

# Virtual Classroom Management System

## 1. Introduction

Over the years, technology has tremendously revolutionized the education system. But much of the innovation has been with revamping the content rather than changing the mode of delivery. Traditional classrooms requires faculties to take sessions to students, share contents as materials, make paper based evaluations and perform face to face doubt clearing sessions. Paper correction was the most hectic part of this traditional classroom system.

Virtual Classroom management is a collaborative teaching tool to assist the students to learn in an interactive manner. It aims to complement the efforts of teachers to integrate technology into their classrooms and link the students to the Internet in educationally productive ways and provide them a stimulating, positive and enjoyable environment to study.

So, Virtual Classroom management system will aim to help the administrator to have the complete control over the application. Other than that, this project is to upgrade the traditional classroom to virtual thus making the lives of faculty and student easy.

## 2. Purpose

The purpose of this document is to outline the functional requirement that will enable design and development of Virtual Classroom Management System.

## 3. Background

The Virtual Classroom Management System mainly focuses on to develop online learning, sharing contents and doubt clarification, to develop use interface for Virtual Classroom Management System.

**Target User:** The groups of user that had been identified to use the system are

- 1) Students
- 2) Faculty
- 3) Admin

The system is functionally divided into the following modules:-

### 3.1 Student Login

It enables a person to login as a student or sign up if he/she has not registered for the classroom. Once logged in as a student he/she should have the following functionalities

#### a) Student Profile (Add/View/Edit):

A student should be able to sign up for his account with the following details

**User Name, Desired Password, Class Room ID, Faculty ID, Email ID, Phone No**

A unique user ID should be created for a student when he signs up for an account.

A person who logs in as a student should be able to view his profile, edit his profile as and when required.

*Note: The User ID field should be read only as it is unique for a particular student*

**b) Study Material & Video Lectures:**

It displays a list of PPT's & interactive video lessons categorized by subjects as posted by the faculty.

The student should be able to search for a particular subject for studying using keywords.

**c) Ask doubts and View Answers:**

It enables the students to ask questions on subjects that they have learnt.

It shows the answers by the faculties to the questions asked by various students.

### **3.2 Faculty Login**

It enables a person to login as a faculty member or sign up if he/she has not registered for the classroom. Once logged in a faculty member has the following features:-

**a) Faculty Profile (Add/View/Edit):**

A faculty should be able to sign up for his account with the following details

**User Name, Desired Password, Class Room ID, Email ID, Phone No**

A unique Faculty ID should be created for a faculty when he signs up for an account.

This Faculty ID will be used by the student to map themselves to that particular Faculty.

A person who logs in as a faculty should be able to view his profile and edit his profile as and when required.

*Note: The Faculty ID field should be read only as it is unique for a particular faculty.*

**b) Study Material & Video Lectures:**

It allows the faculty members to post PPT's and video lessons for the Classroom ID for which they are mapped.

It allows the faculty members to view, edit and remove PPT's and video lessons.

**c) Doubts Clarification & Post Questions and Answers:**

It shows all the questions asked by the students

It also enables faculty to answer the questions posted by the student

Faculty should also have an option to post the questions to students to know their knowledge.

### **3.3 Administrator Login**

The admin has the complete control over the application. Admin has the following features:-

**a) Student/Faculty:**

Admin should have an option of User management like adding/update/delete user etc,.. i.e. Users in this case is Faculty/Student.

Admin should be able to view the list of Faculty and Student with their details.

**b) PPT (upload/del)/Video (upload/del):**

It displays a list of ppts & videos posted by the faculty members. The administrator has the power to remove ppts/videos from the list and upload according to the requirement

**c) Question/Answer management**

It displays a list of questions and answers posted by faculty / students.

The administrator has the power to delete questions/answers from the list at any time.

### **3.4 Assumptions**

1. A classroom will be mapped to one particular Faculty ID.
2. A faculty will be mapped to one particular classroom ID.
3. The course materials posted by faculty will be available only to the classroom ID to which he/she gets mapped.
4. The questions posted or answered will be available for everyone using the system.

### **3.5 Change Requests**

Once the Maintenance period commences, the maintenance team can concentrate on all of the following Change Requests:-

1. Implement the existing data layer to Hibernate data layer for the Administrator module.
2. Implement the present functionality of the Faculty Login Module module in Struts2.
3. Apply Spring JDBC template to the existing data layer of the Student Login module and perform the following report requirements:-
  - 1) Take up an online exam on a particular subject with a predefined set of questions.
  - 2) Score Card should be generated online based on the number of correct answers provided.

**Wish You All The Best!!!**