Maintenance Plan

ICSI-418 Final Project

Version 1.0 ● May 2, 2019

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Document History

Paper copies are valid only on the day they are printed. Contact the author if you are in any doubt about the accuracy of this document.

Revision History

Revision Number	Revision Date	Summary of Changes	Author
1.0	5/2/19	Document created	Dev team

Reference Documents

Please see the following documents for more information:

Document Name	Version	Author

Distribution List

This document has been distributed to:

	Position	Company	Action
GitHub			

Executive Summary

The Maintenance Plan is used to maintain an IT system(s) by describing the system maintenance procedures, operating environment, security, and other control requirements. Maintenance begins when all, or part of the system, has been accepted and all support software and documentation has been delivered. Typically, Maintenance Plans cover the following:

Scope of maintenance/maintenance activities

The identification of the initial status of the system

Structure of the support organization

Corrective action to be taken for each type of defect

Maintenance records and reports

Background

The final project completed is a web-based application. More specifically, it is a testing tool that's function is the managing, administration, and taking of multiple-choice and true-false examinations. The goal of the project is to create a testing system, which includes a user component, where one can take any number of assigned tests, receiving said results, as well as viewing results of previously taken tests. The testing system also includes an administrative component where one can create, read, update and delete all types of users, questions (answers), and tests – as well as view user's results.

Objectives

More specific requirements include: users are identified by and login through an email and password; users can be marked inactive by an administrator and are therefore not allowed to login; users are emailed their identification information upon account creation by an administrator; questions are to be categorized and can contain images as well as text; upon taking a test, a user's progress should be saved actively as they answer questions; the header image, header text, and footer text should be customizable by each administrator; a test with questions and answers can be uploaded to the web-app in the form of a csv file, propagating through the database.

Scope

The scope establishes the boundaries of the document and should describe activities outside of the scope, for example, if certain components are not included in the plan due to budgetary, technical or contractual reasons.

Relationship to Other Plans

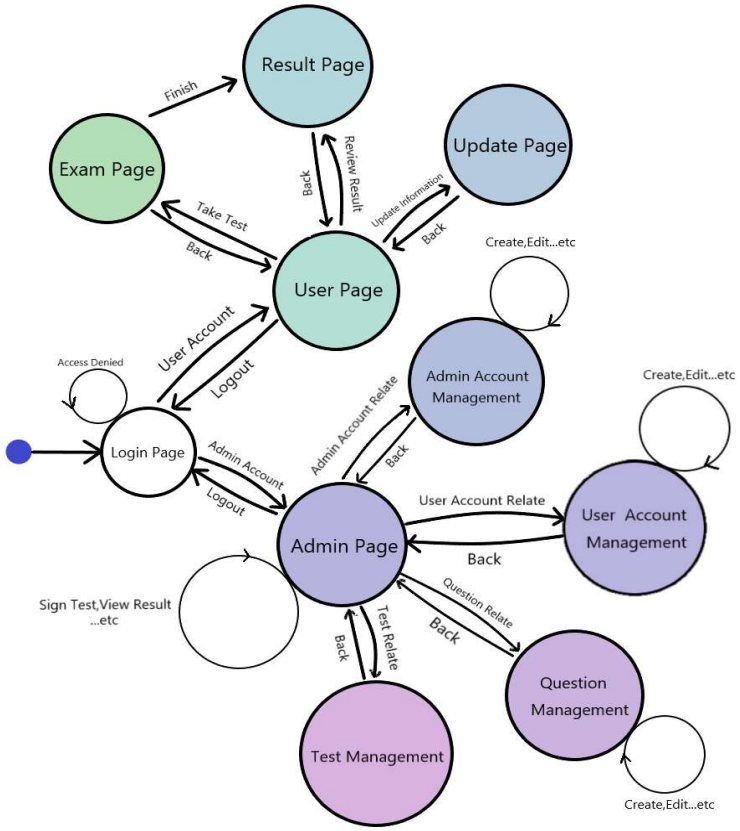
Program description: README.md

https://github.com/lprescott/ICSI418-Group-Project/blob/master/README.md

Project Backlog

System Organization

In this section, provide a brief description of the system structure, major system components, and the functions of each major system component. Include charts, diagrams, and graphics as necessary.



Details

Provide details of the system(s) to be maintained:

Project Owner: development team

Department responsible: none

System name: AWS

System category: Windows Server

Operational status: end of life 5/2/2019

Security

All passwords are encrypted

Points of Contact

NONE

Authorized Usage

This was a class project anyone wants to continue development is welcome to.

Support Environment

This Project was deployed to AWS running Windows Server.

Equipment Environment

AWS Cloud server

Computer Hardware

This Project was deployed to AWS running Windows Server

Facilities

None

Software Dependencies

- javax.servlet-api 4.0.1
- javax.servlet.jsp-api 2.3.3
- jstl 1.2
- mysql-connector-java 8.0.15
- javax.mail 1.6.2
- commons-io 1.3.2
- commons-fileupload 1.4
- opencsv 4.5

Storage Requirements

All storage is on AWS cloud server.

Project Team

Identify the team members by functional job description. State the approximate percentage of each team member's time that will be required to be devoted to the project(s).

Roles and Responsibilities

Describe each person(s) responsibility for ensuring the maintenance activities are performed.

Describe each person(s) role and responsibility during the test plan. Identify the user groups responsible for all aspects of test plan(s) activities, such as developers, testers, technical writers, and end-users.

Name	Role	Responsibility
Luke Prescott	Scrum master	Development, tester, tech writer
Sean Loucks	Developer	Development, tester, tech writer
Jack Holden	Developer	Development, tester, tech writer
Max Moore	Developer	Development, tester, tech writer
Chin Wa Cheung	Developer	Development, tester, tech writer
Will Dahl	Developer	Development, tester, tech writer
Gary Passarelli	Developer	Development, tester, tech writer

Table 1 — Roles and Responsibilities

Training

None.

Management Approach

Describe the approach to managing the project; tracking and controlling the project; assumptions, constraints, or dependencies; risk management issues; project estimates (sizing and time); staffing requirements (skills and resource load); and information on schedule and project deliverables.

Priorities

Describe the approach for determining priorities, for example, if you classify software defects by severity level (e.g. Sev 1, Sev 2, and Sev 3), then describe the procedures for resolving these issues.

Schedule

See: product backlog.

Tasks

Time required to complete each task was based on each team members skill level.

Constraints

Discuss any business or technology constraints that may impact the Maintenance Plan, e.g. resources, schedules, or budgetary issues.

Ref. #	Constraint	Impact
1	End of life	End of life

Table 3 — Constraints

Assumptions

None.

Dependencies

List the main dependencies regarding the Maintenance Plan.

Ref. #	Dependency	Action
1	GitHub	https://github.com/lprescott/ICSI418-Group-Project

Table 5 — Dependencies

Technical Approach

Types of Maintenance Activities

Describe the different type of activities that require maintenance, e.g. resolution, enhancements, and modifications. Review the terms of maintenance (which may be specified in the license or service level agreement).

Typical maintenance activities include:

Problem resolution

Modification and expansion

Performance improvement

Examples of maintenance items include:

Software

Data

Documentation

Configuration Management

None.

Risk Assessment

Low risk to system if unit is changed. Higher risk to individual units if database is significantly changed.

Testing

See: testing plan

System Protection

None.

Special Processes

None.

Maintenance Reports

See: GitHub.

Documentation

See GitHub.

Quality Assurance Activities

See GitHub.

Maintenance Procedures

Discuss the procedures necessary for the maintenance team to maintain the software units that make up the system. This section outlines the step-by-step procedures to maintain each software unit.

Consolidated Unit List

All units created using Eclipse EE in JSP with Java backbone.

Unit. #	Name	Purpose
1	Login Page	Allow access to admin or user page
2	Admin Page	Allow access to create and edit users and tests
3	Admin management	Edit admin account information
4	User Management	Edit user information.
5	Test Management	Edit and create test
6	Question Management	Edit and create questions
7	User Page	Allow access to user
8	Exam Page	Take test
9	Result Page	View results
10	Update Page	Update user information

Table 6 — Unit List

Maintenance Procedure for Software Unit [1]

Login Page

Description

This unit provides login function to admin and user pages.

Conventions

All standard java naming and programming conventions were used.

Verification Procedures

Functionality was verified by development team.

Error Conditions

None

Maintenance Procedure for Software Unit [2]

Admin Page

Description

This unit provides access to pages that allow administrators to view and edit user information. The admin page also allows administrators to view and edit test information.

Conventions

All standard java naming and programming conventions were used

Verification Procedures

Functionality was verified by development team

Error Conditions

None

Maintenance Procedure for Software Unit [3]

Admin management

Description

This unit allows administrator to edit admin account information.

Conventions

All standard java naming and programming conventions were used

Verification Procedures

Functionality was verified by development team.

Error Conditions

None

Maintenance Procedure for Software Unit [4]

User management

Description

This unit allows administrator to edit user account information.

Conventions

All standard java naming and programming conventions were used.

Verification Procedures

Functionality was verified by development team.

Error Conditions

None

Maintenance Procedure for Software Unit [5]

Test Management

Description

Gives administrator ability to create and edit tests.

Conventions

All standard java naming and programming conventions were used.

Verification Procedures

Functionality was verified by development team.

Error Conditions

None

Maintenance Procedure for Software Unit [6]

Question Management

Description

Gives administrator ability to create and edit test questions.

Conventions

All standard java naming and programming conventions were used.

Verification Procedures

Functionality was verified by development team.

Error Conditions

None.

Maintenance Procedure for Software Unit 7

User Page

Description

User page is for the user to take and view tests.

Conventions

All standard java naming and programming conventions were used.

Verification Procedures

Functionality was verified by development team.

Error Conditions

None

Maintenance Procedure for Software Unit 8

Exam Page

Description

Gives users ability to take test.

Conventions

All standard java naming and programming conventions were used.

Verification Procedures

Functionality was verified by development team.

Error Conditions

None

Maintenance Procedure for Software Unit 9

Result Page

Description

Gives users ability to view test results.

Conventions

All standard java naming and programming conventions were used.

Verification Procedures

Functionality was verified by development team.

Error Conditions

None

Maintenance Procedure for Software Unit 10

Update Page

Description

Gives user ability to update their information.

Conventions

All standard java naming and programming conventions were used.

Verification Procedures

Functionality was verified by development team.

Error Conditions

None

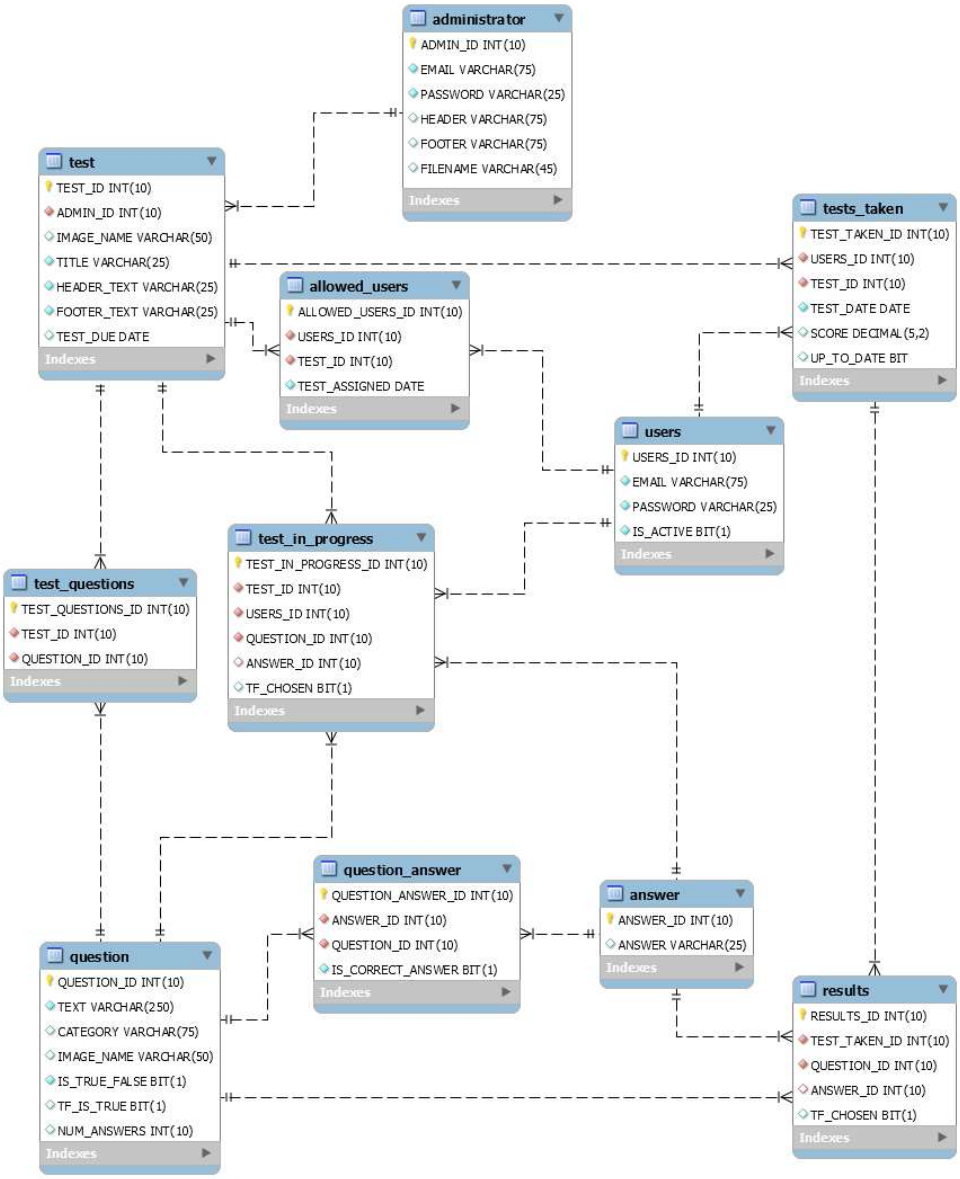
Database Maintenance Procedure

This is a SQL database developed with MySQL and Eclipse EE.

Database [x]

The database is accessed by all units via java backbone.

General Characteristics



Permanency

The database contains dynamic data. Inactive users will need to be removed

Storage

1GB recommended.

Restrictions

None.

Organization and Detailed Description

See: ER-Diagram.

Structures

See: ER-Diagram.

Elements

See: ER-Diagram.

Expansion

None.

Location

Database is located on AWS server.