Individual Assignment

Edward George Prins III

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1. Requirements Specification
   (a) Produce requirements in the form of user stories
      i. As a teacher, I can view the reports on the students/skills that I am teaching in order to better optimize.
      ii. As a student, I can view the reports to better understand what I still need to learn.
      iii. As a student, I can view the reports to better understand what I have already achieved.
      iv. As a user, the applications is accessible.
      v. As a user, the applications respond in a timely manner.
      vi. As a user, I can show only the reports that I wish to view.
   (b) Division of work into smallest-actionable units
      i. To be determine, at the beginning of each development milestone.
   (c) Coordinate with customer to establish requirements
      i. We have been meeting with the customer, Dr. Philip Pavlik Jr., and the Lead Developer, Craig Kelly, every Friday in order to get an understanding of what exactly the customer wanted.
   (d) Simplify requirements to customer understandability
      i. 1) An "All Student" page with the following requirements:
         A. A) Will be organized with a tiled grid format, with each tile representing a student.
         B. B) Each tile will be shaded from red to blue based on the performance for that item.
         C. C) Each tile will have a trendline to indicates trend across repetitions.

D. D) Have a button that switch to the "All Items/Skills" page.

ii. 2) An "All Items/Skills" page with the following requirements:
   A. A) Will be organized with a tiled grid format, with each tile representing an item/skill.
   B. B) Each tile will be shaded from red to blue based on the performance for that item.
   C. C) Each tile will have a trendline to indicates trend across repetitions.
   D. D) Have a button that switch to the "All Students" page.

iii. 3) A "Student" page with the following requirements:
   A. Will switched to this page when the user clicked on a student.
   B. Will show a graph that show the overall trendline for Correctness and Speed.
   C. Will be compared with the average of all students.
   D. List additional performance for each individual skill.

iv. 4) A "Item/Skills" page with the following requirements:
   A. Will switched to this page when the user clicked on an item/skill.
   B. Will show a graph that show the overall trendline for Correctness and Speed.
   C. Will be compared with the average of all items/skills.
   D. List additional performance for each student for the item/skill.

2. QA Plan

(a) Design a plan for software testing

i. Week 8/9 - Alpha Testing

ii. Week 10/11 Performance Testing / Usability Testing

iii. Week 13 - Will be doing Acceptance Testing.

iv. Week 14/15 - Will be doing Beta Testing

(b) Specify which types of testing will be performed

i. Acceptance Testing - Testing with the customer, Dr. Philip Pavlik Jr., to verify if the group additions meets his specified requirements.

ii. Performance Testing - The customer, Dr. Philip Pavlik Jr., has requested that when we include our addition to his project, that he wish the latency to be as low as possible, preferring it to be no more than 5 ms.

iii. Usability Testing - The project is primarily meant for both, students and teachers, in order to imporve the education process. Therefore the our addition should be as user-friendly as the primary system.

iv. Alpha Testing - Testing in house to make sure that the project works on a basic level.

v. Beta Testing - Final testing before turning our additions in to the customer and advisor.

(c) Determine automated vs manual testing

i. All of our test will be manual, due to the nature of the project and requirements.

(d) Describe and establish testing platforms

i. All of our testing will be done within our VCS platform that is easy to distributed and setup.

3. Configuration Management Plan

(a) Establish VCS platform

i. The customer, Dr. Philip Pavlik Jr., has supplied a Vagrant file in the repository to allowed for a unified development. The Vagrant file allows vagrant to run the project in a virtual machine. The virtual machine abstracts away the various setup steps that is needed to get a testable version of the project running, and allow us to use whatever code editors and other we preferred to us in our current operating system.

(b) Establish remote repository setup

i. The customer, Dr. Philip Pavlik Jr., had already created a working copy of the assigned project and is currently hosting it on his own Bitbucket account. I have therefore created a fork of his own project and have given access to it to the group (Edward G. Prins III, Nicholas Gordon, Justin Hiller), customer (Dr. Philip Pavlik Jr.), and the advisor (Dr. Scott Fleming)