

C868 – Software Capstone Project Summary

Task 2 – Section A



Capstone Proposal Project Name: _____ CT Republic – Mobile Application _____

Student Name: _____ Christopher Shelley _____

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Business Problem

The Customer

The customer, CT Republic, is one of the world's largest trading houses of collectable Scotty Cameron golf memorabilia. CT Republic is headquartered in Southern California near the Scotty Cameron gallery where they operate a museum and trading house. Although they have a brick-and-mortar business, their main source of revenue is in the transaction of buying and selling collectable memorabilia at a 15% brokerage fee.

Business Case

CT Republic has a strong desire to separate itself from "Just being another middleman". They have a goal of being able to provide value to their customers in a way that will draw them to their platform as well as keep the customer engaged in the collection business.

CT Republic has identified a specific need that their collectors have of tracking their memorabilia collection in one application. By providing a place for a collector to keep track of their collection in one location, CT Republic feels that this will increase collector engagement.

By creating one application for a collector, CT Republic will be able to start gathering analytics from collectors on what their collection looks like therefore enables the ability to offer target advertising toward a specific collector profile.

Fulfillment

This application will run on an end-user's android tablet or phone device. They will download the application from the Google Play Store and will be able start using it immediately. All of the prerequisite requirements for installation will be handled by the Google Play Store infrastructure.

The basic functions of the application will be to enable an end-user to create a list of all their collectable memorabilia. They will be able to catalog information such as purchase price, date of initial release, attach detailed notes for each item, and add an image of the item.

The collection data will be displayed in a form of a scrollable list with the ability to view the list as a whole or perform search operations on the list to drill down to specific items. The application will also provide the user with the ability to run reports on the data to help get quick collection information based off preset criteria.

Existing Gaps

Each of CT Republic's customers have a different way of keeping track of their collections. Some use spreadsheets like Excel that track information. Some users use pencil and paper and keep small journals and ledgers. Many just keep their collections in a box and just "wing it" when it comes to evaluating their collections.

This application will be replacing many home-grown methodologies of managing a collection. Since the CT Republic's customers and methodologies are so diverse, it would be difficult to catalog. The gap of concern will be the how intimate the customer has been with their old catalog system. The more we can get an end-user to engage in the application, this gap will close.

SDLC Methodology

The Software Development Cycle that has been chosen is the Waterfall method. This was chosen due to the clear and well understood requirements for the project. Clear functional requirements and design will be established prior to the coding stage. Customer prototypes, alpha, and beta releases will not need to be used due to the clarity of the requirements.

The following phases will occur during using the Waterfall method:

Requirements Phase

- The Project Manager will be responsible for creating a document outlining all the features of the application.

Design Phase

- The Design team will create a Design document outlining the look and feel of the application and how the UI will adhere to the Requirements document.
- Any prototypes or wireframes will be created during this phase using the Software Developers as needed.
- Once the design is complete, the software testing team will begin creation of their test plan.

Development Phase

- The Software Developers will code the application and deliver new builds of the application as needed.
- The application code will be store in the company's git repository and backed up on a scheduled basis.

Testing Phase

- The software testers will perform tests while following the test plan they created at the end of the Design phase.
- The software developers will continue to create new builds as issues are addressed.

Deployment Phase

- The application will be submitted to the Google Play Store for public consumption.

Maintenance Phase

- Any customer reported issues that are deemed necessary to fix post-release will be addressed in this phase.

- The source code will be archived and tagged as complete and made available to any future development teams as needed

Deliverables

Project Deliverables

These consist of items that are part of the Project Manager's realm of responsibilities.

- Project Schedule
 - The complete schedule of the project and all the key milestones of each phase.
- Requirements Specification
 - A document containing a detailed outline of how each feature is supposed to work and all the UI interactions.
- Technical Specification Document
 - Class Diagrams, infrastructure related information, and data diagrams will be outlined in this document.
- UI Specification Document
 - This document will be a complete description of the look and feel of the application and will contain detailed design images and style guides for the application.
- Test Plans
 - This will contain a complete list of the testing steps and process that the software testing team will use to validate the application.

Product Deliverables

Product Deliverables represents what is produced to deliver to the customer.

- Wireframes
 - Rough drafts of the UI and the application's interoperability.
- Mockups/Layout
 - Any document that describes the look and feel of the application and how the end-user will interact with it.
- User Guide
 - A detailed set of instructions on how each feature will work written with the end-user as the target audience.
- Application
 - The completed application, signed and submitted to the Google Play Store.

Implementation

There are three well defined implementation phases. The first phase will be the creation of a .apk file where the development team can install these developer builds directly onto their devices in order to test each incremental release.

The second phase will happen closer on code complete and the Google Play closed beta features will be leveraged. Each new build will be available for any approved user to install the application from the

Google Play store for testing. The beta program will be a closed beta and will not be available to the general public.

The third and final phase will happen once we promote the beta release to a production release to through the Google Play Store. At this time the general public will be able to install the application using their Google Play Store credentials. After this point, we will enter the maintenance phase and address any issues that may arise from direct general public usage.

The Product Manager will be responsible for running each of the phases in coordination with the entire development team.

Validation and Verification

The software tester will be responsible for creating a test plan once the design and requirements phase is complete. This will be delivered as a document in combination with a test matrix that will be kept in our Jira Testing suite.

Once the development team starts coding, the team will create a series of internal builds which will be available for the software tester to execute the pre-defined tests as each feature is completed. Any bugs, defects, or improvements will be logged as a separate issue in Jira. These tickets will be reviewed with the development leads and triaged according to priority and severity.

Once the development team declares code complete, the testing team will start downloading builds from the Google Beta Store in order to simulate customer installations. The development team will submit new builds to the Beta Store as bugs are fixed and new releases are needed to run regression and fix testing validation.

Once the test plan has been completed and new issues are no longer found, one final test pass will occur using the entire development team to find any last remaining issues. Once this is complete and all the bugs are fixed or mitigated, the development team will meet and decide as a group if we should promote the latest build to the Google Play Store for public consumption and move onto the maintenance phase.

Environments and Costs

Development Environment

Each member of the team will be using their company supplied computer with role specific applications installed. Each member of the team can use either Windows or Mac desktop software. The use of a laptop vs. desktop shall be the employee's choice. All developers will need to have at least two large monitors.

Program Manager

- Microsoft Project

Designer

- Adobe XD
- Adobe Photoshop

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Developer

- Android Studio

All Employees

- Jira
- Slack
- Microsoft Office

Environment Costs

The completed project shall be hosted and deploy via the Google Play store. There should be no additional fee over and above the Play Store developer membership fee.

The ongoing advertising plan will be hosted and conducted by a third party and the estimated cost will be around \$5,000 per month in Google and Social Media advertising costs.

Human Resource Requirements

The following full-time resources are required for the duration of the project.

<i>Role</i>	<i>Needed</i>	<i>Average Salary</i>	<i>Estimated Hours</i>	<i>Total</i>
<i>Program Manager</i>	1	\$65/hour	200	\$13,000
<i>UI Designer</i>	1	\$60/hour	120	\$7,200
<i>Software Developer</i>	1	\$75/hour	120	\$9,000
<i>Software Tester</i>	1	\$50/hour	120	\$6,000

Project Timeline

Phase	Milestone/Task	Deliverable	Description	Dates
Research	Milestone 1	Customer Identification and Business Case	Internet research on existing applications and identify the needs of collectors and find out what existing needs are unfulfilled	10/1/2021 – 10/15/2021
Requirement Gathering	Milestone 2	Requirements List	Create a list of requirements that should be in the application based on the research conducted during the previous milestone.	10/15/2021- 10/31/2021
Technical Specification	Milestone 3	Technical Specification Document	A one place document needs to be created where all the requirements, customer needs, application host, and software development cycle is documented.	11/1/2021- 11/5/2021
UI Design	Milestone 4	UI Specification Document	A document that outlines each visual component of the application. This includes color schemes and font choices.	11/5/2021- 11/10/2021
Test Case Creation	Milestone 5	Test Case Matrix	A list of test cases to be conducted should be created in a table and should correspond to each requirement in the Technical Specification and UI Design guide.	11/10/2021- 11/25/2021
Development	Milestone 6	Code Completion	Implementation of the Technical Specification and UI	11/10/2021- 11/25/2021

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			Design Specification in code.	
Test Case Execution and Bug Fixes	Milestone 7	Test Cycle Completion and Bugs Addressed	Once the project is code complete, all of the test cases from Milestone 5 should be executed with the idea to expose any existing bugs. These bugs should be documented and fix and the failed test case should be rerun to verify that the bug has been fixed.	11/25/2021-12/10/2021
Sign Off	Milestone 8	Project Complete	Completion of the project and submission to the Google Play Store	12/12/2021