

Project Title: Video Training Website

Category: Web Application

PURPOSE

The purpose of developing this “Video Training Website” is to keep the instructor and learner(student, professional, etc) connected through a virtual platform and provide the course as per interest of learner .

SCOPE

It will provide the course as per requirement and domain of learner . It will integrate the benefits of a physical classroom with the convenience of a ‘nophysical-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 learner and also promotes the distance learning .

INTRODUCTION

Introduction contain the following sub categories

Existing System

The present system is a manual system or a semi-automated system. In Present system only selective learner can learn from instructor , Also the instructor can teach only one course at a time.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 trainee 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 Trainees:

There are various pro's that the trainees of the following system can benefit from.

Here are a few of many advantages:

1) Efficient Time Consumption :

Although many would say that the system would take up a lot of time in starting, but statistics say that it's much more efficient than the average classroom.

2) Ample of Resources to Work With :

The trainees can have multiple resources at hand if they encounter some kind of problem during the session.

Some kind of problems may include - having problem to understand some common terminology, lagging behind the from the course syllabus etc.

Advantages for Faculty

Advantages for the instructors are explained below

- Instructors can manage the course schedule flexibly:

For instructors ,time is a possibility because of the flexible nature of the classroom.

- EffectiveCommunication:Another advantage to the teacher is that they have time to respond to student communications in the online platform ,which helps the instructor in coming up with 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

The system should support a number of standard roles(e.g. Administrator, Teacher, Student, Parent, Guest, and Evaluator/Reviewer) and have the potential to createan unlimited number of additional roles.

- 1) The system should also be able to createuser groups to collaborate, communicate and share content. These can also accommodate different groups ofusers attendingdifferent courses.

- 2) The platform should enable users to access resources fromexternal websites.

- 3) It should be possible to access all administrative tools and functionalities from a single interface.
- 4) System Administrators should be able to set quotas on the disk space for individual users, courses and organisations.
- 5) The administrator should be able to set specific settings for the rights of users based on user roles, including settings for bandwidth on e-resource access.
- 6) The possibility to monitor visits and other statistics of the platform (i.e. number of users, time period, etc.).
- 7) Event log storage and log analysis functionality for the needs of system administrators.
- 8) The following Language packs should be available and included in the RSS module: Bulgarian, French, German, Spanish, Italian and Russian.

NON FUNCTIONAL REQUIREMENTS

Many online training platforms have been developed and are available in the market such as Moodle⁵ and Desire2Learn⁶.

We, however, also focus on the non-functional requirements of such a system. These requirements are important for the system to be able to provide educational services in a manner that the users are not discouraged and continue to learn in the virtual environment. As previously mentioned, the objective of a virtual learning environment is to reach individuals who do not have the capacity to attend a real life classroom. To achieve this, many non-functional requirements have to be catered for. A non-Functional requirement is a requirement that judges the operation of a system. They are not functional requirements but together with functional requirements they become the core requirements of a

system. Moreover, these non-functional requirements affect the manner how the software is designed and implemented. There can be many non-functional requirements of the Virtual Classroom. However, the main concerns are reliability and security (confidentiality, integrity, and availability) of the service provided by the system and the data stored in the system. The virtual classroom system should also be highly portable and conform to a minimum level of performance especially while uploading/downloading materials and audio/video conferencing. Reliability is the property of a system that dictates that it should remain in operation under unfavourable situations. If the service is not available when it is needed the most, then the purpose of the service fails. A reliable system would include mechanisms (e.g., fault tolerance) to ensure continuity of service. Another important requirement for such a system will be security. A security requirement has been defined as a control, safeguard, or countermeasure to avoid or remove vulnerabilities that may be exploited to violate the confidentiality, integrity, or availability of data. These constraints have to be made part of the development during all its phases^{7, 8, 9, 10, 11}. The classroom materials should be preserved in a manner such that unauthorized people cannot make changes (integrity). Materials should also be available when it is required. Performance is another important requirement for the virtual classroom. In the following subsection, we discuss some of the important reliability, security, and performance requirements.

Software Requirements :

Our System is based on the following key software requirements :

- 1) A Website : Frameworks like Django, Bootstrap, JavaScript, Css are needed for this.
- 2) A Backend Database Storage : MySql , PostGresql, and other RDMS may be used.
- 3) A Model which consists of business logic for the system – JAVA , C# , Kotlin, etc.

DEPLOYMENT:

Operating System Server: Window 8, Linux, UNIX, Fedora GTK etc.

HARDWARE SPECIFICATION

Processor: Intel Core i5RAM: 4GBHard Disk: 640 TB