System requirement specification

CSE 482 sec: 1

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# Project name: Online Programming contest

## Project Members

## Pritom Roy 1430378042

## Osman Ali Chowdhury 1320118042

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1. Introduction

This document will propose all features and procedures to develop the online Application Quiz system. This document specially containing details about objectives, scope limitation, process model, primary requirements, team development, possible project risks, project schedule, and finally monitoring and reporting mechanisms. This Exam System is very useful for Educational Institute up to higher secondary stage to prepare an exam, save the time that will take to check the paper. It will help the Institute to testing of students and develop their skills. But the disadvantages for this system, it takes a lot of times when you prepare the exam at the first time for usage. And we need number of computers with the same number of students. The effective use of “Quiz Exam System", any Educational Institute or training centers can be use it to develop their strategy for putting the exams, and for getting better results in less time. It will help us to choose best students of our needed standards required, as in military and other secret departments.

* 1. Purpose:

The purpose of this document is to specify the requirements and preview some elements of the analysis model of the program ‘Improver ‘,improver is a simple program which consists of two programs: ImproverServer - question/answer database editor and exam server ImproverClient - the program to install onto each client computer Objectives Corporate between the data stored in the server of the Institution and our On-line Exam system .To deal with On-line System in an easy way and an efficient mannered (connection process). Create strong and secrete data base that allow for any connection in a secret way, to prevent any outside or inside attacks. Specify a privilege for each person to allow each person use this system to create his own exam. And have a complete control on his exam. Allow each person to create more than one exam with different way to create variant questions.

B) Project scope:

On-line Exam system is designed for Educational Institutes (like schools, colleges, basic educational training centers). The system handles all the operations, and generates reports as soon as the test is finish, that includes name, mark, time spent to solve the exam. Allow students to see or display his answers after the exam is finish. The type of questions is only multiple choice or true and false

Overall Description:

This software is responsible for the recording and automating the task of the conducting online quiz. It makes the faster working and good services with efficient user interaction. Product functions As project is for conducting the examination responsibilities that were firstly the responsibility of humans, the major functions include: 1. Transparent conduct of examination 2. It would provide time as soon as test starts 3. Would create Repeat as soon as user ends the test 4. Automatically send mail to user 5. Tutorials are available so that one should try quizzes 6. Result sheet of all exams Following figure on following page shows the functionalities of the software

Product features:

The major features this program contains are the following: · Cross platform support: Offers operating support for most of the known and commercialoperating systems · Language support: Offers multiple language support for global use. · Top or Connectionless support: Clients can connect to the server using a tcp connectionor connectionless using a removable disk that loads the test from it. · Statistic tool: Questions can also be rated based on how many times they have beenanswered correctly in a statistics sheet that displays this information. Furthermore overratedor underrated question difficulty can be adjusted accordingly. · Flags: Questions can be categorized using flags so that they can be manipulated moreeffectively and to show questions on a particular domain only. · Printing: Offers printing support. Test session results can now be printed both from theclient and server side point of view. · Saved sessions: Every test session can be saved in a log file and studied further. Particularsession of interest can be archived. · Try again option is being introduced for tutorial type of test.

User classes and roles:

For conventional reason we name each of the user classes-actors with this format: Physical Actors: Student:The student is the one that takes the test using the improverClient interface. Multiplestudents can connect to the server and take the test. It is convenient to think that everystudent represents every user that takes the test and that he connects to one client. Teacher:The Teacher is the one that uses the improverServer as an editor to create a database ofquestions and define the test options. It is convenient to think that every Teacher representsevery user that uses the Database Editor to make tests. System Actors: Client:The client is the system that connects to the server and handles the tests based on thesession and finally submits the information back to the server. Server:The server is the system that accepts multiple connections from clients and saves theresults. Database Editor: The database editor handle all the question database tools used to construct modify and save questions and make different tests for the students. Also it isresponsible for logging the session info and restores them for better study.The primary actor is the client that connects to the server and takes the test. The term studentis to be used as a physical actor to describe the physical user of the client. The same term is used forthe Teacher who is the physical user of the database editor and the server and is responsible for thegood behavior of the system and to make sure everything goes well.

Operating environment:

For creating the windows forms and setting up the core program my tools were used so far that effect overall rhythm of software here for better understanding the know-what to do rather thanthe know-how to do it we assume that the reader is not interested for knowing how to create anddesign windows forms and how the program is coded at that time.

3. System Features

* 1. Description

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* 1. Priority(High, Medium, Low)

Since this is at initial stage so,there is no cost for because this new idea to enhance the educational system. So the source code is made free for all. There are various reasons why should anyone use this program. First it’s a framework where you can create edit and store multiple choice questions. Second is an easy and reliable testing program that is very unique in its category where you can use the questions you have created in a way that represents test sessions. And third due to its open Source nature you can modify it according to your needs. The major components of the system as noted in the previous sections are the improver client Window and the ImproverServer window. • The ImproverClient is a simple client-window form that communicates with the active improverServer and its purpose is to run the test sessions that were provided and prints the results. There can be multiple clients that can connect to a single server. • The improverServer is a question database editor that it can be enabled in server mode. As longas is in that state it opens ports to accept improverClient connections or offline connectionsrecord the session statistics such as who is connected at the present time and how manyQuestions have been answered correctly, saves this information in log files and prints the results

* 1. Sequence

4. Non functional Requirements

1. Performance Requirements Some Performance requirements identified is listed below: The database shall be able to accommodate a minimum of 10,000 records of students. The software shall support use of multiple users at a time. There are no other specific performance requirements that will affect development.

2. Safety Requirements The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup.

3. Security Requirements Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below. Keep specific log or history data sets Assign certain functions to different modules Restrict communications between some areas of the program Check data integrity for critical variables Later version of the software will incorporate encryption techniques in the user/license authentication process. Communication needs to be restricted when the application is validating the user or license. (i.e., using https).

4. Software Quality Attributes Availability checking that the system always has something to function and always pop uperror messages in case of component failure. In that case the error messages appear when somethinggoes wrong so to prevail availability problems. Usability checking that the system is easy to handle and navigates in the most expected way with no delays. In that case the system program reacts accordingly and transverses quickly between its states. Functionality Checking that the system provides the right tools for editing question databases, creating session tests and analyzing the test sessions. In that case the tools that the Database editor provide are the ones that provide that attribute.