

Construction Phase Status Assessment



Version Control

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Executive Summary

The key aim of the construction phase is to have a beta ready app to test with corresponding test materials. These materials include; manuals, feedback forms, and instructions.

The project is ready for beta testing. The functional acceptance test results, found [here](#), justifies that assertion.

There are also user manuals, help videos, and troubleshooting guides available for assistance during the beta testing, found [here](#)

The are test materials and feedback forms ready to be utilized during the beta testing process, found [here](#).

1. Deliverables

Deliverable	Link
Beta Ready Version of the Product - Customer	Completed
Beta Ready Version of the Product - Staff	Completed
Supporting Test Evidence (website)	Completed
Beta Test Materials - Customer (google site)	Completed
Beta Test Materials - Staff (google site)	Completed
Troubleshooting Guide - Customer	Completed
Help Video - Customer	Completed
User Manual - Staff	Completed

1.1 Supporting Test Evidence

All testing for both the customer and staff app is located on it's own website. Link is located in the deliverables table.

1.2 Beta Test Materials

1.2.1 Customer App Scenarios

- Create a user
- Login using created user
- Fill the cart with item(s)
- Book a delivery

1.2.2 Staff App Scenarios

- Fille order (queueing)
- Deliver order
- Add a menu item
- Update menu inventory

1.4 User Manual

Customer beta testers have inbuilt help video within the app and are also supplied with a troubleshooting guide. The method of delivery for the beta testers is through a google site that had been created specifically for beta testing.

Staff beta testers have access to a user manual, also found on the staff beta test google site as the method of delivery.

Both customer and staff testers have access to a beta test instructions file on the google site. These instruction documents give details about what the steps of the test are, and any important information to take note of. This includes a warning not to use real credit card details as this is a test only.

All linked in the deliverables table.

2. Construction Iterations

Key:

Incomplete - Remains incomplete but not due to lack of time devoted by assigned team members and/or is postponed/rescheduled.

Postponed - Remains incomplete and was not started this iteration. Task will carry over to the next iteration.

Incomplete - Remains incomplete and will require explanation and/or escalation.

The date column indicates the completion of the milestone.

2.1.1 Iteration 1 - Key Milestones Completed

Milestone	Outcome	Date
LCAM documents updated	The project documents were updated to appropriately reflect the current and predicted state of the project.	13/07/20
Implement and test Empty Cart use case, customer side	Empty cart function added with associated API. Testing was completed for this implementation.	22/07/20
Implementation and test of book delivery, customer side	New activity add, choice of pick-up or delivery	23/10/20
Implementation and test of book delivery, staff side	View delivery addresses for orders as they are placed. Orders can be marked as delivered from the app as they are delivered.	26/10/20
Navigation menu implementation	A menu bar was added to the top of the app for an easier way to travel to important screens.	26/07/20
Conduct end of iteration UAT testing on implemented use-cases	UATs for Empty Cart, Book Delivery & Book Pick Up use-cases completed. There were no bugs found for this UAT testing	26/07/20

2.1.2 Iteration 1 - Issues/Incomplete Objectives

Objective	Status
Research payment gateway and implement the gateway in the customer app	Ongoing - Progress made with payment gateway research but difficulty implementing a test version via tutorial. This job is ongoing and will carry over into the next iteration.
Research a push notification mechanism and	Ongoing - Progress was made with push

implement in the Staff/Customer app	notification research. Early stages of test implementation - this job is ongoing and will carry over into the next iteration
Conduct research into implementing the Sign Out use-case. Implement and then test the Sign Out use-case.	Ongoing - Jake completed the Sign Out use-case implementation, however he ran out of time to write the automated tests for the use-case. Testing was not completed
Conduct research into implementing the View Order use-case. Implement and then test the View Order use-case	Postponed - Jake did not get time to complete this task this iteration as his previous jobs took longer than anticipated. This job has been postponed but will carry over to the next iteration.
Implement and test Book Delivery use-case for the Android Customer application	Postponed - This UAT result has generated a new job: Book Delivery input validation. It should involve some simple regex on the street number and street name fields. This job is low priority/risk and will likely be addressed in a later iteration.

2.2.1 Iteration 2 - Key Milestones Completed

Milestone	Outcome	Date
Test the Sign Out use-case	Sign Out unit and integration testing completed. With conformation the sign out functionality is working correctly.	06/08/20
Browse Menu (Staff) implementation & testing	Browse Menu use case implemented with a new button on the main menu to access the menu item, testing was completed successfully.	07/08/20
Delete Menu Item (Staff) implementation	Delete menu item implemented and is able to remove menu items from the database.	08/08/20
Stripe Payment Gateway implementation	Stripe payment gateway now working within our customer app. Node.JS server for payments deployed to Heroku cloud hosting.	08/08/20
Conduct end of iteration UAT testing on implemented use-cases	End of iteration UATs for Place Order (Stripe payment), Sign Out, the menu bar, Browse Menu (Staff) & Delete Menu Item completed.	09/08/20

2.2.2 Iteration 2 - Issues/Incomplete Objectives

Issue	Status & Outcome
Research a push notification mechanism and implement in the Staff/Customer app	Incomplete - Partially completed but will carry over to the next iteration. Was complicated by some issues with Emily's local development environment during the last day of the iteration.
Conduct research into implementing the View Order use-case. Implement and then test the View Order use-case.	Postponed - View Order has been pushed back to the next iteration - but will be a secondary priority. The cafe staff queueing system will be prioritised and completed before View Order.
Implement and test the View & Edit Menu Item (Manager) use-cases	Postponed - Following the Unified Process we decided to push the View & Edit Menu Item use-cases to the last iteration as they are not a high priority item. The queueing system and push notifications, along with a finalised menu subsystem will be prioritised first.
Implement and test the Add & Delete Menu Item (Manager) use-cases	Postponed - Following the Unified Process we have pushed the Add Menu Item use-case to the last iteration as riskier tasks (queueing system/push notifications) will be prioritised first.

2.3.1 Iteration 3 - Key Milestones Completed

Milestone	Outcome	Date
Staff queueing System implementation	Using a boolean lock system in the database I should be able to lock the order by its id which will prevent other staff members from accessing it while when the user on the order page leaves that page it unlocks to prevent it being permanently locked.	20/08/20
Menu options for customer app	The menu options for the cafe have been fully implemented, and passed the end of iteration UAT. Updates UI and added options for different items	22/08/20
Beverage booker web server	Web server was updated to better reflect the status of the project.	23/08/20

Conduct end of iteration UAT testing on implemented use-cases	UATs completed by all team members for the menu options (Fill Cart/Place Order) and the staff queueing system (Fill Order)	23/08/20
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2.3.2 Iteration 3 - Issues/Incomplete Objectives

Issue	Status & Outcome
Complete push notification mechanism and implement in the Staff/Customer app	Incomplete - Push notifications remain incomplete. Emily made progress this iteration but had difficulty with the backend trigger upon order completion. This task has been escalated and Benn has been assigned to mitigate the risk.
Devise a method and implement a queueing system for incoming orders in the Cafe Staff app	Incomplete - Jake is still working on a related part of the Fill Order use-case where checkboxes for each order item need to be saved as checked/unchecked if a team member backs out of filling an order. Incomplete - Automated testing was not completed due to time constraints but will be completed as a priority next iteration.
Plan and then implement inventory system within the server/database for the cafe	Incomplete - Benn did not get to this task this iteration due to time constraints - finishing the menu options was prioritised. This task will be completed next iteration.
Conduct research into implementing the View Order use-case. Implement and then test the View Order use-case	Incomplete - Jake did not get to this task this iteration due to time constraints - finishing the complete order function (Fill Order/Queueing) was prioritised. This task will be completed next iteration.
Implement regex/input validation to remove bad input for the Book Delivery address input page	Incomplete - Emily has started the Book Delivery task but it was not completed due to time constraints. This task will carry over to the next iteration.
Compile photos for each menu item	Incomplete - Emily did not get to this task due to time constraints - finishing push notifications was prioritised. This job will carry over to the next iteration.

2.4.1 Iteration 4 - Key Milestones Completed

Milestone	Outcome	Date
Size selection functionality added for drink items	Size selection for drink menu items has been implemented in the Customer App. The full menu options implementation has passed unit and integration testing.	27/08/20
Automated testing for queuing	Automated Integration testing for the queueing system completed. Passed testing.	27/08/20
Push notification implementation	NotificationOutput class to obtain the exact order it should be listening for a change to the orderStatus variable. Once the change registers it triggers the notification to be sent to the customers device	31/08/20
Inventory system within the server/database for the cafe implementation	Inventory System has been implemented within the server and the Customer App. Implementations were tested (Fill Cart & Empty Cart use-cases) and passed.	31/08/20
Testing of inventory system	Ran the Postman automated tests for the Fill Cart use-case against the local server. The updated implementation passed all 21 tests.	1/09/20
Add + edit menu items (staff app)	On the menu screen it has an add button once clicked it asks for a type then goes to the item form which has all fields associated with the item that can be filled out and added to the database. Modify takes the information of the item being modified straight to the item form which then fills out the fields	06/09/20
Conduction end of iteration UAT testing on implemented use cases	All team members have completed the end of iteration UAT's	06/09/20

2.4.2 Iteration 4 - Issues/Incomplete Objectives

Issue	Status & Outcome
Implement checkboxes for the Fill Order use case that work with itemStatus variable in the database	Ongoing - Jake completed the Fill Order use-case implementation this iteration. The testing of the use-case will be completed next iteration as a priority.

Conduct research into implementing the View Order use-case. Implement and then test the View Order use-case.	<p>Reassigned - During the mid-iteration team meeting Benn suggested he could take over the View Order use-case job while Jake was busy with another assignment. Jake agreed and the job was reassigned to Benn.</p> <p>Ongoing - Benn implemented the timer/progress bar working off a button click and saving/running in the background using Shared Preferences. The timer is also being set by an estimated order time, but he is midway through implementing the calculations on the server. This will be completed next iteration along with testing for the implementation.</p>
Implement regex/input validation to remove bad input for the Book Delivery address input page	Ongoing - Emily has partially implemented the input validation for Book Delivery address input using Google place autocomplete. This is not fully implemented, and will carry over to the next iteration.
Compile photos for each menu item	Postponed/Ongoing - Emily looked at how would be best to display images for menu items - either in the database and read down with the menu items, or locally within the app. Low resolution images pulled down from the database looks like the most straightforward approach. This job is low priority compared to the other implementations so will likely be completed after prioritised functionality.
Implement and test the Add & Edit Menu Item (Manager) use-cases	Ongoing - Jacob completed the implementation of Add & Edit Menu Item, but the testing for both use-cases will carry over into the next iteration.
Implement and test the View & Update Inventory (Manager) use-cases	Postponed - Benn did not get to this task this iteration. It will be implemented next iteration after completing the View Order use-case and testing.
Implement and test the delete single cart item (Empty Cart) use-case	Ongoing - Jacob completed the implementation for the delete single cart item (Empty Cart) use-case. Automated testing was not carried out but will carry over to the next iteration and be completed as a priority.
Implement and test the View Account (Edit Info) use-case	Postponed - Nobody was assigned to this job as we have been working off a “ticketed” system

	where if all previous work is finished then the next available team member will take the job. Not started this iteration, but will be completed next iteration.
Implement the Manage Staff functions (Add, Delete) along with staff level restrictions within the Staff App	Postponed - Nobody was assigned to this job as we have been working off a “ticketed” system where if all previous work is finished then the next available team member will take the job. Not started this iteration, but will be completed next iteration.

2.5.1 Iteration 5 - Key Milestones Completed

Milestone	Outcome	Date
View Order use-case implementation	View Order use-case now fully implemented. When order is confirmed an estimated order time is displayed for the customer. The customer can also go back to this activity and view the estimated time.	11/09/20
Regex/input validation to remove bad input for the Book Delivery address input page	Book Delivery address input page has input validation & the address field no longer accepts symbols. First name & phone number has been added to deliveries. Drivers can contact the customer concerning any delivery address issues.	13/09/20
Test the Add & Edit Menu Item (Staff) use-cases	Automated testing carried out successfully for the add menu item use-case. Wrote Postman tests for the Add Menu Item use-case and tested them against the local server.	11/09/20
View & Update Inventory (Manager) use-cases implementation and test	Implemented the View & Update Inventory use-cases in the Staff App. Performed instrumented testing on the implementations. Passed testing.	12/09/20
Delete single cart item (Empty Cart) use-case testing	Integration testing carried out successfully for the Delete Single Cart Item use-case.	09/09/20
View Account (Update Info) use-case	The UI for the profile page is complete. Account is deleted & signing the user out removes them from the db. User can edit/update their info & it will save that to the db	20/09/20

Manage Staff functions (Add, Delete) along with staff level restrictions within the Staff App implementation	Users can input staff level, first name and last name of the new staff user. Staff restrictions added, 1 is manager, 2 barista, 3 delivery drivers (numbers are for staffLevel in the database).	20/09/20
Conduction end of iteration UAT testing on implemented use cases	UATs completed for Book Delivery, View Account, Manage Menu, Update Inventory, Manage Staff and Staff Sign Out/Staff Restrictions. There was a bug with deliveries	20/09/20

2.5.2 Iteration 5 - Issues/Incomplete Objectives

Issue	Status & Outcome
Implement and test the View Account (Edit Info) use-case	Incomplete - Benn did not get to writing an automated test for the View Account implementation. This will carry over as a priority to the contingency iteration.
Update the UI in the Customer App	Incomplete - Benn is close to completing the UI updates for the Customer App, however, the changes for the Account page must still be made and will be completed in the contingency iteration.
Prepare help video for the Customer App	Incomplete - Jacob has begun to create the help video for the Customer App, however, this will carry over and be completed in the contingency iteration.
Implement the Manage Staff functions (Add, Delete) along with staff level restrictions within the Staff App	Reassigned - Benn took over the remaining Manage Staff functions from Jake and Jacob as it was the last day of iteration. Implemented the recyclerview for the staff list and the Delete Staff function.
Compile photos for each menu item	Not Required - The group decided to no longer pursue the app supporting images in the menu. Was likely to cause issues with our slow server. Removed as we deemed this not feasible within the given timeframe.

2.6.1 Iteration 6 - Key Milestones Completed

Milestone	Outcome	Date
Testing for the View Account Implementation completed	The View Account use-case has passed automated testing.	23/09/20
Testing for the Manage Staff Implementation completed	The Add and Delete Staff functions have passed automated testing.	23/09/20
Place Order Bug Resolved	The bug that is stopping orders being placed in the database has been addressed and the implementation is fully functional	23/09/20
Update and Run Customer App Automated Tests	Automated tests are updated to run with Beta version 1.0 of the Customer App when it is connected to the web server	25/09/20
Customer App UI Updates completed	Customer App UI is properly constrained for different mobile screen sizes. Branding/colour scheme is consistent throughout the app.	26/09/20
Update the UI in the Staff App	Staff App UI is properly constrained for different mobile screen sizes. Branding/colour scheme is consistent throughout the app.	1/10/20
Customer App Help Video Recorded and Linked	Help video is recorded for Customer App main functions	26/09/20
Customer App v1.0 Deployed to Google Play for Beta Testing	Customer App has been successfully deployed to the Google Play Store and is ready for Transition Phase Beta Testing	30/09/20
Write Beta Tests for Transition Phase	1st round Beta Tests are written and ready for the Transition Phase	
Write user manual for the Staff App	A complete user manual has been written for all the functions within the Staff App	9/10/20
Write troubleshooting guide for customer app	A guide for dealing with common error codes has been written	9/10/20

2.6.2 Iteration 6 - Issues/Incomplete Objectives

There are no outstanding issues or work items to be completed.

3. General Issues

Issue	Outcome & action taken
Scope creep	Task items needed to be reassessed on the value they would bring to functionality of the app, as time remaining became an issue. To remedy scope creep items were removed or altered to fit the required timeframe.
Inaccurate time estimation	Some implementation took longer than expected due to unforeseen problems. This was remedied by escalating the tasks and assigning part or all of the task.
Architecture choices	Some of the choices made at the very beginning hindered the implementation of functionality such as notifications. In hindsight utilising libraries that are specific for android development would have reduced implementation time and complexity.
Local development issues	Emily's local development seemed to have issues. With one issue being caused by the NBN connection preventing the app being able to talk to the remote server. This issue was luckily after the implementation was completed, but still caused delays.