Software Requirements Specification

for

BUP Admission Portal (After Admission)

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

Building a website that may be used for BUP post-admission exams is the primary purpose of this project. BUP administration is responsible for manually handling this activity. As a result, simplifying and streamlining the post-admission procedures will be one of the primary goals of this project. After you have finished both the written and oral portions of the test, you will have access to all of the features that are included in this program. This will function as a faithful factotum for the BUP administration, and it will fulfill all of the obligations required to offer a student with the subject they have earned by adhering to the essential standards.

1.2 Document Conventions

The IEEE document convention has been followed in the creation of this publication. The Institute of Electrical and Electronics Engineers (IEEE) style is the style that is standard for all IEEE publications and periodicals. It is also often used for papers and articles in the subjects of engineering and computer science since it is the style that is officially recognized by IEEE. The Notes-Bibliography system used by IEEE is comparable to the Chicago/Turabian style, which mandates the inclusion of endnotes and the numerical citation of references inside the body of the text.

The whole document is formatted in "Times New Roman," which is the typeface that was used to make it. The headers and subheadings have been formatted using strong type to draw the attention of the readers. Headings are written using a font size of 14, while the rest of the content, including subheadings, is typed using a font size of 12.

1.3 Intended Audience and Reading Suggestions

Due to the fact that this program was developed for use after admission, there will be two distinct categories of users. One of them is a student, while the other works in

administration. The "Admin" user will have complete access to the whole database, and he or she will also have the ability to make any modification to any aspect of the data pertaining to any student. The Admin user will have the ability to add, amend, and remove any data.

The user that is logged in as the student will have access to a dashboard that displays his identification as well as his results. On the admissions exam, he will be shown a breakdown of his scores according to the subjects they cover. As a consequence of meeting the prerequisites properly for each topic, he or she will be able to add that subject to the list of options available to him or her. The student has the option of keeping the auto-migration button turned on in order to be automatically moved to the next available higher-level topic in his chosen list. The student will not have the ability to alter any of the data in any way.

1.4 Product Scope

The BUP authority will employ this product in order to improve the effectiveness of the after-admission test processes that they carry out. The primary objective of this product is to finish the internal processes in a manner that is speedier and less laborious so that a student may receive the topic that they want to study as soon as possible. There will be no business or commercial concerns brought up by the fact that this software will be developed for a specific purpose by the BUP authority.

1.5 References

- IEEE 8030-1998 standard for writing SRS document
- I Sommerville, Software Engineering ,8th edition, Addison Wesley,2007

2. Overall Description

2.1 Product Perspective

Post admission test site would be a successful and suitable strategy for dealing with the issues the authorities experience when performing the after-admission operations manually. This can be accomplished by reducing the amount of time spent on each activity.

2.2 Product Functions

2.2.1 Administrators

- Admins have the ability to publish the results of the poll.
- Input, amend and remove marks.
- Administrators are able to see the aggregated grades of all students at once.
- Ensure that you are aware of the preferred areas of study for each individual student.
- You should have a comprehensive list of the available topics and empty seats.
- Be in possession of information about Quota.
- Determines which pupils meet the minimal criteria for a topic based on the students' grades and the quota for that subject.
- Capable of controlling and managing the system of automatic migration.

2.2.2 Regular Users (Normal) (Students)

- Users have updated marks.
- Allows for the selection of subjects when those prerequisites have been met.
- Keep track of each subject's grades in minute detail.
- Have the ability to decide for themselves whether or not they wish to make use of the auto-migration option.

- Following each migration, they will be able to check to see whether the topic of their choice is still accessible.

2.2.3 User Classes and Characteristics

- Users of this software include students who have been accepted into the program, members of the Admission Committee who are responsible for post-admission processes, and Administrators who will be responsible for website maintenance.
- Students and members of the admissions committee will be expected to demonstrate a fundamental understanding of computer and internet navigation.
- Administrators are required to have expert knowledge across all available modules and the ability to solve any problems that may arise as a consequence of a system crash, loss of power, or any other kind of emergency.

2.3 Operating Environment

The Post Admission Portal is a piece of software that functions faultlessly on Windows and can be accessed by web browsers like Google Chrome and Mozilla Firefox. The functionality of this program does not rely on the presence of any specific hardware platform.

2.4 Design and Implementation Constraints

- A database has to be used to store all of the information pertaining to the students, including their names, topics, grades, seats, and quotas.
- My SQL Server will operate as both the database and the SQL engine for this project.
- Students with a valid User ID and password are able to log in from any device with an internet connection provided they have those credentials.
- The only web protocols that are supported by the system are HTTP and HTTPS.

2.5 User Documentation

For the purpose of system maintenance, a one-of-a-kind document that describes the system in the most straightforward manner feasible should be prepared.

2.6 Assumptions and Dependencies

- There are currently classes that you may enroll in.
- The information may be accessed and used as necessary.
- In order to store the database, Microsoft SQL server is used.

3. External Interface Requirements

3.1 User Interfaces

1. Login: Entering the System Presume that all applicants have been provided with a user ID and password since this is a post-admissions portal. A candidate may access his profile by logging in with this username and password combination. In the event that the user enters either their username or password in an improper manner, the system will display an error message. After a candidate has successfully signed in, they will be able to see the dashboard, which includes many distinct domains such as their profile, results, topic choice form, and so on. In this part, the results will reveal the individual's subject-specific grades as well as their overall rank.

2. Result: The end result is that the aggregate results of all faculties and units will be published in pdf format there. Candidates will need to log in to their profiles in order to see their personal results organized by topic.

3. Help Center: The help center allows candidates to have direct communication with the administrator by having them fill out a form that includes the issue type, problem specifics, and a personal email address. In addition, they may receive assistance by calling the toll-free number or sending an email. Problems with logging in, recovering user IDs and passwords, and other types of technical issues are covered in this area.

4. **Notice:** This includes both general announcements as well as notices specific to certain departments or faculties, as well as directions for the next step in the admissions process and so on.

5. Frequently Asked Questions (FAQ): A list of the questions and answers that are most frequently requested will be published there.

3.2 Hardware Interfaces

Laptop/PC with basic requirements of a computer system is required to run the software.
Recommendation (for a stable and fast experience) :

1. Intel core i3 or above processor.
2. Minimum of 2 GB RAM.
3. Hard Disk 40 GB or above.

3.3 Software Interfaces

Database – MYSQL is used as database as it is easy to maintain and retrieve records by simple queries.
Operating system – windows 7/ above recommended.
Text editor – visual Code Studio/ other text editor.
Browser – to load and view the webpages (Google chrome recommended).
Programming language- HTML is used to write the whole code and develop webpages with CSS, and java Script for styling and PHP Laravel for backend development.

3.4 Communications Interfaces

Because the many components of the system are interdependent, it is critical that they be able to communicate with one another.

1. When any event happens, such as a result, reporting time, or other relevant announcement, this admission portal system will send alerts to the applicants through email and SMS.

2. The Hypertext Transfer Protocol (HTTP) and the Secure Hypertext Transfer Protocol (HTTPS) will be used for the communication between the client and the server.
3. The TCP/IP protocol — The TCP/IP communication protocols are used to link devices on a network, as well as to access and distribute information via the internet.

4. System Features

Administrator:

Admin control panel: Here admin can publish results and also, they are able to input, delete and update marks as the can see the marks of all students. They will provide minimum requirements for each subject that will help to divide the selected students into their respective departments.

Auto migration: In this segment administrators can control auto migration after publishing result depending on vacant seats. Also, they can monitor student's marks and choices of subjects.

Quota selection: There are many kind of quota such as: Army quota, Civil quota, Freedom fighter quota, Tribal quota. Depending on the marks the admin can choose whether the student is eligible for quota or directly admitted.

Normal user :

Auto migration Feature: There will be given two option. If they don't want auto migration, they can stop auto migration, and if they want to be migrated into different subject, they can enable auto migration.

Department preference: Under the Faculty of Science and Technology, there will be given three subject such as : Information and Communication Engineering , Environmental Science and computer Science and Engineering. Students can choose their subject according to their preference.

Dash board: Dash board will show marks, list of preferences, whether the migration has been done or not, merit position, waiting position (if applicable), quota (if applicable).

Notifications:_ Student's will be notified their results and other things by sending message or email.

Common feature:

Login: In this feature students and administrator will use user id and password to login.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- The database should have the capacity to store at least 40,000 records of different pupils.
- The system ought to be capable of supporting the simultaneous usage of a number of users at any same moment.
- The retrieval of data should be trustworthy so that the availability results of the requested department may be shown to the student as quickly as feasible.
- The speed at which information is retrieved from the database should be appropriate.

5.2 Safety Requirements

The users of this program won't experience any negative side effects.

5.3 Security Requirements

- Maintain specialized logs or data sets for the history of the operation.
- Limit the number of computers that are able to visit the website for the online admission system.
- Check data integrity for crucial variables.
- Every user ought to be permitted to use the system in any of the categories that are offered.
- When the program is verifying the user or the license, communication has to be limited. (i.e., utilizing https).

5.4 Software Quality Attributes

This software characteristic is broken down into the following sub-characteristics, which are as follows:

The term "operability" refers to the extent to which a software system or a digital product have characteristics that make it easier to operate and exert control over it.

Protection against user error refers to the degree to which a software system or its components prevent users from making mistakes while using the system.

The word "reliability" refers to the degree to which a software system or its components fulfill certain tasks under preset circumstances for a given amount of time. Dependability may be broken down into two categories: high reliability and low reliability.

Fault tolerance refers to the degree to which a software system continues to function properly in spite of problems with either the hardware or the software.

Testability is a concept that refers to how simple it is to assess how easy it is to test a software solution in order to detect faults or to guarantee that it satisfies all of the set requirements.

6. Other Requirements

Appendix A: Glossary

IEEE: Institute of Electrical and Electronics Engineers

HTTP: Hyper Text Transfer Protocol

HTTPS: Hyper Text Transfer Protocol Secure

MySQL: My Structure Query Language

HTML: Hyper Text Markup Language

CSS: Cascading Style Sheets

PHP: Hypertext Preprocessor

TCP: Transmission Control Protocol

IP : Internet Protocol

Appendix B: Analysis Models

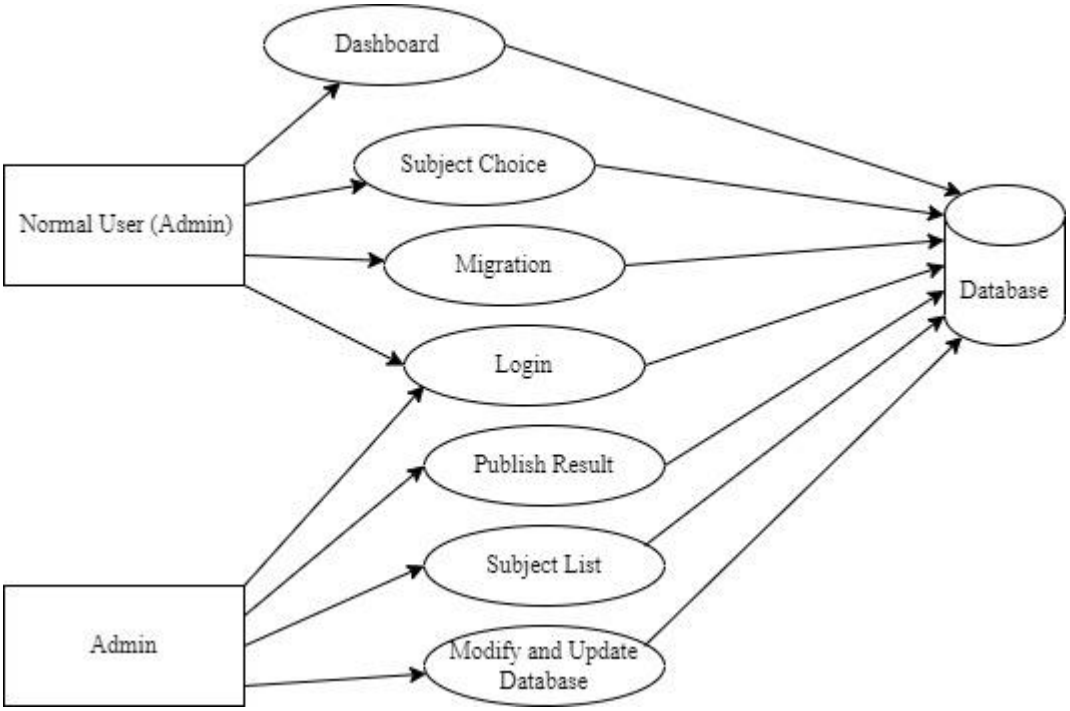

Fig.1. BUP Admission Portal (After Admission) behavioral diagram