**Project Design**

**And**

**Status Report**

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# 1. Introduction

The project design provides details about the progress of the paperless testing project. It includes the project goals and each individual developer's’ responsibilities in implementing the systems features. Also, this document introduces the database schema.

# 2. Project Goals/Features and Progress:

|  |  |
| --- | --- |
| **Feature** | **Progress** |
| * Provide capability for teachers to create tests that are designed to be taken by students. | * Percentage complete: Not yet started |
| * Provide capability to allow professors to create a professor account to access the system | * Creating login and registration process * Created database to store test credentials for professors * Percentage complete: 25% * Below are images of the UI for the teacher login system:   Screen Shot 2017-03-30 at 1.05.15 AM.png  Screen Shot 2017-03-30 at 1.02.11 AM.png  Screen Shot 2017-04-07 at 12.49.00 PM.png |
| * Set up the test with the appropriate question type, including the weight of each question towards the overall points for the test, and the amount of time allowed to complete the test. | * Percentage complete: Not yet started |
| * Provide answers to questions so that the grading system will know how to score them as either correct or incorrect. | * Percentage complete: Not yet started |
| * Reset a test for a student or a group of students. | * Percentage complete: Not yet started |
| * Allow students to create an account and enroll in a course to take tests for that course. | * Creating login and registration process * Created database to store test credentials for student * Percentage complete: 25% * Below are images of the UI for the student login and registration:   Screen Shot 2017-03-30 at 1.02.40 AM.png  Screen Shot 2017-03-30 at 1.02.11 AM.png  Screen Shot 2017-04-07 at 12.31.50 PM.png |
| * Display grades to the students at the completion of the test taken | * Percentage complete: 5% * Began work on database to store grades |
| * Display a list of grades for all student tests taken for each course session | * Percentage complete: 5% * Began work on database to store grades |
| * Teachers will be able to publish the test to the class or classes that they have set up for course sessions | * Percentage complete: Not yet started |

# 3. Project Schedule Update

The following is a table containing the updated project schedule, with comments on progression of the project based on weekly tasks.

|  |  |  |
| --- | --- | --- |
| **Week** | **Tasks** | **Assignments** |
| Week 1  (March 13 - 19) | * Form Group | * N/A |
| Week 2  (March 20 - 26)  All tasks have been completed. | * Project Plan * Begin SRS/SDD * Determine Roles and Responsibilities * Begin discussing Test Plan | * Turn in Project Plan |
| Week 3  (March 27 - April 2)  All non-highlighted tasks were completed.  Highlighted tasks have been moved to week 4. | * Update SRS/SDD * Discuss Spring Framework * Create Test Plan * Review Roles and Responsibilities to begin coding * Begin work on coding the login/system account creation process * Create database tables for storing account information * Create test accounts for students and teachers * Begin work on the User Guide * Start work on question templates for test generator | * Turn in Test Plan   Comments on progress:  Finalized our design and began working on our login/authentication system mainly by creating the html for the login and sign-up pages.  Did not create SQL tables yet and have moved this task to week 4. |
| Week 4  (April 3 - 9) | * Verify the login and account creation processes are functioning properly * Update SRS/SDD * Begin work on the test generator/ continue work on question templates * Create database tables for storing account information * Create test accounts for students and teachers * Start work on student and teacher UI * Functionality and security testing for all operating components * Continue work on the User Guide * Start work on question templates for test generator * Start work on automated grading of tests * Finish login and Account creation process | * Turn in Project Design |
| Week 5  (April 10 - 16) | * Update Test documentation/SRS/SDD/ User guide/ Development history * Functionality and Security Testing on all created components * Continue work on Student and Teacher UI * Continue work on test generator * Continue work on automatic grader for tests * Finish question templates for test generator | * Turn in Phase 1 Source |
| Week 6  (April 17 - 23) | * Update Test documentation/SRS/SDD/ User guide/ Development history * Functionality and Security Testing on all created components * Finish work on Student and Teacher UI * Finish work on test generator * Finish work on automatic grader | * Turn in Phase 2 Source |
| Week 7  (April 24 - 30) | * Update Test documentation/SRS/SDD/ User guide/ Development history * Functionality and Security Testing on all created components * Specifically, using test credentials create a sample test to be taken by a test student account, and verify that the test is automatically graded appropriately upon completion and that both the test student and test teacher account can view the result of the test * Fix any bugs or issues that arise from testing the entirety of the system | * Turn in Phase 3 Source |
| Week 8  (May 1 - 7) | * Finalize all Test documentation/SRS/SDD/ User guide/ Development history * Ensure that all bugs and errors in functionality/security have been fixed * Finalize deployment of application * Develop conclusions for final project submission (design strengths, limitations, lessons learned, suggestions for future improvements | * Turn in Final Project |

# 4. Contributions

|  |  |
| --- | --- |
| **Individual** | **Contributions** |
| Abraham Ewnetu | * Developed user interface that helps students/teachers to login/register/choose courses they want to take . * Creating a logic layer login/registration/choose courses * Creating MySQL queries for login/registration/ choose courses |
| Brady Word | * Developed and has updated the SRS/SDD * Completion of the initial Project Plan and has updated project plan * Completion of the Test Plan * Developed and has updated the Project Schedule * Creating the MySQL database for the student/professor test account credentials * Assist in login/registration functionality |
| Georgy Louis | * Design MySQL Database * Assist with SQL Script * Assist with Testing SQL Script * Develop test system * Contribute in developing SRS/SDD |
| Lewie Giammaria | * Contributed with SRS/SDD * Completion of initial Project Plan * Completion of Test Plan * Assisting on front end/back end development |

# 

# 5. Database Design

## 5.1 Database Table Description

Following are the descriptions of the tables in the database schema

**Table Overview**

|  |  |
| --- | --- |
| **Table Name** | **Description** |
| user | Stores information about users who can access the system |
| course | Stores information about courses offered |
| CourseTaught | Stores information about a course session that a professor is teaching |
| CourseTaken | Stores a student registration for a course being taught |
| Test | Stores information about a test a professor has created for a course that he or she is teaching |
| TestSession | Stores information related to a test that a student has taken |
| Question | Stores information about questions related to tests |
| Choices | Stores information about individual responses related to a question |
| StudentAnswer | Stores information about questions that students submit in the context of test |

## 5.2 Table Details

**User**

|  |  |
| --- | --- |
| **Column** | **Description** |
| userId | User unique identifier. Primary Key |
| email | User’s email |
| password | User’s password |
| firstName | User’rs first name |
| lastName | User’s last name |
| userType | Professor or teacher |

**Course**

|  |  |
| --- | --- |
| **Column** | **Description** |
| courseID | Unique course identifier |
| name | Course name |
| code | Code identifying a code that infer the course name |
| number | Unique number identifying a course |
| description | Course description |

**CourseTaken**

|  |  |
| --- | --- |
| **Column** | **Description** |
| studentID | Unique student identifier |
| couseTaughtID | Unique identifier for a course being taught |
| registrationDate | Date the student has registered for a course |

**CourseTaught**

|  |  |
| --- | --- |
| **Column** | **Description** |
| professorID | User unique identifier. Primary Key |
| CourseID | Unique course identifier |
| CourseTaughtID | Unique identifier for a course being taught |
| date | Date course being taught started |
| numberOfStudents | Number of students participants in a course being taught |

**Test**

|  |  |
| --- | --- |
| **Column** | **Description** |
| testID | Unique test identifier |
| courseTaughtD | Unique identifier for a course being taught |
| professorID | User unique identifier, but related to a professor |
| timeLength | Test duration |
| dateCreated | Date the test was created |
| status | Indicate whether the test is activated or deactivated |
| courseID | Unique course Identifier |

**TestSession**

|  |  |
| --- | --- |
| **Column** | **Description** |
| TestSessionID | Unique test session identifier. Data related to the test a student has taken. |
| studentID | Unique student identifier. |
| courseID | Unique identifier for a course being taught |
| testID | Unique test Identifer |
| grade | Students grade for the test |

**Question**

|  |  |
| --- | --- |
| **Column** | **Description** |
| questionID | Unique question Identifier |
| testID | Unique testdentifier. |
| category | Identifier of a category of questions.For example, Fill in blank |
| questionStatement | The question content |

**Choices**

|  |  |
| --- | --- |
| **Column** | **Description** |
| choiceID | Unique question Identifier |
| choiceStatement | Content of a response that can be chosen |
| answer | Element indicating if this choice statement is the response or an element of the response to the question |
| questionID | Unique question identifier |

**StudentAnswer**

|  |  |
| --- | --- |
| **Column** | **Description** |
| questionID | Unique question identifier |
| studentID | Unique student identifier |
| testSessionID | * Unique test session identifier * Test session : course being taught |
| student | Answer student submitted. |

