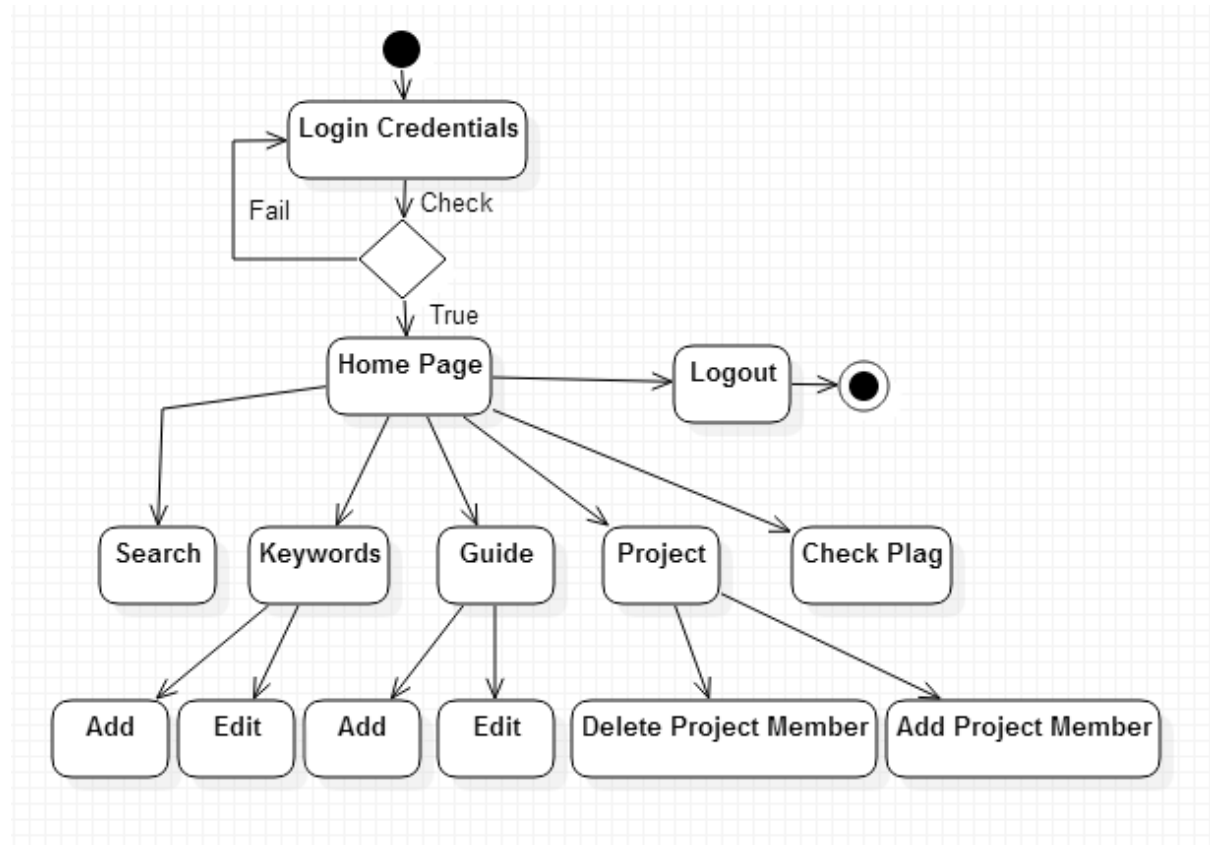
2.3.1 Use Case Diagram
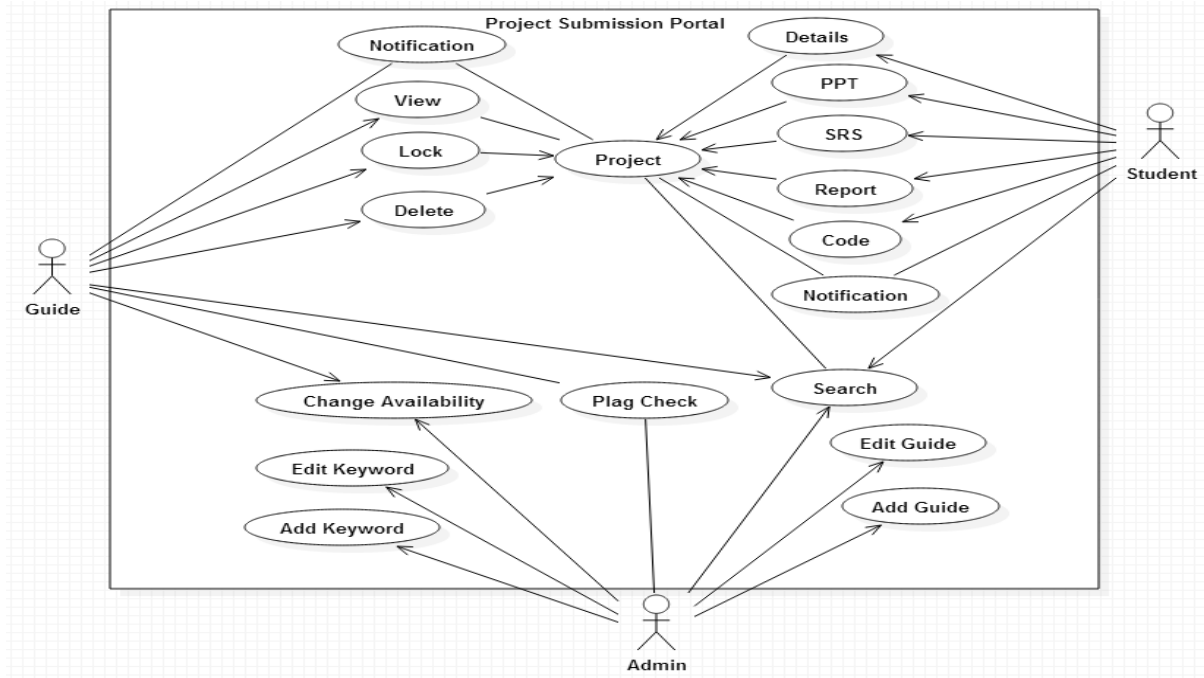
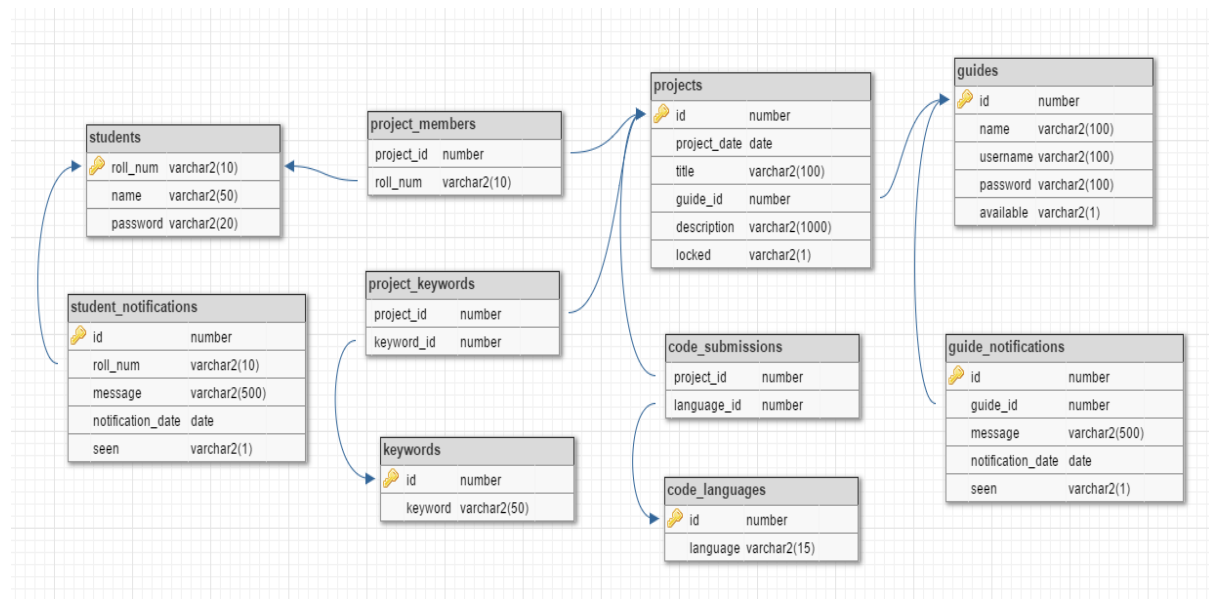## 2.3.2 Activity Diagrams:

Student:

Guide:

Admin:

2.3.3 Database Structure

2.4 Operating Environment

2.4.1 Hardware

Project Submission Portal requires an entry-level PC for small number of projects(like, when small data is stored locally). For larger no. of projects a server class machine is recommended.

2.4.2 Software

The Project Submission Portal sever can run on any recent version of Linux, such as Ubuntu, Fedora etc and Windows machines. It requires:
1. Gson 2.2.4 or later
2. Glassfish 4.0 or later
3. OJDBC 6.0 or later
4. JDK 1.8 or later
5. JPlag 2.11.8[5] or later

The Project Submission Portal User-Interface works with any of the following graphical browsers on any hardware and OS:

1. Firefox 5.0
2. Internet Explorer 7.2
3. Chrome 2.0
4. Opera 2.3

Higher versions of these browsers are likely to work but cannot be guaranteed. With update of HTML, the interface may get deformed, so it is recommended the Project Submission Portal software be updated on a regular basis.

2.4.3 External

The Project Submission Portal requires 24-hr electricity supply and communications for data update to be timely. Democratic and free society is recommended but can work equally well for corrupt regimes.

3 Specific Requirements

3.1 Performance Requirements

Database can store details of upto about a thousand projects, but that can vary according to increase in number of projects, and would depend on data storage capacity of server and not on database.

The response time depends on size of database due to searching process, but still the response by server will be just the time to search, as it would be accessed from specific devices in the college the server time won't much lag.

3.2 Design Constraints

- Enhancements to the security features might lead to performance overhead.
- Central Server should be on-line round the clock.
- As Plagiarism is checking of codes, large number of files increases the time of result.
- As the JPlag does not compare with the internet, the plagiarism checking is restricted to local files.

3.3 Overview of Data Requirements

The product is completely data oriented.

In Admin functionalities, the admin controls over the data and perform some actions to get the required data.

In Guide functionalities, the guide has the control over viewing project details and rejecting it, knowing the status of projects, dowload the project related material(report, presentation, code, SRS) for further usage.

In Student functionalities, the student can upload the project related materials(report, presentation, code, SRS) and can input the details of the project for registration.
For plagiarism checking we use the projects submitted by students.

3.4 Additional Comments

This document describes a SQL and Java based Online application for purpose of implementing a Project Submission Portal, for a B.Tech. 7th Semester project under the course IPRJ708P at Indian Institute of Information Technology, Allahabad, Allahabad, Uttar Pradesh, India, in academic year of 2016.

This document describes a fictitious software product purely for the above mentioned academic purpose. It is not related in any way to particular existing or proposed real product. This document doesn't guarantee the implementation to be secure, efficient or error-free.

Appendix A

The notations being used in the documents are mentioned below:

Project Submission Portal Name of the product being described by this document

Guide A faculty member who is guiding the projects done by student.

Student A student is a member of college who learns from academic courses and perform academic activities according to curriculum to complete the graduation.

Project Course of academic curriculum which has the implemented part of theoretical study.

Plagiarism checking: The practice of checking whether someone's work or ideas is original.