

**CAP 3104 Group Project Documentation Deliverable  
(PD1)**

**Template Instructions:** This document serves as a template for the information required for your project documentation. You are welcome to make the formatting look even more professional than this basic template, but do not make it look worse! For instance, you are encouraged to use smart art graphics, tables, and sub-headings instead of just writing dense paragraphs that are difficult to digest. Instructions for this project deliverable will be written in blue. All blue text should be removed from this template before you submit this assignment. Points will be deducted if you do not follow directions carefully.

**App Name:** Add App Name

**Group Number:** Add Webcourses Group Number

## **1. Group Collaboration (10 Points)**

*Note: If a group member is not pulling their weight, I can and will adjust individual grades to reflect a poor level of contribution. A peer evaluation will be factored into your project grades at the end of the semester. Any group issues should be brought to me immediately.*

**Prepared by:**

<b>Group Member</b>	<b>Role</b>	<b>Level of Contribution</b>	<b>Statement of Work</b>
<i>Alphabetized by last name</i>	<i>List the role assigned to the group member for this deliverable (e.g., Project Manager, Business Analyst, etc.).</i>	<i>To be completed by project manager . . . 0=No Contribution 1=Weak Contribution 2=Equal Contribution 3=Strong Contribution</i>	<i>To be completed by each team member to describe the key ways they contributed to this deliverable.</i>

**Revision History:**

<b>Revision Author</b>	<b>Date</b>	<b>Description of Change</b>
<i>Name of group member</i>	<i>Date of Revision</i>	<i>Describe what was changed to have a log of when work was completed. Example: Completed the benchmarking of the competition. Example 2: Revised the benchmarking of the competition to add another competitor app and correct typos.</i>

		Add as many rows here as necessary.
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## 2. Project Proposal (15 Points)

*Your project proposal should be completed AFTER you have completed your user study. However, for the purpose of presentation, leave it in this order in the template.*

### Executive Summary

**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Give a high level description of your target audience and the mobile application you will develop for this class. Focus on the value that you will be providing to your end users through the use of this app.*

### Target Audience

**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Describe the target audience/users of your app. What are some unique characteristics of your users? Use external references to give an in-depth understanding of your users. All external sources used in this document should be cited. Make sure you choose a target population that you will have some level of access to in order to perform an evaluation of your final design.*

### Problem Definition/App Justification

**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Convince me why there is a business need for the mobile app you are proposing. What problem will it help users solve? What unique service or benefit will it bring to your customers? Use quotes from your interviews and external references to justify what an app like this needs to exist.*

### Benchmarking Competition

**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*List and describe three similar apps that are currently available that have similar features as your app. The apps may be a little different but overlap with yours in some way. Include screen shots of each interface. Describe how your app is going to be different/better than these apps. Do this by explaining some of the issues/problems your team found with the existing apps (using concepts learned from the textbook) and how your app will address these issues. Do not try to compete on user interface alone. Make sure your app has unique features that are not provided by your competition. If a similar app does not exist, document this carefully to show that you performed an exhaustive search.*

### 3. User Study (20 Points)

*A key component of user-centered design is gaining a deep understanding of your end user before you begin designing your technology solution. Make sure this section focuses on the users' needs, not your app features. Be willing to adjust based on the feedback you get from your users.*

#### User Classes

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Often, one app has multiple interfaces for different users. For example, an e-commerce app would have an interface for the business owners to maintain inventory and for customers who make purchases. List all of the main users of your app here that may require different interfaces for using your app. Clarify which user you will be focusing on when developing your prototype. You should interview at least one person who comes from each of these user classes for your user study.*

#### Stakeholder Analysis

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Identify all (i.e., brainstorm an exhaustive list) of the potential stakeholders associated with your app – the people who will use it, invest in it, benefit from it, or may even harmed by it. These are the people who will have influence over whether your app is ultimately a success or a failure. Describe each of their roles associated with your app and why they are stakeholders. I suggest that you represent this visually (e.g., Microsoft Smart Art graphic). These are also people you may consider interviewing for your user study.*

#### Recruitment

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*As part of this assignment, you will conduct five semi-structured interviews. Describe how you went about recruiting the participants for your user study here.*

#### User Study Participants

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Name	Role	Contact Information	Interviewer	Relationship
<i>Name of your user</i>	<i>Their position title or justification of why they are a representative member of your target users</i>	<i>Contact information in case I need to verify</i>	<i>Who interviewed this user? Best if two people attend each interview.</i>	<i>Relationship to the interviewer or other group members.</i>

**Notes:** You are welcomed and encouraged to conduct more interviews than the five that are required for this assignment. It will help you gain deeper insights into the needs of your users. You should also consider audio recording your interviews so that you don't have to take notes while you are conducting your interviews. Submitting the audio files of your interviews will be an extra credit assignment (see "Extra Credit" below).

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## Semi-Structured Interview Questions

**Author:** The person who created this section.

**Editors:** The people who reviewed/revised the section.

Provide a list of approximately 15 interview questions that you will ask/asked your users. Make sure to follow the guidelines provided in class, such as not leading your users with bias questions or focusing too much on the features or technology of your app. For each question, explain your goal for asking the question (e.g., to determine that the user is part of my target audience, to understand my user's needs, etc.). **Hint:** If the answer to your question isn't useful in designing your app, you may consider asking a better question.

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## Summary of Results

**Author:** The person who created this section.

**Editors:** The people who reviewed/revised the section.

For each question asked in the semi-structured interview, summarize the responses across all of your users. Please do NOT just report the raw data from users. Focus on when your users agree or disagree with one another. For example, you could say something like "four out of five of our target users felt that xyz was a big challenge for them. However, one user said that 'direct quote here,' showing that this was not a problem for them." Don't tie these results to implications for the design of your app yet; you should do that in the "Implications for Design" section below.

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## Persona Development

**Author:** The person who created this section.

**Editors:** The people who reviewed/revised the section.

Based on your insights from your interviews, create two detailed personas of typical users of your app. Try to make these personas different from one another, realistic, and not too stereotypical. Illustrate how these two personas will use your app. Highlight some of the challenges they may have (e.g., accessibility issues, special considerations). See the recorded lecture on personas and Google to make sure your personas are high quality. For each personas (like in the recorded lecture), provide detailed bullet points of key design implications associated with that type of user.

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## Implications for Design

**Author:** The person who created this section.

**Editors:** Everyone should be an editor for this section!!

This step is critical and very difficult! Describe what you learned from your user study (stakeholder analysis, interviews, personas, etc.) that will directly influence your design. Compare the different user perspectives and report useful insights that you gleaned from the data. Reference your personas and use direct quotes from your user study to illustrate your findings.

For instance, are there any unique differences between users that you have to take into account? Are there any challenges that you will have to address in your design due to the different types of users?

*What other implications can be made from the user profiles and other data you gathered? Highlight interesting insights that emerged from your data, especially those that you did not anticipate before talking to potential users.*

*In order to identify key themes from your user data, you may consider brainstorming with your team to create an Affinity Diagram (See: <http://infodesign.com.au/usabilityresources/affinitydiagramming/>). This will help you group like ideas together to better understand all of the data you have collected.*

*Come up with at least five main design implications for your app. Describe each in detail and back up your design implications with evidence.*

## **4. Requirements Analysis (15 Points)**

### **a. Functional Requirements**

*Functional requirements define what the system is supposed to do without specifying the specific technologies of how it will be done. The functional requirements of your mobile app outline the main tasks that your app will perform to help solve the users' problem or benefit the user in some way. It is crucial that you focus on features that are 1) useful, 2) novel, and 3) feasible. Useful means that the feature is valuable to the user. Novel means that there isn't another app that already does this in the same way. Feasible means that this feature can be realistically implemented.*

#### **Main Functionality**

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**Author:** *The person who created this section.*

**Editors:** *Everyone should be an editor for this section!!*

*Describe two main tasks that your mobile app will be able to perform (See p. 104, Box 3.1 for the typical language for doing this).*

*For each task, describe in detail all of the steps that would need to be taken into account to complete the task. To do this, you should perform a hierarchical task analysis (HTA). See the recorded lecture slides for Personas and HTA's.*

*Hint: When describing functionality, do your best NOT to tie it the functional requirements or HTA to a particular interface design. Focus on the task, not the technology! Revise your language if you are using terms like "click" or "dropdown" or any other terminology that assumes a screen design. Design comes after this step!*

#### **Secondary Functionality**

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**Author:** *The person who created this section.*

**Editors:** *Everyone should be an editor for this section!!*

*Give bullet points for secondary functionality that is necessary for your app but not the primary purpose of the app. For example, if you have a user login, customizable settings, or other features that you would include in the app but aren't going to focus on them in the prototype, list them here. The purpose is to get a big picture of what your entire app will do even if you don't plan to implement it for the purposes of this class. No need for HTA's here.*

## **b. Technical Requirements**

*Technical requirements involve how the functional requirements will be implemented with given technologies. Even though you will not be implementing this mobile app, it is important that you take into consideration the technical requirements necessary for doing so. We don't want to design a solution that can't be implemented.*

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### **Platform Compatibility**

**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Decide which platform (e.g., Android, iPhone, Microsoft Windows phone, etc. – choose ONE) in which your app will be compatible. This is important because your prototype will need to be consistent with this platform in terms of look and feel. Justify why you chose this platform. Again, justification can be from direct quotes from your user interviews or from external references.*

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### **Required Hardware/Software**

**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Describe the hardware and software necessary for your app to work. For example, what is the lowest version of the operating system your app will support? Justify why. Minimum requirements may include a particular mobile phone (i.e., Android, Apple, etc.) or phone features, such as camera, GPS, wifi, or other hardware or software components. It may also include external hardware components, such as remote sensors (e.g., for home automation) and other necessary infrastructure.*

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### **App Permissions**

**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*When a user installs the app, what permissions will they have to give the app (e.g., phone contacts, text messaging, camera, etc.)? For each permission requested, justify why your app needs this particular information. **Tip:** Users only want to give up their privacy if there is value in it for them.*

*Use the following links to find the permissions available for Android and Apple phones:*

- **Android App Permissions:** <https://support.google.com/googleplay/answer/6014972?hl=en>
- **Apple App Permissions:** <http://www.howtogeek.com/177711/ios-has-app-permissions-too-and-theyre-arguably-better-than-androids/>

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### **Data Maintenance Plan**

**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Most apps will have to have a centralized database to store the data associated with the app (e.g., user profiles, product descriptions, etc.) What types of data does your app need to have in order to work? How will this data be collected? How will this data be kept accurate and up-to-date?*

## 5. Design Proposal (20 Points)

*Your design proposal focuses on the initial design decisions for your mobile app. Up until this point, your focus has been on the end users and the tasks that they perform. Now is the time to start focusing more on your actual design solution.*

### c. Design Considerations

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#### Market/App Store Description

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Model this after the details of apps listed in the respective app store (Android or Apple) from which your app would be downloaded. Describe what your application does and why the user should download it. Don't oversell. This isn't a marketing class.*

#### Main Menu

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Most apps have a main menu or dashboard of main options when a user first opens the app. What are going to be the primary actions available to your users from your apps entry screen?*

#### Notifications

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Define special events that justify notifying the user of a particular state of the system. Explain why this is important because users generally don't like too many push notifications.*

#### App Icon

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*This would be the icon that users would click on to open your app on their mobile device. Justify why you chose this as the icon to represent your brand.*

#### Visual Metaphors

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Later in this class, you will learn that good design often employs the use of visual metaphors that mirror the real world. For instance, using graphical icons with meaningful pictures is preferred to text-based menu options (Example: A "Home" icon of a house instead of a button that says "Home."). For your app, what are the relevant visual metaphors you can use leverage in your design? Include menu icons and other graphical elements that you plan to incorporate in your design. For example, if I were developing a fund raising app, I might use a piggy bank or a thermometer to illustrate the amount of funds I have raised so far. For each graphic, describe the metaphor you are using and how the graphical element will be incorporated into your mobile app design. You should include the set of icons for each of your main menu options here.*



## **d. Other Considerations**

### **Social Component**

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*All of your apps should incorporate a social component that either facilitates collaboration or social engagement. Describe how you included this social aspect into the design of your application. If your app was already a socially-oriented app, you don't have to repeat everything you said in your project proposal, just clarify how your app will help connect people with other people in a beneficial way.*

### **Privacy and Security Implications**

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Now that your app is a social platform, that increases its vulnerability to privacy and security issues. Describe the potential privacy and security issues associated with your app. How will you mitigate these potential issues? Don't focus on hypothetical situations of if your app gets hacked. Instead focus on privacy and security issues that can arise through normal or unintended use. Explain how you will ensure that your app is safe for the end user to trust. For example, should you have password protection? Why or why not? **Tip:** Privacy is my main area of research, so it is important that you take this section seriously!*

### **Feasibility Analysis**

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*Identify all of the key challenges you will face in making sure that your mobile app is successful and sustainable for long-term use. For each challenge, create a mitigation plan for how you will overcome that challenge. I suggest doing this in a tabular format (i.e., Challenge – Mitigation Plan).*

### **Ethical Considerations**

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*What ethical concerns are potentially associated with your app? For instance, could your app encourage deviant behaviors or be use for unintended purposes? And what are you going to do to mitigate them?*

### **Business Plan**

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**Author:** *The person who created this section.*

**Editors:** *The people who reviewed/revised the section.*

*How will you launch your app and motivate users to use it? How will you gain a critical mass for success? How will this app be profitable/sustainable?*

## **6. Appendix A (5 Points)**

*In the table below (or something similar), provide detailed notes for how each user responded to your list of semi-structured interview questions. If follow-up or clarification questions were asked, include those*



*as well. Whenever possible, try to include direct quotes from your users instead of paraphrasing. Also, make sure not to pick and choose evidence that supports your assumptions. Record whatever the users say without judging their responses.*

Question	User 1	User 2	User 3	User 4	User 5

## **7. Extra Credit**

*(20 points) Upload your end user interview audio files to Webcourses. You will probably have to do this as a zip file. Each complete interview that you upload will be worth two points. You may receive up to 20 points extra credit (for 10 interviews) as long as all of the interviews uploaded are included in the analysis for this deliverable. In other words, you can't conduct interviews for extra credit that you don't incorporate in this assignment.*

## **8. References (5 Points)**

*Cross reference all external sources that you used in this document. I don't care what format you use. I care that you are using external references and giving them the appropriate credit. Do not plagiarize!*

## Grading Rubric

Category	Points	Expectations
Group Collaboration	10	The group completed these sections of the project deliverable as specified by the instructions. Minimum requirements were satisfied adequately.
Project Proposal	15	
User Study	20	
Requirements Analysis	15	
Design Proposal	20	
Appendix A	5	
References	5	The group went above and beyond the minimum requirements and showed a professional level of effort in completing this project deliverable. It was clear that they read and followed the instructions. It was also apparent that they put forth a concerted effort to work together as a team in completing this assignment and not waiting to the last minute to put everything together.
Overall Quality	10	
Total	100	