Test Plan

Planr, an Agile Project Planning Application

Version 2.0

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Prepared by

Michael Blakeman

CIS 895 – MSE Project

Kansas State University

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# Introduction

This document will include the plan for testing the critical use cases and functionalities described in the Vision Document.

## 1.1 Objectives

The test plan for the application should support the following objectives:

* Identify the features of the application which will be tested.
* Define the criteria in which a test case passes or fails.
* Define any test approaches required during testing.
* Identify the testing deliverables.

# 2. Features to Test

This section lists the requirements that will be tested for the Planr application. Each major feature has as designated identifier for test case references.

|  |  |  |
| --- | --- | --- |
| **Actor** | **Feature Identifier** | **Description** |
| User | PROJ | Project Setup / Settings |
|  | FEAT | Feature Setup / Modification |
|  | ENG | Engineer Setup / Modification |
|  | PLAN | Planned Features |
|  |  |  |

# 3. Test Cases for User Requirements

## 3.1 Project Setup / Settings

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Test Case** | **Action** | **Result** |
| PROJ.1.1 | Project Setup / Settings | Create an empty project without engineers or features. | Unable to proceed through project setup without engineers or features. |
| PROJ.1.2 | Project Setup / Settings | Assign an Engineer to created project. | The project now has a name and one assigned Engineer. |
| PROJ.1.3 | Project Setup / Settings | Assign an unplanned feature to created project with one engineer. | The project now has an assigned Engineer and one unplanned feature. |
| PROJ.1.4 | Project Setup / Settings | Assign 15 Engineers to a created project. | The engineer information shows in the "Add Project Engineers" view and the list will scroll. |
| PROJ.1.5 | Project Setup / Settings | Assign 15 Features to a created project. | The feature information shows in the "Add Project Features" view and the list will scroll. |
| PROJ.1.6 | Project Setup / Settings | Adjust the Planr settings to have an average velocity of 10 points per Engineer, a sprint length of two weeks, and an estimate padding of 0%. | The settings reflect the changes applied. |

## 3.2 Engineer Setup / Modification

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Test Case** | **Action** | **Result** |
| ENG.1.1 | Engineer Setup / Modification | Create a new engineer to assign to the project with a valid first and last name, at least one valid platform, and two unavailable dates within the next two weeks. | A valid Engineer created with a name, platform, and valid unavailable dates. |
| ENG.1.2 | Engineer Setup / Modification | Create an engineer with four unavailable weeks. | A valid engineer with four unavailable weeks. |
| ENG.1.3 | Engineer Setup / Modification | Create an invalid Engineer by attempting to enter in a first or last name with a value that is greater than 40 characters. | Text field does not allow name length longer than 40 characters. |
| ENG.1.4 | Engineer Setup / Modification | Create an engineer with no platform proficiencies. | Save button is not enabled until at least one platform is chosen. |
| ENG.1.5 | Engineer Setup / Modification | Create an engineer with no first name. | Save button is not enabled until at least one character is entered in first name field. |
| ENG.1.6 | Engineer Setup / Modification | Create an engineer with no last name. | Save button is not enabled until at least one character is entered in last name field. |
| ENG.1.7 | Engineer Setup / Modification | Cancel creating an engineer. | Input is discarded and user is taken back to the "Add Project Engineers" view. |

## 3.3 Feature Setup / Settings

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Test Case** | **Action** | **Result** |
| FEAT.1.1 | Feature Setup / Modification | Create an unplanned feature with a name, summary, at least one platform, an effort estimate above 0 points, a priority between 0 and 1000, and no concurrency allowed. | A valid created, unplanned feature. Returned to the list of features. |
| FEAT.1.2 | Feature Setup / Modification | Create a feature with no feature name. | Save button is not enabled until feature name has at least one character. |
| FEAT.1.3 | Feature Setup / Modification | Create a feature with a name character count of 50. | Text field automatically invalidates input back to valid 40 character limit. |
| FEAT.1.4 | Feature Setup / Modification | Create a feature with no summary. | A valid created, unplanned feature. Returned to the list of features. |
| FEAT.1.5 | Feature Setup / Modification | Create a feature with a summary of 250 character length. | Text field automatically invalidates input back to valid 240 character limit. |
| FEAT.1.6 | Feature Setup / Modification | Create a feature with 0 point estimate. | Save button is not enabled until point estimate is above 0. |
| FEAT.1.7 | Feature Setup / Modification | Create a feature with 150 point estimate. | Text automatically validates to max valid point estimate value. |
| FEAT.1.8 | Feature Setup / Modification | Create a feature with a priority of 0. | A valid created, unplanned feature. Returned to the list of features. |
| FEAT.1.9 | Feature Setup / Modification | Create a feature with a priority of 5000. | Text automatically validates to max valid priority value of 1000. |
| FEAT.1.10 | Feature Setup / Modification | Create a feature with no platforms. | Save button is not enabled until at least one platform has been chosen. |
| FEAT.1.11 | Feature Setup / Modification | Cancel creating a feature. | The input is discarded and the user is taken back to the feature list view. |

## 3.4 Planned Features

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Test Case** | **Action** | **Result** |
| PLAN.1.1 | Planned Features | Create a project with four valid features, each feature has a sprint point total of greater than 18 points. Create three engineers to work on the project / features and have the necessarily platform proficiences to match the project needs. | A valid Roadmap output for the given input parameters. |
| PLAN.1.2 | Planned Features | Create a project with four valid engineers each only working on iOS platform. Create four valid features each with an associated Android platform. Click view plan. | Error messaging saying that at least one engineer needs to be available to work on the platforms for each feature. |
| PLAN.1.3 | Planned Features | Create a project with four valid engineers each only working on iOS platform. Create four valid features each with an associated Android platform. Click view plan. | Roadmap values are all visible and discernable. |
| PLAN.1.4 | Planned Features | Create a project with four valid engineers each only working on iOS platform. Create four valid features each with an associated Android platform. Click view plan. | Roadmap can scroll horizontally, and vertically if needed. |
| PLAN.1.5 | Planned Features | Create a project with four valid engineers each only working on iOS platform. Create four valid features each with an associated Android platform. Click view plan. | Roadmap title matches the project name input. |

# 4. Approach

This test plan addresses the testing of the Planr application using automated unit testing using XCTest framework in XCode. The Planr application will be manually tested as well.

# 5. Item Pass/Fail Criteria

Tests will pass if they meet the requirements specified for the tested feature in the Vision Document 2.0 or will otherwise fail.

# 6. Suspension Criteria and Resumption Requirements

## 6.1 Suspension Criteria

In the case of a manual test failure, any tests for a feature dependent upon the failed feature must be suspended. The failed test case will be logged with a description of the test case failure as well as the date and time the failure took place. Any feature that does not have a dependency upon the failed feature may continue to be tested. Automated unit testing may resume regardless of failures.

## 6.2 Resumption Criteria

Testing for a failed feature may resume when the root cause of the defect has been identified and addressed.

# 7. Test Deliverables

## 7.1 Test Log

A test log will be used to document the test cases. The log must include a date and time of the test, if the test passed or failed, and if a failure occurs the reason for the failure must be documented with suggested solutions.