Deliverable 1

Project/ Group Name Pro TA

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Project Description

With our app, professors that need to take attendance can automate the procedure by making it possible for students to swipe their student ID's on a card scanner; eliminating the time wasted by calling roll or adding student names as they come later in the class period. Having a system that can record the exact time when students arrive can be used to give more accurate class participation grades as well as incentivise not only attendance, but student punctuality and participation. A teacher will be able to create a reoccurring class, list the classes time slot, and add students if they don't already exist based on their card swipe. However if they do exist it will mark that class block (day and time) as attended.

After the students have attended, the teacher can pull analytics from any given class, the teacher would have access to both viewing, editing, and converting to pdf for printing or emailing. Such analytics may include days students attended, average grade to student attendants comparison, and specific student data such as student id, name, grades, assignments turned in, attendance, and teacher comments.

Our project will be a mobile application for android phones using nodejs/javascript. To eventually achieve multi-platform compatibility we will package our app using Cordova; using Cordova doesn't just give us the ability to be cross platform and use JavaScript to code our application, but it also has an api to access the native card reader that we need. Along with Cordova for the user interface, we will use Framework7 to help build our app. We would also like to use the Blackboard API in order to more easily access student information and eventually be able to plug attendance/participation grades in directly through the app; making it very easy for professor to use.

For initial testing and prototypes we will be using the android SDK as achieving apple's apps certificates can be time consuming and has an initial $100 developer's license cost. Our app will use an aux connection card swiper unit. This unit has an associated api that cordova will expose for us to develop on and read data off student id cards.

Meeting Minutes

Meeting 1: September 5th, 2017

2:30 PM – 3:50 PM
Attendees: Nicolas Stencel, Manuel Vargas, Naumaan Hassan, Keenan Jabri

Things Discussed: During this meeting, we discussed each of our ideas for the project and decided on developing a digital teacher's assistant, ProTA. We brainstormed early functionality and the different features it could potentially sport. We also exchanged contact information so that we could discuss project development with each other at any time. We were essentially testing the waters, getting to know each other, and beginning the processes towards developing our final group project. We also discussed Assignment 1 and everybody needed to figure out how to commit to the github repository.

Meeting 2: September 7th, 2017

2:30 PM – 3:50 PM
Attendees: Nicolas Stencel, Manuel Vargas, Naumaan Hassan

Things Discussed: During this meeting we got clarification as to what exactly we needed to provide on our Deliverable I, as well as how we would structure it in our GitHub repository. We also divided the points we needed to hit between ourselves and gave everybody a due date as to when these tasks needed to be accomplished. We were continuing to lay the groundwork, and also had talk about potential logo ideas.

Meeting 3: September 12th, 2017

2:30 PM – 3:50 PM
Attendees: Nicolas Stencel, Manuel Vargas, Naumaan Hassan, Keenan Jabri

Things Discussed: This was our final meeting before our first deliverable was due. We discussed our progress with the deliverable and brought to the attention of the group specific areas that still needed to be worked on. Since we are using Google Drive we are able to collaborate on the deliverable in real-time and communicate through Slack.

Timeline

Deliverable 1

Start date: 8/29/2017, end date: 9/13/2017

- Consists of a report detailing risk management as well as laying the foundations for group organization, accountability, and basic information regarding the actual project.
- We will establish:
    - A working timeline for the project, which we will update as needed
    - GANTT/PERT charts
    - The directory structure for the project
- Subtasks:
    - -Deliverable 1 report
    - -Deliverable 1 PPT (will be used in presenting our topic, due on 9/13, presentations will be on 9/14)

*The completion of this will be a milestone, as it will be a tangible step that will help us focus and complete our project.

Deliverable 2

Start date: 9/13/2017, end date: 10/10/2017

- Consists of developing a set of specifications and a series of design documents, as well as a test plan. Should describe all the intended functionality.

- Updates:
    - If needed, update the project plans and potential risks from Deliverable 1
- Subtasks:
    - Written requirement specifications (due 9/22)
    - UML Design Document (*The completion of this will be a milestone)
    - Test Plan (due 10/10)

- The rest of the report requirements will be updated on throughout.

Deliverable 3

Start date: 10/10/2017, end date: 11/13/2017

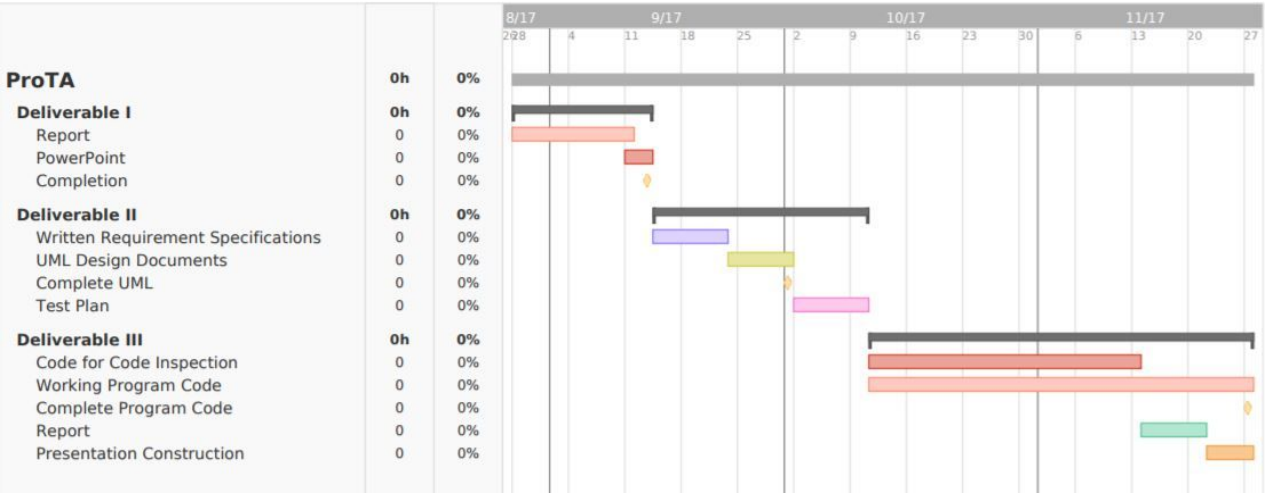
- Final Stage: Hand in working program based upon defined specifications as developed in the previous Deliverable, with an automated test suite for the program.

- We will also create a user manual that explains how to run and use the program, and contains a series of best practices.

- Subtasks:
    - Code for conde inspection of the functionality of project (due 11/13
    - Working Program code (*The completion of this will be a milestone)
    - Report meeting specifications (due 11/21)
    - Presentation creation (due on 11/27)

Gantt Chart

This Gantt chart is a visual representation of our tentative schedule for the project this semester. We will continue to update this in every deliverable as our priorities shift based on our progress.



Risk Management

Top 5 Risks

1. Issue with the card reader and Android display device, including, but not limited to poor handling of the device.
    a. We can monitor this by taking proper care and making sure to test it every once in while to ensure its reliability.
    b. Possibly create some sort of carrying case to prevent it from damage
    c. We will also purchase a backup card reader just in the event that the first one becomes defective
    d. Keep track of who is using the device so that in terms of liability, we know who handled it last if any sort of issue does occur. This is to avoid any sort of miscommunication or any issues that could arise from someone blaming another person for the malfunction of the device.
    e. The Risk Impact of this would be having our entire project be unable to work properly as both of those materials are essential to our project.
    f. The Risk Probability of this occurring has yet to be fully determined as we have not purchased a card reader.

2. Android tablet application not functioning properly
    a. This could include the application not functioning properly through any stage of this project, it could be earlier on, or even the day before the presentation. In order to combat this, we will make sure we have multiple working backups of the last issue free version of the app.
    b. That way, we can always have a working version on us. If we encounter any issues with the actual tablet, we have an Android phone on us that we will also check the application with. This would be to help us troubleshoot if the problem lies with the application or the device.
    c. The Risk Impact of this would be being unable to display any meaningful data representation, which in turn would not only make our project seem inadequate, but will also impact our grade.
    d. The Risk Probability of this occurring has yet to be fully determined as we have not started designing our android application.

3. Being unable to obtain data from our UNT Student ID’s
    a. One of the most intricate and fundamental materials within our group project are our UNT Student ID’s. We are hoping to be able to use them to build a working model of Pro TA; however, that relies on us being able to use them with the card reader in order to obtain data from the magnetic strip.

    b. If for some reason we aren't able to obtain the data we are looking for, we will introduce an option within the app that will allow the student to assign that information to a username that will be associated to the ID card. If we can't obtain that information directly from the card, we will simply ask the user to input it, and then have the app associate the two together from then onwards.
    c. The risk Impact of this would be needing to adjust our planning and having the look into programming a segment into the app that would be able to read user input, and assign that to a variable that would associate it with the card swiped.
    d. The Risk Probability of this occurring has yet to be fully determined as we have not purchased a card reader.

4. Running into issues using the native card reader API
    a. Passing the information from the card reader to our application is extremely important, as this is essentially the backbone of our entire project. If we are unable to do this, we would need to look for another way to be able to pass information from some sort of equipment to the application.
    b. The Risk Impact of this would be needing to look for an alternative to Cordova in regards to packaging our application.
    c. The Risk Probability of this occurring has yet to be fully determined; however, if we do, we will simply look for an alternative to Cordova to package our application.

5. Being unable to complete a fully functioning product
    a. We can monitor this by measuring each team member's contribution and seeing how well our current development lines up with our projected timeline, and adjust as needed.
    b. If we run into any sort of issues, such as a crucial team member dropping the class or all of a sudden not picking up his share of the work, we would need to figure out a plan and redistribute the workload, while communicating with our Professor to seek her guidance in this regard.
    c. The Risk Impact of this happening would require us to overhaul our idea and do our best to adjust our goals so that we can have a functioning product.
    d. The Risk Probability of this occurring has yet to be fully determined as we have not started the process of making the application and testing out the card reader.

Progress Report

The overall deliverable progress has been good. Everyone has contributed to the project concept and written considerably for this report. Currently our team has a team leader (Keenan Jabri) who is in charge of the project direction since we are working in the development environment he is most familiar with. We also have a team organizer (Manuel Vargas) who is in charge of finalizing the deliverables and maintaining the github directory structure. As of right now the other two members (Nicolas Stencel & Naumaan Hassan) contribute equally but are very flexible with what they can add. Soon enough we will all have more clear roles in the actual development of the software and will be able to divide the workload; communicating with the card reader, access the blackboard API, User Interface, Documentation, etc.. As far as updating the repository we have decided to use git branches to work on new features that are not completed. That will give us all a way to access that code and work with it but not break the master branch in the repository which should always have a functioning version of the application. Once a branch passes all of our tests we will then be able to merge with the master branch and move on to the next feature.

Member Contribution Table

As this is the first deliverable, we divided the work up evenly amongst us.

Member	Contribution Description	Overall Contribution	Note
Nicolas Stencel	Steps 5, ½ of 6	25%	Took diligent notes for the meeting in minutes
Keenan Jabri	Steps 2, 9	25%	Team Leader, came up with the project idea and shared his technical knowledge
Manuel Vargas	Steps 3, 4, 8, and 9	25%	Took the initiative and set up a communication group on Slack, reminded everyone of their responsibilities
Naumaan Hassan	Step 7, ½ of 6, and 9	25%	Helped provide more details towards the project, both technical and organizational