Technical Document

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CIS4592 Capstone Systems Project

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Abstract

This document is comprised of the strategies we wish to implement while working on this software project. We will implement the software using the Android platform with the help of AWS for our server architecture. We plan on having regular meetings with the team and with our client. Our app should be easy to use and a smartphone architecture helps with that.

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1 Team Process

The team has decided to go with the scrum agile development process. This process means we will be progressing the development of the application through a series of sprints. This process will also put us on a daily reporting schedule that covers basics such as; What did you do? What needs to be done? What got in your way? This should allow the development team to address any issues that come up quickly. We will be combining this with weekly in-person meetings and checklists that will provide the team with a way of tracking the progress on the development of the application. Below is a detailed schedule of what we will be doing. We added in two general review periods to the schedule that allows us to cut down on what our initial sprint lengths were and will also allow for us to overview what worked, what we can add and what we are individually weak on.

Project Plan:		Jan/31/2020
Sprint 1 Planning:		Feb/1 - Feb/3/2020
Sprint 1:		Feb/4 - Feb/25/2020
Review:		Feb/26 - Feb/29/2020
Presentation 2:		Mar/3/2020
Sprint 2 Planning:		Mar/4 - Mar/7/2020
Spring Break:		Mar/8 - Mar/13/2020
Sprint 2:		Mar/3 - Mar/24/2020
Review:		Mar/25 - Apr/13/2020
Final Presentation		
Final Submission:		Apr/21/2020

2 Requirement Elicitation Strategy

We will deduce our requirements by holding meetings and speaking with our customers. Any requirements that our client does not specify that is needed for our program to function will be deduced by the team as a team effort. The IEEE recommends that our requirements are obtained by the customer accurately describing what they wish to obtain. As well as the suppliers - this team - understanding what the customer asks for.

The team will collect the user stories as deduced from the requirements given by our customer. We will hold those user stories in a management app called Trello. Apart from user stories, our workflow will stem from our pair programming methodology and from the tasks assigned by the user stories beforementioned. We will start our programming with test-driven development that uses mock-ups for the objects as needed.

Our project owner - in our case Mason Riley - will contact our client once a week or when the need arises. We will attempt to contact our client as soon as an issue arises and intend to hold regular group meetings with that purpose.

3 Relevant Requirements

A user needs to be able to login to the “Get It Done” app and be able to perform tasks from 2 different perspectives. The user must be able to act as a host, allowing them to create an event and attach the required tasks to that event. A host must be able to add other users to the events they create, in order to distribute the workload of getting ready for the event. The user must also be able to act as a participant in an event they have been added to. Participants must be able to mark a task as completed.

4 Deployment Platform

We chose Android as our primary deployment platform. We chose this platform because we thought that it would be the greatest way to reach many users. As well as our idea fitting very comfortably on this platform because of the tools the platform provides. Other development platforms we are going to use are Amazon Web Services for our servers and our database. We will be mostly coding in Java for Android, Java server architectures, and SQL. For our IDE we chose Android Studio because it offers quick deployment to an Android Virtual Machine.

The reason we chose Android Studio, Java and AWS are because our team has worked with these tools in the past with great success. So not only does the project fit well into these tools but the complexity of the system can be streamlined more securely because of the proficiency of our developers in the programming languages being used.

5 Client Platforms Targeted

We chose Android as the platform to develop for. We chose this because the interface offers the most fitting user interface for the application that we are creating. As well as being the best way to reach the greatest amount of people. Android provides us with a lot of development tools that work well with the idea we will implement and the team has worked with similar tools in the past such as JavaFX and is proficient with Java in general. Our project bases itself on being easy to use, and Android provides a clean platform on which to achieve that.

6 Development Platform

Our development platform is the same as the deployment platform. We will additionally be using Git to coordinate our codebases through a remote repository hosted in GitHub. To

summarize, the development platforms are Java on Android with Android Studio for our IDE, AWS for the Java server and SQL database, using GitHub and Trello for synchronization.

X References

[1] *IEEEXplore-SRS-template*

http://www.cse.msu.edu/~cse870/IEEEXplore-SRS-template.pdf