Software Requirement Specification

1. Introduction

In Virtual Education System connects the people who want to learn and who want to teach. It helps people who cannot go to the school or college to study like girls in backward area and physically disable people. There are three main user of the system Admin, Faculty, Student. Admin will log in the system in the log in menu and the system will direct this user to admin interface. In this module there will be options to create user and course into the database and which student allocated to whom. He approves user and assure user about registration. These are the full responsibilities of admin. Faculty can be a user of the system after passing the exam taken by the VES. He will log the system in the log in menu and the system will direct this user to faculty interface. In this module there will be option to upload material like ppt, pdf, and video. Student can be a user of system by registration into system student can select one or more subjects. He can study the as per his convenience. Appear for test, View progress report and participate in extra-curricular activates online.

1.1 Purpose

The goal of this document is to provide support information on the **Virtual Education System**. The growing popularity of Internet and e-learning introduced new terms to education, such as "Virtual Education System". May be in the near future students will not go to anywhere in order to take their studies. The concept "Virtual Education System" enables users to learn from anywhere through Internet and provides a learning experience. This project is intended to give both teacher and student the ability to do their jobs effectively and efficiently without even leaving their places. By this solution we aimed to meet the expectations of both students and faculties.

1.2 Document Conventions

The purpose of SRS and it covers the designing purpose and the documents of this report training period of project

Overview of responsibilities of Developer:

If you are considering a job as Software Developer here is a list of the most standard responsibilities and duties for the Software Developer position.

- Evaluate, assess and recommend software and hardware solutions.
- Develop software, architecture, specifications and technical interfaces.
- Develop user interfaces and client displays.
- Design, initiate and handle technical designs and complex application features.
- Develop, deliver and test software prototypes.
- Assist software personnel in handling ongoing tasks as required.
- Build flexible data models and seamless integration points.
- Innovate and develop high-value technology solutions to streamline processes.
- Initiate and drive major changes in programs, procedures and methodology.

1.3 Intended Audience and Reading Suggestions

This Software Requirements document is intended for:

- Developers who can review project's capabilities and more easily understand where their efforts should be targeted to improve or add more features to it (design and code the application – it sets the guidelines for future development).
- Project testers can use this document as a base for their testing strategy as some bugs are easier to find using a requirements document. This way testing becomes more methodically organized.
- End users of this application who wish to read about what this project can do.

1.4 Product Scope

- Virtual Academy.
- To Provide the Online Lectures.

- Time consuming.
- Cost effective.

1.5 References

1. Marileena Koskela, P.K.: Suitability of a Virtual Learning Environment for Higher Education.

Electronic Journal of e-Learning 3(1), 1–30 (2005)

2. Project Life Spans in the 1990s: The Role of the Project Life Cycle (Life Span) in project Management, http://www.maxwideman.com/papers/plc-models/1990s.htm (retrived November 16, 2009)

3. Virtual Environments Enable New Models of Learning (n.d.) (2009), http://secondlifegrid.net/slfe/education-use-virtual-world (retrieved November 16, 2009)

4. Project Wonderland: Toolkit for Building 3D Virtual Worlds (2007), Java.net: https://lg3d-wonderland.dev.java.net/ (retrieved November 16, 2009)

2. Overall Description

2.1 Product Perspective

Virtual academy is a very useful and timesaving program for those who like to organize their education system. All you have to do is access it for free, install it and you are done.

2.2 Product Functions

Virtual academy system provides users the following functions/features:

- Admin: Admin can add all notes video information's link to share all students.
- End User Perspective: End user like student to register our system and view notes videos that they want required.

2.3 User Classes and Characteristics

All kind of users: Virtual academy system is a powerful, yet easy application to use so, all users with some basic experience with system are able to use it efficiently.

Open source software developers and contributors:

- Software Developers: People with very good knowledge of programming language project, in order to understand and be able to extend project's source code
- End User: People of all age groups with very good knowledge of a language not included in the current translation list.

2.4 Operating Environment

Virtual academy should run on Operating Systems: WinXP / Vista / Win7 / Win8. It is written in a windows depended language so unfortunately it won't run on a Linux-based system.

Operating Platform: Spring boot.

2.5 Design and Implementation Constraints

The university will be in session during the development of the application. Since current system downtime needs to be maintained at low levels; system rollouts and system validation need to be scheduled during low usage periods.

 Not allow languages will be represented for online system documentation.

 Only browsers from Microsoft, Apple and Mozilla will have functional access to the application.

2.6 User Documentation

Both the enrolled students and faculty will be provided with notes through system and will have access to on-line tutorials. The system will also provide an on-line help feature, providing the users with easy to read "how-to" instructions.

2.7 Assumptions and Dependencies

It is assumed that answer data will be made available for the project in some phase of its completion. Until then, test data will be used for providing the demo for the presentations. It is assumed that the user is familiar with an internet browser and also familiar with handling the keyboard and mouse.

Since the application is a web based application there is a need for the internet browser. It will be assumed that the users will possess decent internet connectivity.

3. System Features.

This section describes the functional requirements of the application and the features it provides. System features are described in detail to help the future extension and testing of the system. Features stated here are already parts of the implemented system so no prioritization is needed. Priority is needed for features to be developed that will be added to this document later.

3.1 Functional Requirement:

4. External Interface Requirements

4.1 User Interfaces

User interface of this program is the common windows interface, nothing additional is required.

The Virtual Academy user interface should be intuitive, such that 99.9% of all new users are able to use Virtual Academy application without any assistance.

4.2 Hardware Interfaces

The hardware should have following specifications:

- Ability to read gallery
- Ability to exchange data over network
- Touch screen for convenience
- Keypad (in case touchpad not available)
- Continuous power supply
- Ability to connect to network
- Ability to take input from user
- Ability to validate user

4.3 Software Interfaces

- The software interfaces are specific to the target other user's Virtual Academy Application or software systems.

4.4 Communications Interfaces

- All the program's features are available offline. You only need an internet connection to download the application, update it and (optionally) to get some target images for your personal profile.
- Our Project belongs to android based, so connecting user at online with request and response form. For that HTTP protocol we are going to us. That is provided by PHP web services.
- HTTP protocol: The Hypertext Transfer protocol is an application protocol for distributed, collaborative, and hypermedia information systems. HTTP is the foundation of data communication for the World Wide Web. Hypertext is structured text that uses logical links (hyperlinks) between nodes containing text.

5. Other Nonfunctional Requirements

5.1 Performance Requirement:

- System can produce results faster on 4GB of RAM.
- It may take more time for peak loads at main node.
- The system will be available 100% of the time. Once there is a fatal error, the system will provide understandable feed back to the user.

5.2 Safety Requirements

- Only administrators have access to the database of each individual user.
- All data will be backed-up every day automatically and also the system administrator can back-up the data as a function for him.
- This makes it easier to install and updates new functionality if required.
- For the safety purpose backup of the database must be required.

5.3 Security Requirements

- Our System is being developed in Java. Java is an object oriented programming language and shall be easy to maintain. The system is designed in modules where errors can be detected and fixed easily.
- For the security purposes and to avoid illegal use of the system, while using this application user must do following things:
    - At the time of deploying this software user have to register to system.
    - To use software user, have to login and logout each time.

5.4 Software Quality Attributes

- The system considers following non-functional requirements to provide better functionalities and usage of system.

i. Availability: The system shall be available during 24 hours of a day.

ii. Usability: The system is designed keeping in mind the usability issues considering the end-users who are developers/programmers. It provides detailed help which would lead to better and faster learning. Navigation of system is easy.

iii. Consistency: Uniformity in layout, screens, Menus, colors scheme, format.

iv. Performance: The performance of the system should be fast and as per user requirement. From this system we will get expected outcome in less time and less space since efficiency is higher. Speed is totally depending on the response of the database and connection type.

v. Extendibility: Prevention in the system should be done in the system by which we make changes in the system later on.

vi. Reusability: Files of any type can be used by the system for any number of times during transformation.

vii. Reliability: Protection of data from malicious attack or unauthorized access.

viii. Security: The system provides security to the randomly generated private key by performing encryption to it for encrypting patient data and thus protects from other nodes in the network. The network is free from malicious node and misbehaving node attacks.

ix. Reliability: Our system can provide user an efficient search each time. So the user can reliable on the system. Because system can guarantee user to provide his/her interested data every time in least amount of time.