Amir Farhat

CS 361 Assignment 3

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CS361: Assignment 3: Project Plan and Sprint 1 Plan (for Milestone #1)

# Overview

Now that you’ve been introduced to the microservices concept, start planning your individual project. It’s OK to change your plan later!

First, define the entire set of user stories for your individual project. The timespan for the user stories is this term but you don’t have to finish implementing all the user stories this term. These user stories will need to go in a **Product Backlog** column/section/category of your task management system.

Next, move some of those user stories into a **Sprint Backlog**—these will be the user stories you WILL complete during this Sprint (for Milestone #1) and comprise your **Sprint Plan**. **Note these minimum requirements for Milestone #1:**

* Has a way for users to interact (e.g., provide input, push buttons, etc.)
* Reflects CSH
* Reflects three quality attributes you choose (i.e., satisfies the non-functional requirements you write for each quality attribute)
  + *Hint: If you choose “usability” or “inclusivity” as a quality attribute, your corresponding non-functional requirement can involve the CSH*

# Instructions

Complete each item below by replacing the highlighted text (**Usability note**: double-click the text to select it).

## Task Management System

Choose a task management system based on the spike you did previously.

**Which task management system** did you choose?

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| Jira |

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## Product Goal and Backlog

You’ll be using *some* Scrum methods in this course. Unfortunately, the Scrum Master and Product Owner roles don’t work well in this setting. You will, however, be experiencing Scrum Events and Artifacts.

* 1. What is your **Product Goal** for your individual project?

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| *Develop a Cleveland Cavaliers quiz app that quizzes users.* |

The Scrum Guide (<https://scrumguides.org/scrum-guide.html>) doesn’t give a detailed description of the Product Goal: “**describes a future state**”, “**long-term objective**”. Example Product Goal: “Develop software I can use to communicate with my dog when I’m on vacation.”

* 1. In a **Product Backlog** column, section, or category of your task management system create **user stories** for your entire **individual project**. Use INVEST to guide you.

## Requirements for user stories:

* Each has a **name** that briefly describes the functionality
* Each uses the **“As a… I want to… so that…” format** (see textbook)
* Total of at least **10** user stories (you will not have to implement all of these)
* As a set, must have **no obvious violations of INVEST**

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|  | **Name (e.g., “Login”)** | **As a… I want to… so that… format** |
| **1** | *Create username for my profile.* | As a user, I want to be able to create a temporary profile for this session and create my own username so that I can see my progress later on when the leaderboard is implemented. |
| **2** | *Button/keyboard input to start quiz.* | As a user I would like to be able to click a button or enter a keyboard input to choose and start a quiz so that I can do everything via keyboard inputs instead of using a mouse. |
| **3** | *Choose answers via keyboard input* | As a user I would like to be able to choose my answers via a keyboard input so that I dont have to use my mouse at all. |
| **4** | *Progress of quiz* | As a user I would like to be able to see my progress of which question I am on in a quiz so that I get a sense of how much time I have left. |
| **5** | *See correct answers.* | As a user, I want to be able to compare the answers that I gave and what the correct answers to the questions were so I can learn what I got incorrect. |
| **6** | *Score at end of game.* | As a user I would like to get my score at the end of the game instead of during. I want it implemented this way so I don’t get anxiety or anything if I know I am off to a bad start on the quiz. Kind of an ignorance is bliss attitude. |
| **7** | *Post my score to leaderboard* | As a user I would like to have the option to post my score to the leaderboard so I can compare my performance against other people that have taken this quiz. |
| **8** | *Create Main Home Page* | As a user , when entering the home screen I should see a CLI interface with keyboard options for navigation. |
| **9** | *Total Quiz time* | As a user I would like to see how long a quiz is taking me while I am taking the quiz so that I get a sense of time and how long this is taking me. |
| **10** | *Create Easy, Medium, Hard quizzes* | As an admin, create the questions for the easy, medium, and hard quiz options and categorize them so that it’s easy to differentiate them |

Enter these user stories into your task management system. Take a **screenshot** so that the grader can confirm you added the stories.

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## Non-Functional Requirements

## Select the top three quality attributes you care about for your individual project. See <https://en.wikipedia.org/wiki/List_of_system_quality_attributes>for ideas. Convert them into non-functional requirements.

## Which three quality attributes did you choose? Name and define each.

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| **Quality attribute name** | **Quality attribute definition** |
| *Accuracy* | *How close a given set of measurements are to their true value.* |
| *Reusability* | *the use of existing assets in some form within the software product development process* |
| *Usability* | *the capacity of a system to provide a condition for its users to perform the tasks safely, effectively, and efficiently while enjoying the experience* |

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## Why did you choose these quality attributes? Ex: How are they relevant to your end user? How are they relevant to your Product Goal? (1+ sentence per quality attribute)

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| **Quality attribute** | **Why it’s relevant to YOUR project** |
| *Accuracy* | *Accuracy is important to this project because a users scores are paramount to this whole thing. When a user takes a quiz his score has to be accurate and that will reflect in our leaderboard. If anything in our app scoring wise isn’t accurate it really defeats the purpose of most of the app except for the learning component.* |
| *Reusability* | *Reusability is important because I am going to be creating multiple quizzes and I would like to re use many of the components for each quiz. The process for creating one quiz should be followed closely and re used in the other quizzes created. This is more important for our software uses rather than for users. UI wise we should be re using those screens for each quiz.* |
| *Usability* | *As of right now, I plan on using a CLI for my project. This has it’s benefits like ease of creation and simplicity. The problem is that creating a pleasant experience within a CLI is more difficulty. Less visual options so making an easy to use UI will be difficult and that’s why it needs to be more usable.* |

## Convert your quality attributes to non-functional requirements. Must be testable. What are your three non-functional requirements? How will you test that they’re satisfied? (1+ sentence each)

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| **Quality Attribute 1** | *Accuracy* |
| **Non-functional requirement 1** | *A users quiz score must have a 100% accuracy rate.* |
| **How will you test that the non-functional requirement is satisfied** | *The developer will run through a quiz 5 times with pre determined questions that they will get wrong before hand. By doing this, the developer will know what the correct score should be at the end. The developer will enter in these incorrect values and run through the quiz and compare the scores.* |

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| **Quality Attribute 2** | *Reusability* |
| **Non-functional requirement 2** | *A user must be able to try multiple quizzes even after submitting to the leaderboard* |
| **How will you test that the non-functional requirement is satisfied** | *A user will create username, complete quiz, and then submit their score to leaderboard. The user will then attempt a different quiz.* |

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| **Quality Attribute 3** | *Usability* |
| **Non-functional requirement 3** | *All pages should be navigable via keyboard.* |
| **How will you test that the non-functional requirement is satisfied** | *Developer will navigate the CLI and use the keyboard to reach every screen possible.* |

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## Sprint 1 Plan (for Milestone #1)

## What is your Sprint Goal?

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| *My sprint goal is to create the quiz questions* |

## Next, select at least three user stories from your Product Backlog and move them to your Sprint Backlog. Choose what you think you can complete, but recall the minimum requirements (see Overview). Which user stories did you select?

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| *Create username for my profile* |
| *Create Main Home Page* |
| *Create Easy, Medium, Hard quiz questions.* |

## Take a screenshot that shows you’ve moved these user stories into a Sprint Backlog in your task management system.

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## Now that you’ve selected your Sprint user stories, you will define several tasks for each user story—the tasks you’ll need to complete to complete the user story. Add tasks to each user story and take screenshots showing each user story’s tasks in your task management system. Note: It might work best to make your user story a task and your tasks subtasks of the user story.

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## Lastly, you’ll need a Definition of Done for the Sprint. You’ll need to show this DoD is satisfied when you do your implementation.

**Requirements for Definition of Done:**

* Has an least one acceptance criterion for each user story
* Each acceptance criterion uses the “Given… when… then…” format

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| **Acceptance criterion** | **For which user story?** |
| *Given a user starts the application, when he gets the option to create username then he can type in a username and it saves the profile.* | *Create Username for my profile* |
| *Given when a user starts the application, when it loads he is then greeted by a CLI home page with keyboard actions for navigation.* | *Create Main Home page* |
| *Given 3 quizzes, when reviewing the quizzes, then there are 10 questions total for each quiz.* | *Creeate easy, Medium, Hard Quizzes* |
| Each non-functional requirement is satisfied | None |

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## You are NOT required to put the DoD in your task management system.

# Submission

PDF or Word format via Canvas.

You must follow instructions at Modules > 'HOW TO: Attach a Document to "Text Entry" Field'.

# Grading

You are responsible for satisfying all criteria listed in the Canvas rubric for this assignment. You will be able to revise this assignment if you miss points.

# Questions?

Please ask via Ed so that others can benefit from the answer.