e-Valuate

Software Development Plan

Version 1.0.0

Revision History

Date	Version	Description	Author
28/Oct/19	0.1.1	Assign roles, project estimate	Kenny, Jordyn
30/Oct/19	0.1.2	Project overview	Megan
30/Oct/19	0.1.2	Introduction	Action Ghimire
14/Jan/20	0.2.1	Transition date fixed	Jackie Ye
15/Jan/20	0.2.2	Completed sections 3.1 and 3.2	Jordyn Dent
16/Jan/20	0.2.3	Add Summary column to Evolution table (sec 2.4). Complete section 4.2. Fix indentation and formatting.	Kenny Houston
06/May/20	1.0.0	Final touch ups and corrections	Kenny Houston

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Software Development Plan	Date: 06/May/20

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Software Development Plan

1.   Introduction

1.1   Purpose

The purpose of this document is to gather all information necessary to develop and plan the e-Valuate project. It describes the approach to the development of the software and is the top-level plan generated and used by project managers to direct the development effort.

The following people use the Software Development Plan:

1.1.1   Project Managers

Project managers use it to plan the project schedule and resource needs. Also, to track progress against the schedule.

1.1.2   Team members

Team members use it to understand their goals, when these goals must be accomplished, and what other activities their goals are dependent upon.

1.2   Scope

This Software Development Plan describes the overall plan to be used by the e-Valute project, including design, implementation, testing, and deployment of the product. The details of the individual iterations will be described in the Iteration Plan documents referenced below.

1.3   Definitions, Acronyms, and Abbreviations

All terms can be found in the glossary.

1.4   References

1.4.1   Glossary
1.4.2   Iteration Plan 1
1.4.3   Iteration Plan 2
1.4.4   Iteration Plan 3
1.4.5   Iteration Plan 4
1.4.6   SRS
1.4.7   Use Cases
1.4.8   Vision Document

1.5   Overview

1.5.1   Project Organization

This section describes the organizational structure of the project team. This section also specifies the roles and responsibilities of each team member.

1.5.2   Management Process

Explains the estimated cost and schedule, defines the major phases and milestones for the project, and describes how the project will be monitored.

1.5.3   Applicable Plans and Guidelines

Provides an overview of the software development process, including methods, tools and techniques to be followed.

2. Project Overview

Each year, the CCSC (Consortium for Computing Sciences in Colleges) South Central Region hosts a conference in which contestants can submit research posters to be judged. Any given year can have dozens of posters, but since the adoption of this conference, organization and judging efforts have been completed by hand (and often on paper) by the chair and his colleagues.

When contestants sign up for this event, they must contact the chair directly. This requires time consuming and unnecessary work on the part of the chair. Then, during the event, judges must grade each poster using a paper rubric and a pen. Then, all judges' scores are compiled together into an excel spreadsheet. This is a very time-consuming and error prone process which requires a lot of moving pieces to be successful.

e-Valuate is an online event management and judging platform which aims to streamline this process. Our solution removes the headache of doing everything manually and allows everyone involved with the conference to utilize the benefits of the service. e-Valuate also allows for similar contests to reap the benefits of our digital service, by leaving the structure of events and rubrics to be customizable.

2.1 Project Purpose, Scope, and Objectives

The purpose of e-Valuate is to create an online and mobile-friendly judging web application and provide customizable rubric templates for different events/contests. e-Valuate will be first used at the Consortium for Computing Sciences in Colleges (CCSC) on April 3, 2020. This project will solve current issues that the conference is facing: using paper to grade posters, manually exporting scores into an excel file, etc. The end goal is to provide a mobile-friendly and paperless judging app that can be used for many different events.

2.2 Assumptions and Constraints

- We assume that the contestants will not need an account to login to the system.
- We assume that there is only one chair of an event.

2.3 Project Deliverables

Deliverables are delivered towards the end of the iteration, as specified in section 4.2.4 Project Schedule.

2.4 Evolution of the Software Development Plan

The Software Development Plan will be revised prior to the start of each Iteration phase. The target dates for the end of each phase and iteration are shown below.

Phases	Date	Summary
Inception	23/Sep/2019 - 07/Oct/2019	Generating the basic concept and requirements
Elaboration	14/Oct/2019 - 28/Oct/2019	Building on requirements more specifically.
Construction	04/Nov/19 - 02/Mar/20	Implementing the software.
Construction Iteration 1	04/Nov/19 - 09/Dec/19	Implementing on the most required features.
Construction Iteration 2	30/Dec/19 - 31/Jan/20	Implementing more required features.
Construction Iteration 3	01/Feb/20 - 28/Feb/20	Implementing features with lower priority.

Transition	02/29/2020 - 03/16/2020	Final deployment for CCSC.

3.   Project Organization

3.1   Organizational Structure

The project team includes six developers one client, and two main review authorities. .

The six developers are all full stack developers with four individuals taking on additional lead roles laid out in section 3.3 of this document.

Our client is in-house and represents an external organization known as the Consortium for Computer Sciences in Colleges: South Central Region.

The two main review authorities are in-house and are professors in the computer science department at TCU. One of these review authorities serves both as our client and course instructor.

3.2   External Interfaces

Official external group interfacing for this project is limited to the Consortium for Computer Sciences in Colleges: South Central Region. Our client, Dr. Michael Scherger, serves as the project spokesperson and main contact for the group.

Initial deployment will be handled by the developers during the transition phase shown in section 2.4 of this document. The project, including the source code and documents, will be handed over to the client on April 22 to be housed and maintained for the future.

The product will be debuted, showcased, and utilized at the CCSC:SC conference on April 3. The poster session of the conference will be organized and run using our product.

3.3   Roles and Responsibilities

Person	Rational Unified Process Role
Jordyn Dent	Project Manager Full Stack Developer
Kenny Houston	Backend Lead Full Stack Developer
Megan Phan	Frontend Lead Full Stack Developer
Hau Ha	Full Stack Developer
Jackie Ye	Database Lead Full Stack Developer
Action Ghimire	Full Stack Developer

4. Management Process

4.1 Project Estimates

For the execution of our project, we are focusing on utilizing free software. As a result, the costs for our project should be free, as the resources we are using have no costs associated. A re-estimation of this cost could come whenever we begin hosting our project using AWS because we may need to take up a paid plan.

4.2 Project Plan

4.2.1 Phase Plan
- Iteration 1: 04/Nov/19 - 09/Dec/19
- Iteration 2: 30/Dec/19 - 31/Jan/20
- Iteration 3: 01/Feb/20 - 28/Feb/20

4.2.2 Iteration Objectives

4.2.2.1 Iteration 1
- UC04 Create a Rubric
- UC13 Grade an Entry
- UC07 (alpha) Analyze a Score Report

4.2.2.2 Iteration 2
- UC01 Create an Account
- UC02 Log in to an Account
- UC03 Create an Event
- UC12 Access a List of Assigned Entries
- UC15 Register for an Event

4.2.2.3 Iteration 3
- UC05 Invite Judges to an Event
- UC07 Analyze a Score Report
- UC08 Assign Judges to Group
- UC11 Use an Event Invitation Link

4.2.3 Releases
- Prototype was a demo completed on 01/Nov/19
- Iteration 1 was a beta completed on 09/Dec/19
- Iteration 2 is beta to be released on 31/Jan/20
- Iteration 3 is a full release to be complete on 28/Feb/20

4.2.4 Project Schedule
- Required feature completion: 02/Mar/20
- CCSC: 03/Apr/20
- Student Research Symposium: 17/Apr/20
- Senior Design Presentation: 30/Apr/20

4.3 Project Monitoring and Control

4.3.1 Requirements Management

The requirements for this system are captured in the Vision document. Requested changes to requirements are captured in Change Requests, and are approved as part of the Configuration Management process.

4.3.2 Schedule and Budget Control

Expenses are monitored by the project manager, and reported and assessed monthly. (See Reporting and Measurement below).

The project manager maintains a schedule showing the expected date of each milestone. The line items in the schedule include work packages assigned to individuals. Each individual who is assigned a work package provides %completion information to the project manager on a weekly basis. Changes in the schedule will be escalated to the project sponsors, who will then decide whether to alter scope in order to preserve target completion dates.

4.3.3 Quality Control

Defects will be recorded and tracked as Change Requests, and defect metrics will be gathered (see Reporting and Measurement below).

All deliverables are required to go through the appropriate review process, as described in the Development Case. The review is required to ensure that each deliverable is of acceptable quality, using the guidelines described in the RUP for Small Projects review guidelines and checklists.

Any defects found during review which are not corrected prior to releasing for integration must be captured as Change Requests so that they are not forgotten.

4.3.4 Reporting and Measurement

Updated cost and schedule estimates, and metrics summary reports will be generated at the end of each iteration.

In addition, overall costs will be monitored against the project budget.

4.3.5 Risk Management

Risks will be identified in Inception Phase using the steps identified in the RUP for Small Projects activity "Identify and Assess Risks".

4.3.6 Version Control

GitHub will be used for source code version control and repository management.

The Change Requests/Pull Requests are reviewed and approved by two members of the team, and may require the review of a Codeowner depending on the section of code which is being modified.