CMSC 355 Group Project Description

Android App Development

Overview

This semester you will undertake a group project (**4 people, possibly 3 if needed**). For the team's grade, each person will receive the same grade if each person has contributed equally. Throughout the semester, each student on the team will assess how much of the group project each team member was responsible for and how well each person performed. **Lack of participation will result in a lower grade.** Great teams have great contributors, each contributing equally. Within the team, you must negotiate on how much and what each person will contribute.

Team Submissions

For each submission, you will submit a team report in Blackboard. This report should be submitted by just one person from the group. The documentation and grade will be uploaded to every group member when the report is graded. Each report will include the team name, team members' full names, and member roles. There are two main reports as outlined below. Each of these reports have other portions of the grade that will be outside of the main report as indicated.

Personal Contribution Survey (submitted via Google form):
In addition to the group submission, each team member must complete the project contribution survey on which parts of the project they were responsible for. This form will allow you to grade your performance on each part of the project as well as grade your peers on their role in each part of the project. **Failure to submit this form for each part of the project will result in the loss of points in that part of the project**.

Team Logistics

The teams will have four members unless otherwise specified by the professor. The following member roles are recommended: manager (coordinates all tasks, assigns duties), communication director (responsible all communication within group and with outside sources, such as TA's and Professor), negotiator (responsible for all problems and issue that might arise), recorder (responsible for making sure everything gets documented and versions are properly consolidated). These roles will be in addition to the project duties that each member will have to complete the parts of the project. You may rotate and alter roles throughout the semester as needed.

I will give you a blackboard group repository area where you can collaborate. However, you can also utilize any other tools that you find helpful.

Part 1 (150 points) – Requirements Gathering, Project Summary, User Stories, Storyboards, Scenarios, Design, and Sprint Breakdown

Requirements Gathering: 40 points

1. **(10 points) Group and Project Selection:** In this course, you will be developing a software project specified by the professor. I will be your client and will elaborate the requirements to you. However, it is up to you to determine those requirements. As a team of **four**, you will work together to first pick the project you wish to build. You will find a brief description of the project choices in the discussion board section of our course. You will then to use this initial information to formulate questions to ask your client to gain a full understanding of the requirements of the system. Please note that the projects will be assigned on a first come first served basis. Please select your team and then specify the project you want to work on as well as your second choice. I will assign projects according to request. You may not get one of your choices depending on how long it takes you to decide on your group and project request. You will submit as soon as possible your group name, full name of members and your first and second choices for the project. There should be one submission for the group. The submission window will open on Thursday 1/18 at 12:30 pm. All submissions must be made by Thursday 1/25 at 11:00 am.

2. **(30 points) Requirements Elaboration:** Once you are assigned to a project effort, you will be working with other groups to determine the requirements of the project and will use the appropriate discussion forum to ask questions of your client. You will be allowed to ask five questions a day for two weeks. You will be graded on the quality of the questions your group asks. Please be aware of the questions that other groups ask and do not ask redundant questions. The discussion forums will open on Wednesday, January 25, and will close on Thursday, February 15.

User Stories, User Acceptance Tests, Storyboards and Scenarios: 100 points

1. **(30 points) User Stories:** You will fully elaborate the requirements for your project using user stories. You should have, at a minimum, twenty user stories. In addition to the user stories, you will have at least one user acceptance test for each story. This should help you to ensure that each user story is SMART. The user acceptance tests will be used to test your completed user story.
2. **(30 points) Storyboards:** You will create a mocked-up screenshot and/or sketch of what your app will look like. This should be done by hand or with a tool such a PowerPoint. This will **not** be done with any Android development. This should be a rough mock-up of what each screen will look like for the user to view before proceeding with the project. The storyboards should encompass all the user stories and should be mapped to each user story they represent.
3. **(30 points) Scenarios:** You will elaborate each user story into a scenario that matches your storyboards and describes how each user story will be performed in a step by step manner
4. **(10 points) Project Check-in:** During the week of February 12, the group will check-in with the instructor to show what has been accomplished so far. The expectation is that this section should be almost complete.

Design Document, Sprint Breakdown: 60 points

1. **(50 points) Design of your system:** You will create a Model-View-Controller diagram for your complete system. You will also create a series of data flow diagram for your complete system. You will also select **one** of the UML diagrams we discussed this semester and use this diagram technique to represent your system.
2. **(10 points) Sprint Breakdown:** Please elaborate what you will accomplish in each of the two sprints for this project. You can leave items of your project unfinished if you think that you will not be able to accomplish all the requirements in these two iterations. The goal is to document what you will do in each iteration and to make sure you accomplish your goals on-time.

Part 1 is due Tuesday, 2/27 at 11:00 am. along with the Personal Contribution Survey

Part 2 – Sprint 1

Sprint 1: 100 points
1. **(50 points) Project Demonstration:** You will schedule a time during the Week of April 2nd, to demonstrate your completed user stories and your unit tests that show these user stories work. You will provide to your reviewers the appropriate user acceptance tests that you will also be running to show the user functionality they will have in this iteration.
2. **(40 points) Description of the User Stories and Test Cases completed during the sprint:** Provide a detailed description of the user stories and test cases that were completed during this sprint utilizing the SOA architecture and Android app development introduced in this course.
3. **(10 points) Team Reflection:** What did each member work on, what was accomplished, what worked during this iteration, what issues you encountered, how might you need to modify your goals for Sprint 2.

Part 2 is due Thursday, April 5 at 11:00 am. along with the Personal Contribution Survey

Part 3 – Sprint 2

Sprint 1: 100 points
1. **(50 points) Project Demonstration:** You will schedule a time during the Week of April 2nd, to demonstrate your completed user stories and your unit tests that show these user stories work. You will provide to your reviewers the appropriate user acceptance tests that you will also be running to show the user functionality they will have in this iteration.
2. **(40 points) Description of the User Stories and Test Cases completed during the sprint:** Provide a detailed description of the user stories and test cases that were completed during this sprint utilizing the SOA architecture and Android app development introduced in this course.
3. **(10 points) Team Reflection:** What did each member work on, what was accomplished, what worked during this iteration, what issues you encountered, what is left to complete in this project.

Part 3 is due Tuesday, May 1 at 11:00 am. along with the Personal Contribution Survey