Software Requirement Specification

Product Title: Virtual Class Room System

Category: Web Application

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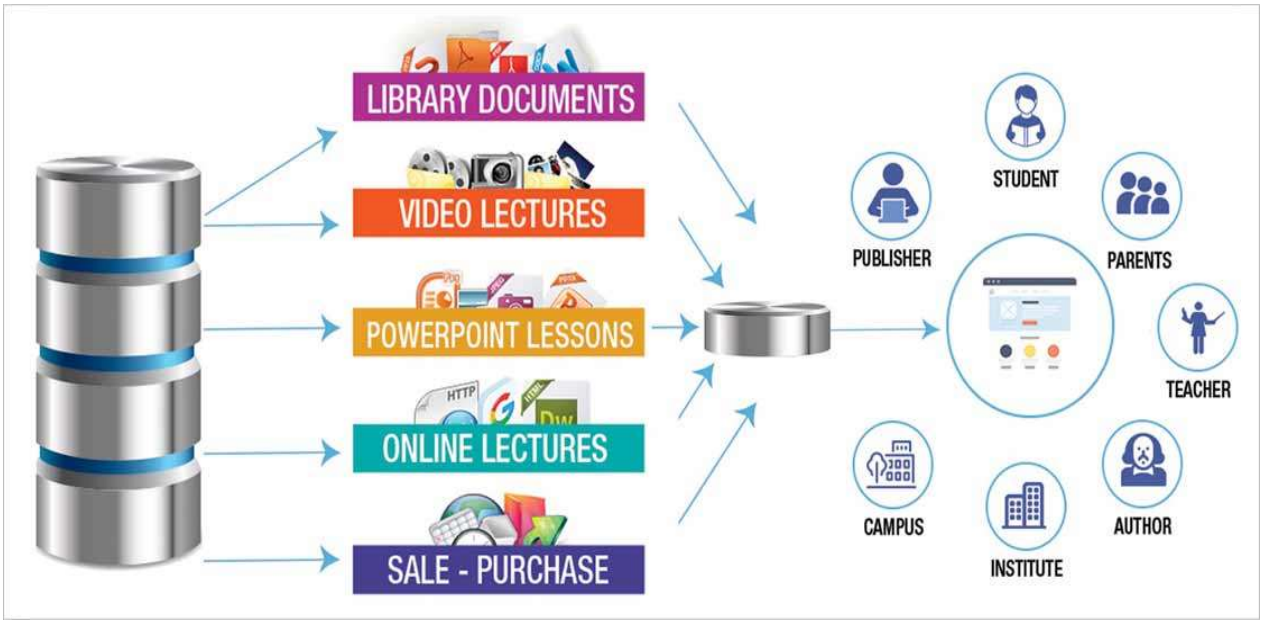

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Purpose

The purpose of developing this "Virtual class room system" is to keep the students and teachers connected through a virtual platform even when they cannot reach to the physical platform. (E.g., University, Colleges)

Scope

It will integrate the benefits of a physical classroom with the convenience of a 'no - physical - bar' virtual learning environment, minus the change hazards and expenses. This will provide more flexibility in the existing learning platform structures. It provides a means of collaborative learning for the students and also promotes the distance learning.

Introduction

Introduction contain the following subcategories

Existing System:

The present system is a manual system or a semi-automated system. Manual system involves paper work in the form of maintaining various files and manuals. Maintaining critical information in the files and manuals is full of risk and a tedious process.

- → A manual system has following disadvantages
- → It's a limited system and fewer users friendly.
- → Searching of particular information is critical it takes lot of time.
- → In the existing system students need to learn course in the class room only.
- → In the manual system student need bare the lot of time and cost.
- → The existing system need to travel a location in which one have to participate in the course.
- → Conduct of examination and compilation of result is a tedious process.
- → The existing system needs to save the information in the form of files.
- → Limited sharing is possible if the data is in the form of paper or disk drives.
- → The manual system gives us less security for saving data, some data may be lost due to mismanagement.

Proposed System:

As the virtual classroom is one that aims to give the student an experience equal to or better than sort they would find in a traditional classroom. There are obviously many advantages of the virtual classroom to the student, as well as the teacher and the associated educational institution.

The system after careful analysis has been identified to be presented with the following modules:

- → **Student Registration:** Admin can register a student for a specific program.
- → **Video Lectures**: Student can watch and listen the class room session repeatedly which will be uploaded by the teacher.
- → **Result:** Students can get the result via this web application
- → **Attendance:** It includes attendance of students for a specific class.
- → **Record Storage:** The user information files should be stored in centralized database which can be maintained by the system.

- → **Authentication:** Authentication of this application will be provided for only registered members.
- → **Activities for Students:** The teacher can upload assignments to the students, multimedia which a student can download and listen when required.
- → **Administration Access:** Administration would be able to keep an eye on the records of students.
- → **Library:** Student helping material would be available.

Advantages for Students

Advantages for the teachers are explained below

- → **Flexibility for Teacher:** For teachers of virtual classrooms, working part-time is a possibility because of the flexible nature of the classroom.
- → **Effective Communication:** Another advantage to the teacher is that they have time to respond to student communications in the virtual classroom, which gives the teacher a chance to construct the best possible response to the student.
- → **Independent of Location:** The teacher is not required to work from an office or classroom to instruct lessons or organize material and lessons this can be done from anywhere where they have access to a computer with an Internet connection.

FUNCTIONAL REQUIREMENTS:

"Functional requirement describe what a system should do." [4] Functional requirements of our system are explained below:

- → Users must have valid User ID and password to login thus creating their individual profiles.
- → Administration can register new teachers.
- → Students can choose courses.
- → Attend lectures either at the scheduled time or view lecture later.
- → Video lectures facility can also be available for the students
- → Students can check attendance, result and assignments,
- → Faculties can take lectures, upload assignments, announcements, compile results and also can upload lectures and other discussions in various formats as in videos, power point presentation etc.
- → Notice board facility can also be available for the students from administration and teachers.
- → Notice board can also be available for the teachers from administration.
- → Forms and guidance can also be available for the students regarding any query.
- → There can be platform to discuss various queries and to put up suggestions posted both by students and teachers.
- → Documents and media library that can help in active learning of a student.
- → Student can send any application to the administration for any query.
- → Administration can post upcoming events banner.

NON-FUNCTIONAL REQUIREMENTS

Requirement that specifies criteria that can be used to judge the operation of a system are called nonfunctional requirements. Nonfunctional requirements of our system are mentioned below:

- → Secure access of confidential data (user's details).
- → Maximum time availability
- → Better component design to get efficiency at peak time.
- → Flexible service-based architecture will be highly desirable for future extension.
- → Teacher registration facility is accessible by administration only.

SOFTWARE TOOLS:

- ❒ **Database Server:** Microsoft SQL Server-2019
- ❒ **Client**: Microsoft Internet Explorer or any web browser
- ❒ **Development Tools:** Microsoft Visual Studio 2019
- ❒ **Programming Language:** C#.Net

DEPLOYMENT:

Operating System Server: Window 10, Linux, MAC

HARDWARE SPECIFICATION

- ❒ **Processor:** Intel Core i5
- ❒ **RAM: 8GB**
- ❒ **Hard Disk: 1 TB**