Software Requirements Specification

for

Virtual College System

Version 1.0 approved

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VIRTUAL COLLEGE SYSTEM

1. Introduction

1.1 Purpose

The purpose of this document is to build an online college portal that provides a simple interface for the maintenance of student information. It will provide the students with virtual college management and will ensure all the college-related things happen virtually including and not limited to the library for students, courses, queries of students, student community as well as individual messaging.

1.2 Intended Audience and Reading Suggestions

This project can be used by educational institutes or colleges to maintain the records of students easily. This has been implemented under the guidance of college professors. It is assumed that the reader has some knowledge of web application development and college management.

1.3 Product Scope

This project is a college management system that will help college management to manage the students of the college easily. The system will be available through the web. Using this system any student will be able to maintain all his/her records. It will have all the details about the student like name, college ID, address, E-mail id, photograph etc. The system will be a secure one and will be having a firewall to protect the information from unauthorized access.
The system will also have a student community where the students will be able to post their queries and their answers will be provided by other students. A student can also post his/her comments about the courses.
The system will also have a library for the students so that they can search for the books and can download them from the library. They can also post their queries regarding the books and their related topics. For each student registered in the system, the system will have a virtual college where the students will be able to post their comments and queries about the college and its management. The college management will be able to answer the queries of the students.

1.4 References

- https://krazytech.com/projects

2. Overall Description

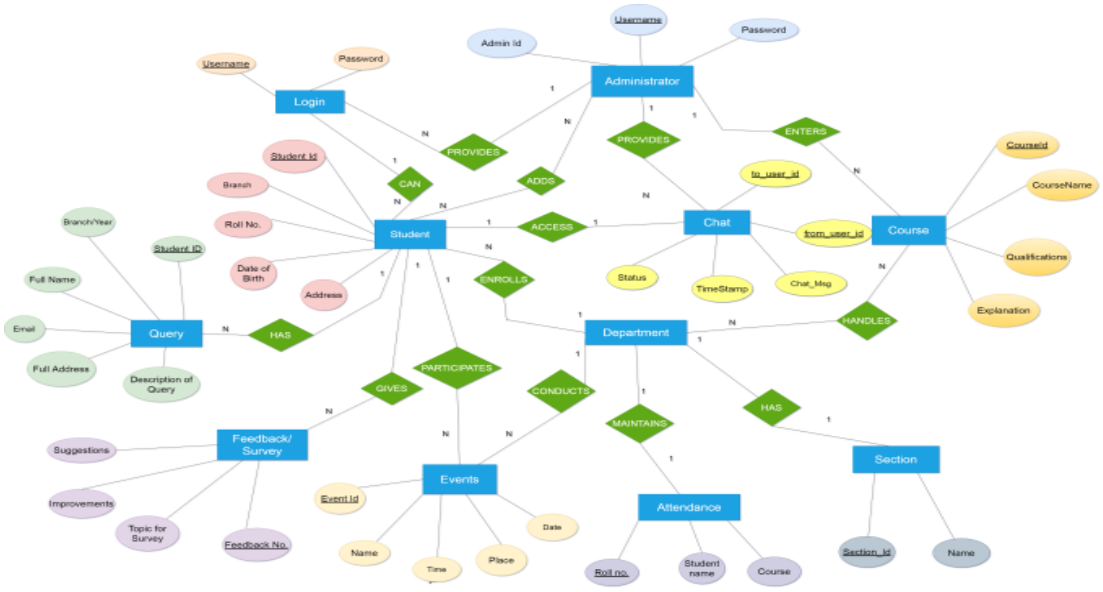
2.1 Product Perspective

A virtual college system stores the following information:-

- **Student management**: It tracks all the features of a student from day one to the end of the course which can be used for all reporting purposes, monitoring of attendance, progress in the class, completed semesters, years, coming semester year curriculum details and all these will be available through a secure, online interface embedded in the college's website.
- **Discussion Forum**: An online chatting feature where the students can discuss and solve their doubts.
- **Online Library**: A service dedicated to students where we provide online resources to all students whenever, and from wherever they have chosen to study.

2.2 Product Functions

The major features of the airline database system as shown in below **entity-relationship model (ER model)**



2.3 User Classes and Characteristics

The user classes for this product are as follows:

1. Administrator: The administrator will have full access to all the features of the product and will be able to manage all the students and their records.

2. Student: The student will have access to all the features of the product except for the administrator rights.

3. Guest: The guest will have limited access to the product and will be able to view the information about the students but will not be able to access their records.

The most important user class for this product is the students who are using the product for their studies. The administrator is also an important user class who is responsible for managing the students' records. The guest is the least important user class who has limited access to the product.

The students should be able to do the following functions:

Register: The students need to be able to register themselves on the system.

Maintain Records: The students need to be able to maintain all their records on the system.

Discussion Forum: The students should be able to discuss and solve their doubts in the Discussion Forum.

Online Library: The students should be able to access the Online Library and download the books.

2.4 Operating Environment

The operating environment for the virtual online system is as listed below:-

- Relational database
- client/server system
- Operating system: Windows.
- database: Mysql database
- platform: vscode/HTML/javascript/PHP

2.5 Design and Implementation Constraints

The design and implementation constraints for the project are as follows:

1) The product should be developed using open source tools and technologies.
2) Implement the database at least using a centralized database management system.
3) The product should be developed using the MVC architecture.

2.6 User Documentation

The user documentation for this product is as follows:

1) The product will have a user manual that will describe all the features of the product.
2) The product will have an on-line help feature that will help the users to use the product.

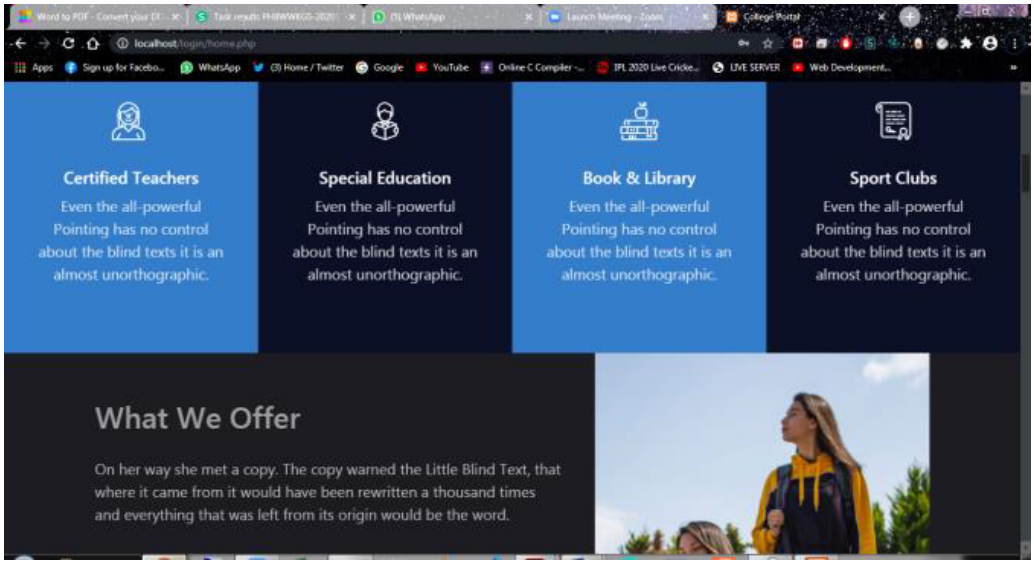
2.7 Assumptions and Dependencies

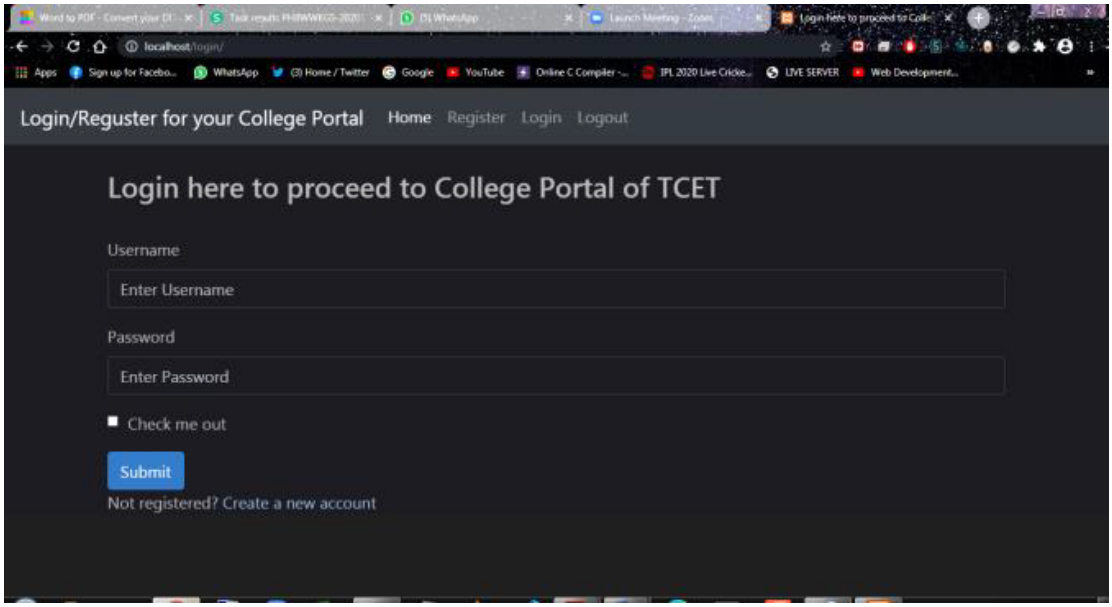
It is assumed that the user has some knowledge of college management. It is assumed that the user has some knowledge of using a web application. .

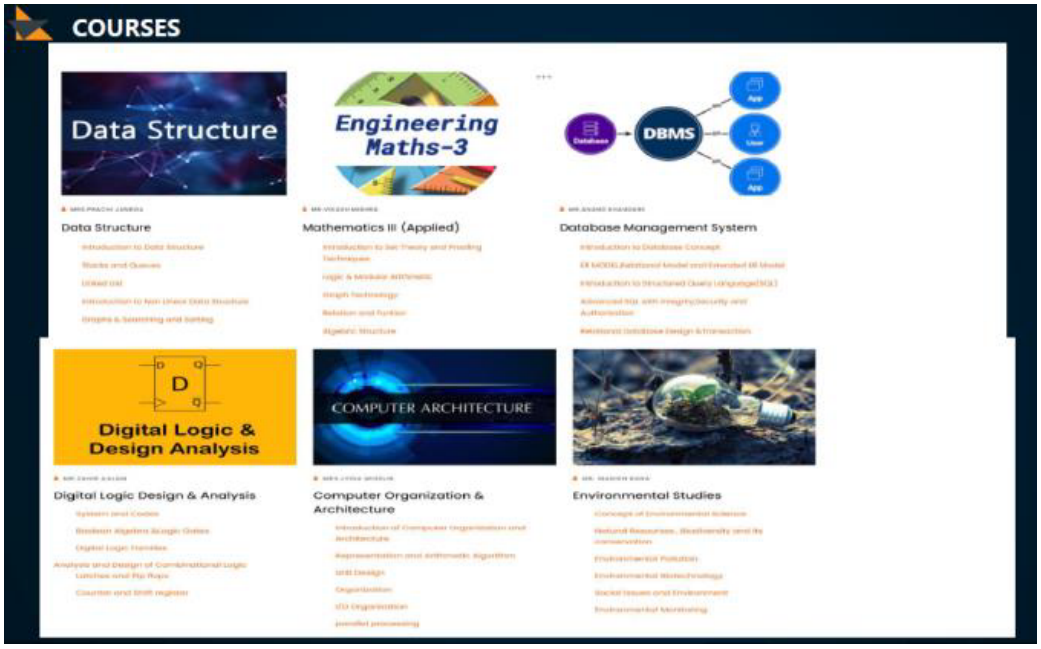
3. External Interface Requirements

3.1. User Interfaces

Front-end software: HTML, CSS, JS
Back-end software: PHP, MYSQL
The interfaces are very user-friendly and very easy-to-follow. The product will have the following user interfaces:
Registration/Sign-in Page: The students need to be able to register themselves on the system.
Maintain Records: The students need to be able to maintain all their records on the system.
Community Discussion: The students should be able to discuss and solve their doubts in the Discussion Forum.
Online Library: The students should be able to access the Online Library and download the books.


Certified Teachers
Even the all-powerful Pointing has no control about the blind texts it is an almost unorthographic.
Special Education
Even the all-powerful Pointing has no control about the blind texts it is an almost unorthographic.
Book & Library
Even the all-powerful Pointing has no control about the blind texts it is an almost unorthographic.
Sport Clubs
Even the all-powerful Pointing has no control about the blind texts it is an almost unorthographic.
What We Offer
On her way she met a copy. The copy warned the Little Blind Text, that where it came from it would have been rewritten a thousand times and everything that was left from its origin would be the word.


Login/Reguster for your College Portal
Home
Register
Login
Logout
Login here to proceed to College Portal of TCET
Username
Enter Username
Password
Enter Password
Check me out
Submit
Not registered? Create a new account



3.2 Hardware Interfaces

The minimum hardware requirements of Gephi are a 500 Megahertz CPU and 128 megabytes of RAM.

3.3 Software Interfaces

It requires PHP to be installed on the system, more specifically a newer version of php.
It can be connected with a MySQL database to manage all databases and thus require MySQL based workbench to be installed thus to make and insert changes to the software.
A combination software which has php, mysql, apache, etc should be preferred, e.g. XAMPP for windows.

3.4 Communications Interfaces

It requires an internet connection to install new plugins, update already installed ones and update some of its components (APIs, modules etc.)

4. System Features

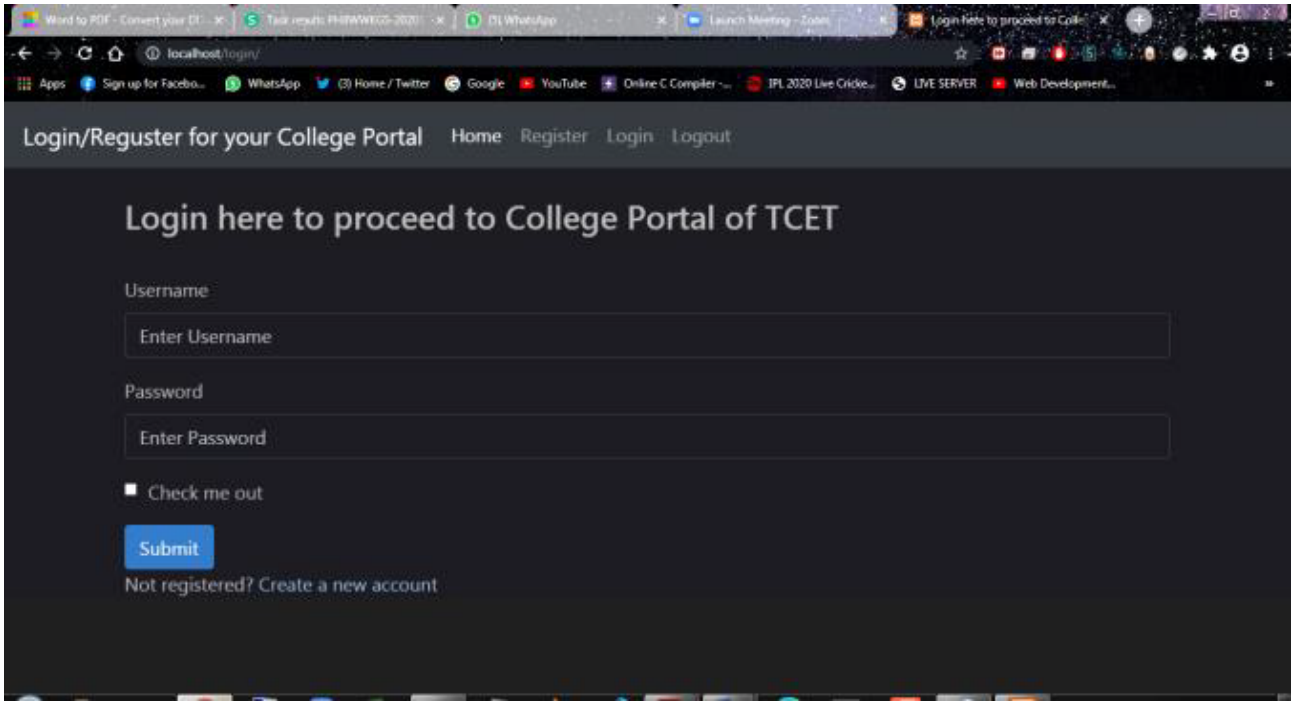
4.1 Registration

4.1.1 Description and Priority

The students need to be able to register themselves on the system. This is a very important feature of the product as it will help the students to maintain all their records on the system. This feature is given a high priority as it is the first step in using the product.

4.1.2 Stimulus/Response Sequences

The user will enter the following information: Name College ID Address E-mail id Photograph The system will store all the information in the database and will generate a unique ID for the student.



4.2 Maintain Records

4.2.1 Description and Priority

The students need to be able to maintain all their records on the system. This is a very important feature of the product as it will help the students to keep track of all their records. This feature is given a high priority as it is the second step in using the product.

4.2.2 Stimulus/Response Sequences

All the registered users will be able to login using their unique ID and password. After login, the student will be able to view all his/her records. The student can also add, edit or delete the records.

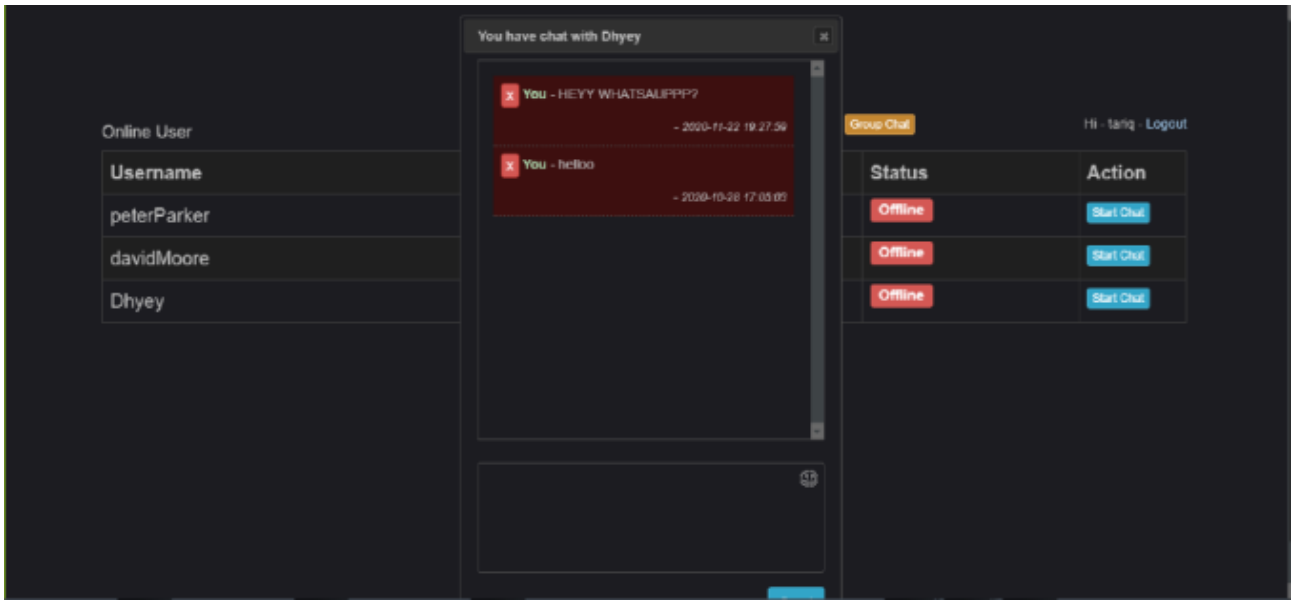
4.3 Discussion Forum

4.3.1 Description and Priority

The students should be able to discuss and solve their doubts in the Discussion Forum. This is a very important feature of the product as it will help the students to interact with each other and solve their doubts. This feature is given a high priority as it is the third step in using the product.

4.3.2 Stimulus/Response Sequences

The user will enter the following information:
Query
The system will store all the information in the database and will generate a unique ID for the query. The other students will be able to view the query and can post their answers to the query.



4.4 Online Library

4.4.1 Description and Priority

The students should be able to access the Online Library and download the books. This is a very important feature of the product as it will help the students to get all the books that they need for their studies. This feature is given a high priority as it is the fourth step in using the product.

4.4.2 Stimulus/Response Sequences

The user will enter the following information:
Book name
Author name
The system will store all the information in the database and will generate a unique ID for the book. The students will be able to view the book and can download it from the library.

4.5 Event Participation/Organization

4.5.1 Description and Priority

The students should be able to participate in the events organized by the college. This is a very important feature of the product as it will help the students to interact with each other and also help them to learn new things. This feature is given a high priority as it is the fifth step in using the product.

4.5.2 Stimulus/Response Sequences

The user will enter the following information:

Event name
Event date
Event venue

The system will store all the information in the database and will generate a unique ID for the event. The students will be able to view the event and can register for it.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The update of the data to the college server should be very fast. Also the retrieval of the data from the database should be in a constant time to improve efficiency.

5.2 Safety Requirements

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.This is called a restore and roll-forward operation.

5.3 Security Requirements

The product should be a secure one and should have a firewall to protect the information from unauthorized access. The product should have a login page where the users need to enter their username and password to login. The product should also have a logout page where the users can logout from the system

5.4 Software Quality Attributes

This portal provides the users with both simple and advanced features. Due to its well designed and easy to use interface it can be used by both experts and typical users. However, users must already have a basic knowledge of college management before using it.

5.5 Business Rules

The database administrator can perform all the database handling and will have access to all of it. The admin of the portal will be responsible for updating any features and uploading of any documents, books, etc. He/She can even suspend any users from the portal if one is not following appropriate rules.