Beverage Booker
Project Plan

Version Control

Version	Date	Author	Description
V1.1	26/4/2020	Benn Curby	Initial project plan
V2.1	21/6/2002	Emily Carter	Review for LCAM - based on changed use case adjustments

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1. Introduction

This document outlines our overarching plan for the Beverage Booker application - essentially the structures in place for how our team functions and operates, along with the overall plan schedule which is based around iterative development and the Unified Process.

Project Team:

Benn Curby:
Benn has up to this point been working on the use-cases for the project and conducted the role-playing questionnaires to attain use cases from the system users. He also has developed the use case model for the application and its associated subsystems. Benn also researched and oversaw the implementation of the Technical Competency Demonstrator as well as this Project Plan document.

Jacob Kennedy:
Jacob's area of focus has been deriving the functional and non-functional requirements from within the system. He has documented his findings in the NFR Checklist & Specification documents. He has also been tasked with developing the Vision document for the Beverage Booker project.

Jake Durnford:
Jake has been conducting research into what architecture would fit the requirements model of our proposed application. He has been documenting these findings in the Architecture Notebook. Jake has also been responsible for the Inception Phase Status Assessment document.

Emily Carter:
Emily has overseen the development of the domain model for the system and its subsystems. She has also conducted the development of our Master Test Plan and the included testing principles that we will use as we implement and test each of our highest priority use-cases as we move into the Elaboration Phase of the project. Emily also participated in the role-playing exercise with the system users.

Communication Channels:

The teams primary communication channel is through a dedicated Discord server:
https://discord.gg/xuemAyv

To organise and complete documentation in real time we are using a shared Google folder:
https://drive.google.com/drive/folders/1ApRVX9B-YoKAhbIrTd96rdQZLxoNmSeq

2. Project practices and measurements

Work Practices:

The project will be conducted using principles from the Unified Process, where the overall project that spans both ITC303 and ITC309 will be broken into four phases: the Inception Phase, the Elaboration Phase, the Construction Phase, and the Transition Phase.

Within each phase, the project is broken into fortnightly iterations. Each iteration plan is developed by an individual team member on a rotating roster, however input is allowed from other team members once the iteration plan has been drafted. Team members can assign additional tasks if they feel they are needed for either personal skill development or with the team's approval if they are directly project related.

The tasks for each iteration are derived on what are the perceived high-level objectives for this coming iteration. These high-level objectives are in turn guided by the current phase of the project and our overall project schedule that is attached to the end of this document. High-level objectives are checked against what are ideal ‘outcomes’, in other words what we decide at the start of the iteration would be a best-case outcome of meeting that high-level objective.

To meet objectives and attain the associated outcome, the team breaks these outcomes into steps, or smaller job items that we think are achievable in a maximum of 4 hours. We are following this method as it offers clear achievable goals that are also able to be completed in ‘one-sitting’. If goals are too large and stretch beyond this they can become too hard to track progress and the project can start to suffer from ‘project drift’.

As these smaller jobs are completed, each team member checks them off against the iteration plan and puts in values for hours spent on a job, as well as the hours remaining to complete it. This way the team can see at a glance the progress of items throughout the iteration.

Continuous Integration:

As we enter the Elaboration Phase, the team will start to practice some elements of Continuous Integration. In larger teams or bigger projects, code can be integrated or merged to the mainline daily or several times a day. In our smaller project we will likely be merging more infrequently, with integration taking place after each round of unit testing and possibly at a rate of several times per iteration (fortnight).

Work Assessment:

To assess progress and outcomes at the end of each iteration a team meeting is held where the job items are checked and in conjunction with this the next iteration plan is developed.

Iteration Plans:

Job Items:

Job items are assessed by the linking of each completed job to tangible proof of the jobs completion. An example of this would be a job to develop a short document that is then linked to the completed document which is now under version control.

Issues:

Any issues that have arisen during the iteration are vocalised during the iteration assessment team meeting. However pressing issues can be added throughout the iteration and then assessed during this period. Issues can be anything from how some work items are being completed, facets of the team's approach to the project, or what could be bad practices by team members or the team as a whole. Once all perceived issues have been identified they are then added to the iteration plan and are marked as either ‘resolved’ or ‘pending’. Pending issues have a plan or approach going forward outlined in the notes that should resolve the issue. At the next iteration meeting these pending issues are revisited and either marked as resolved or if not, then a new strategy is devised to resolve them within the next iteration.

Assessment:

To give a brief overview of the status of the project at this iteration end point, an assessment target (or targets) is/are checked to summarise overall project progress. Included is an overall project status of either green, yellow or red. Green is assigned if all assessment targets have been met. Yellow is assigned if most targets are met, but there are some remaining targets and associated jobs that will be carried to the next iteration. Red is assigned if the majority of targets have not been met, and the project is critically off target.

Assessment Against Objectives:

Our overall high-level objectives are summarised here with a status update. They are either marked as ‘met’ if the job items provide evidence of that high-level objectives completed outcome. If they are ‘not met’ then they are marked as such and some explanatory text is included to outline why they weren’t met during this iteration.

Assessment Against Evaluation Criteria Test Results:

Following on from the objective assessment section, evaluation criteria/outcomes are listed for each high-level objective. Outcomes are either marked as 'complete' or incomplete' if the team believes the objective has been met in the previous section. Summaries are provided for both how outcomes were met or not met, and any high-level objectives and associated outcomes from these two sections that are not met are carried over onto the next iteration plan and are completed as a priority. Completing unmet objectives from the previous iteration keeps the overall project on track and stops any project drift.

Testing Procedure:

Testing will be carried out in line with our iterative development approach. Use-cases are to be implemented with the CCRD Use-Case (Place an Order) forming the basis of what is implemented architecturally to support that use-cases successful completion. This forms the focus of the Elaboration phase, and by extension what will be tested.

We will be using a combination of Unit Testing, Integration Testing, System Testing and Internal and External User Acceptance Testing to ensure the working state of the application at each stage of the project.

Testing order is based around risk assessment, with the most critical (CCRD) implemented and tested first, and then subsequently in order of assessed risk through to completion.

Testing will be carried out and recorded as per the guidelines set out by the Master Test Plan:
https://docs.google.com/document/d/1fXMroMcFvLB-dgk7F-Y86hxgmpYP8qlWHI-J0KCglqk/edit

3. Deployment

We are developing an Android application so it will be released via the Google Play Store. Applications released on Google Play need an associated developer account that is acquired through the Google Play Console. Once a fee of US$25 is paid we are free to use Google Play Console's features.

When the app is nearing completion and is entering the External User Acceptance Testing phase, the application can be bundled into an APK file for testing. To do this, within Android Studio a signed

APK file of the app is created which is then ready to be uploaded to Google Play for the External UAT.

As results come back from the External UAT there will be inevitable bugs detected. Once our team has come up with a potential fix for the code, the app is again bundled into an APK through Android Studio. The package name needs to be the same as the original APK, but the version code must be incremented higher than the previous version. The APK is uploaded as an update through the Google Play Console and an update for the app can then be pushed to all external testers with the application installed on their testing device.

The documentation we will be following for navigating deployment of our application to the Google Play Store can be found here:
https://support.google.com/googleplay/android-developer/answer/113469?hl=en

4. Project milestones and objectives

Phase	Iteration	Dates	Primary objectives (risks and use case scenarios)
Inception Phase	I - 1	16/03 – 29/03	- Establish Vision - Contact Potential Project Sponsor - Establish Initial Use Case Model - Complete Initial Short Use-Case Descriptions - Complete Preliminary Non-functional Requirement Analysis - Identify/Document Candidate Architectures - Define initial Data Model - Establish Version Control - Establish Risk List
	I - 2	30/03 – 12/04	- Implement Technical Competency Demonstrator - Identify Critical Core Risky Difficult (CCRD)Use Case - Complete Short Use-Case Descriptions Complete Use-Case Model - Complete Domain Models - Create Master Test Plan - Establish Initial Project Plan - Finalise Vision - Deliver Life Cycle Objectives Milestone (LCOM) - Complete Inception Phase Status Assessment
Elaboration Phase	E - 1	13/04 – 26/04	- Mitigate Highest Priority Risk(s) - Place an Order (CCRD Use-Case) - Complete diagrams for core use-cases - Implement Highest Priority Architectural Element(s) to Support CCRD Use Case (Place an Order) - Host Domain and MySQL database (test) implemented - Apache server and MySQL database deployed along with PHP scripts for communication (test implementation) - Complete Development Testing for Highest Priority Architectural

			Element(s)
	E - 2	27/4 – 10/05	- Mitigate 2nd Highest Priority Risk(s) - Log in, Fill Cart, Place an Order, Browse Menu Use-Cases - Classes implemented to support Log in and Browse menu use-cases - Implement 2nd Highest Priority Architectural Element(s) to Support CCRD Use Case - Menu subsystem and Menu database created - Classes implemented to support Place an Order along with basic customer UI functionality - Sales subsystem and associated classes are implemented - Cart system and Account subsystem is implemented - Complete Development and Integration Testing for 2nd Highest Priority Architectural Element(s)
	E - 3	11/05 – 24/05	- Mitigate 3rd Highest Priority Risk(s) - View Active Order, Fill Order Use-Cases - Implement 3rd Highest Priority Architectural Element(s) to Support CCRD Use Case - Implement Cafe side application to support use-cases - Complete Development and Integration Testing for 3rd Highest Priority Architectural Element(s) - Deploy Executable Architecture in Trial Environment - Complete Internal User Acceptance Testing for CCRD Use Case in Trial Environment - UI functionality for Cafe end of application (Order is placed and then is viewable on Cafe Staff UI)
	E - 4	25/05 – 5/06	- Contingency - Deliver Life Cycle Architecture Milestone (LCAM) - Complete Elaboration Phase Project Assessment
Mid Year Semester Break			
Construction Phase	C - 1	13/07 – 26/07	- Implement 2nd Highest Priority Use Case(s) - - Complete Development and Integration Testing for 2nd Highest

			Priority Use Case(s) - User account functionality [signout, view account, view orders, book delivery, empty cart] - Complete Internal User Acceptance Testing for 2nd Highest Priority Use Case(s)
	C -2	27/07 – 9/08	- Implement 3rd Highest Priority Use Case(s) -Manage Menu/inventory Menu -[add item, view item, search menu, delete item, edit item] Inventory - [view item, update item, delete item, add item] - Complete Development and Integration Testing for 3rd Highest Priority Use Case(s) - Complete Internal User Acceptance Testing for 3rd Highest Priority Use Case(s)
	C - 3	10/08 – 23/08	- Implement 4th Highest Priority Use Case(s)- User extra functions [loyalty rewards, favorite orders, student discount] - Complete Development and Integration Testing for 4th Highest Priority Use Case(s) - Complete Internal User Acceptance Testing for 4th Highest Priority Use Case(s)
	C - 4	24/08 – 6/09	- Contingency - Deliver Initial Operation Capability Milestone (IOCM) - Complete Construction Phase Project Assessment
Transition Phase	T - 1	7/09 – 20/09	- Deploy Application in Trial Environment - Complete 1st Round External User Acceptance Testing - Resolve Any Identified Issues
	T - 2	21/09 – 4/10	- Complete 2nd Round External User Acceptance Testing - Resolve Any Identified Issues
	T - 3	5/10 – 16/10	- Contingency - Deliver Product Release Milestone (PRM) - Complete Final Project Assessment