S3b - User Manual

Washu

A mobile application by

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2. Introduction

Washu is a convenient car wash service by TaxiPack Corp that is served as a software application through a mobile devices. For many, time is a precious resource in today's fast moving world. By allowing people to have their car washed while it is planned to be inactive, Washu allows people to spend more time focusing on their other daily activities.

This document aims to provide a useful resource for users to navigate through and access all the features of the application. This manual will describe instructions on using the application as either a car wash customer, a car washer, or a business manager who has licensed the Washu service. Sample interactions are included for users as a guide on how to use the system. The manual also includes instructions on how to handle and recognize errors in case of incorrect use. A list of known deficiencies is also included as reference.

Washu is designed to run on devices running Android 4.0 Ice Cream Sandwich or later. This guarantees full functionality for all of Washu's features.

3. How to Use

When you press on the Washu app icon on your phone, you will be brought to a loading screen where Washu will load its assets. If it is the mobile device's first time opening Washu, the user will be prompted to enter in their profile consisting of first and last name, email address, and phone number. When the user completes filling the required fields, the user presses the "Submit" button. Before Washu finalizes the profile, it will check if all the mandatory fields are filled. If any of the mandatory fields are not filled, Washu will inform the user to fill in the required fields. Once the user has completed their profile for the first time, the user will no longer be directed to the profile editing screen upon opening Washu.

Users who have entered in their information will be directed to the the main menu where different buttons will be displayed depending on the user's roles:
- "Change Profile" - Visible for all users. Directs the user to the profile editing page.
- "Customer" - Visible for all users. Directs the user to a page containing customer-specific actions
- "Washer" - Visible only to car washers. Directs the user to a page containing car washer-specific functions.

3.1 Change Profile

The "Change Profile" button directs the user to their user profile screen where they can change their first and last name, email address, phone number, and owned cars as they wish. The user can then press the "Update" button to confirm the changes. Washu will check if all required fields are filled and inform the user if required fields have been left blank. The

user can select "Back" to go back a screen if the user does not wish to change any information.

3.2 Customer

Selecting "Customer" on the main menu screen directs users to a screen where they can select "Make an Order" and "My Previous Orders".

3.2.1 Make an Order

Selecting "Make an Order" directs users to the order creation screen (however, if the user is not currently located within a Washu region, the phone will notify the user that they will not be able to create orders). The user will then be prompted to select a wash package. Once a package is selected, the user will be prompted to enter a license plate number, and to select a picture of their car (saved on the app from previous orders or from their device) or take a new picture. If the user elects to take a new picture, the device's camera app will open, allowing the user to take and upload a picture.

Once the user has entered all their information, they can press the "Next" button. The user will then be taken to the payment screen, where they will be prompted to enter their credit card information. If their credit card information is already saved on their profile, they will simply be asked to confirm the card information (Washu currently only accepts Visa and Mastercard).

After the user enters their credit card information, Washu checks if the credit card is a valid before completing the transaction. If the credit card is not valid, Washu informs the user to enter in a valid credit card. If the credit card is valid, order information will be sent to Washu servers and a receipt of the order will be emailed to the user's email address as entered in the user's profile.

3.2.2 My Previous Orders

Selecting "My Previous Orders" redirects the user to a screen that shows the user a list of their previous wash orders. If the user is new to the Washu app, the "My Previous Orders" screens displays a text that tells the user that no previous orders have been made.

If an existing Washu user clicks on the "My Previous Orders" button, the next screen to be loaded shows the user a list of all his/her previous washes ordered. Each of the previous washes contain the washer information, the location of the wash, the rating the wash received and also the method of payment used to finalize the transaction.

3.2.3 Wash Review

Once a wash has been completed, the user will receive a push notification indicating "Wash Complete". Interacting with this push notification will bring the user to the "Wash Review" screen. Pushing the "Review Wash" button will display a form for the user to rate the quality of the wash by highlighting one to five stars (displayed graphically) and writing a written

review, Hitting the "Submit Review" button will submit the review, sending it to the Washu servers, and allowing the washer and manager to view the review.

3.3 Washer

If the user is a car washer, the "Washer" button will be visible on the main menu. If the user selects the "Washer" button from the main menu, Washu will first check if the user is in a Washu region. If the user is not in a Washu Region, Washu will inform the user that they are not in a Washu Region, and that the should go to a Washu region before trying again. If the user is in their appropriate wash region, they will be directed to a screen with a scrollable pending orders window and two buttons: "Refresh" and "My Previous Washes".

3.3.1 Washer Interface

Upon being directed to the "Washer" interface, the Washu app will ask for any pending orders from Washu servers. If there are no pending orders in the window, the user can wait approximately 10 seconds to have the pending orders window recheck for any new orders, or the user can press the "Refresh" button to manually recheck for any new orders.

If there are pending orders, the user can select any pending order. Upon selecting an order, a pop-up will display with the customer's name, wash package ordered, car's picture and license plate, and car location. The user can accept the car wash by selecting the "Accept Wash" button at the bottom of the pop-up or decline the wash and close the pop-up by selecting the "Decline Wash" button.

If the user accepts the order, the user will be directed to a new screen with the order's wash package, car's picture and license plate, and car location. This screen has a "Start Wash" button for when the user arrives to the car wash location. When pressed a time will display on the screen indicating how long the user took to wash the car. When the car wash is complete, the user presses the "Wash Complete" button and the wash duration timer will stop. A pop-up will appear on the screen asking the user to upload a picture of the washed car and to rate the car wash out of five. The picture can be taken with the mobile device's camera. When a picture is taken, Washu will check if the user has rated the wash. If no rating is given, Washu will inform the user to rate the wash. Afterwards, data will be sent to the Washu servers and the screen will then be redirected back to the Washer Interface.

3.3.2 My Previous Washes

The "My Previous Washes" button directs the user to a screen that displays any past washes the user has completed. If the user has not serviced any washes in the past, the screen displays "No washes to show".

4. Error Recognition and Handling

In the course of use of the system, it is possible that errors can occur. The Washu system has systems in place to handle errors in the application. In the case of run-time exceptions,

exception handlers are in place to handle the exception and take action accordingly. Most exceptions can be handled gracefully. In this case, the user will be notified via a pop-up dialog box of an error, and the action that caused the error. The application will continue running, allowing the user to continue to use the app uninterrupted.

In the case of an unhandled exception, the application will exit gracefully and then a dialog will appear, containing information about the user's system and the state of the application when the error occurred. The dialog will contain a button allowing the user to submit the bug report to the developers. This will allow developers to be made aware of any errors that are occurring in the course of app use and also enable the developers to start working on updates to fix the particular bug.

5. Sample Interaction

The following sample interaction describes steps for a customer to create a new car wash order. This interaction assumes a customer has already set up their profile, and has enabled Washu push notifications on their device.

Upon entering a Washu wash region, the user's device will receive a push notification prompting the user to order a car wash. Upon opening the notification, the Washu app will open to the order creation menu.

Figure 1. Washu notification

The user will then be prompted to select a wash package. After package selection, the user will be prompted to enter their licence plate number, and to choose a photo of their car by either selecting an existing photo from their device, or using their device's camera to take a new photo.
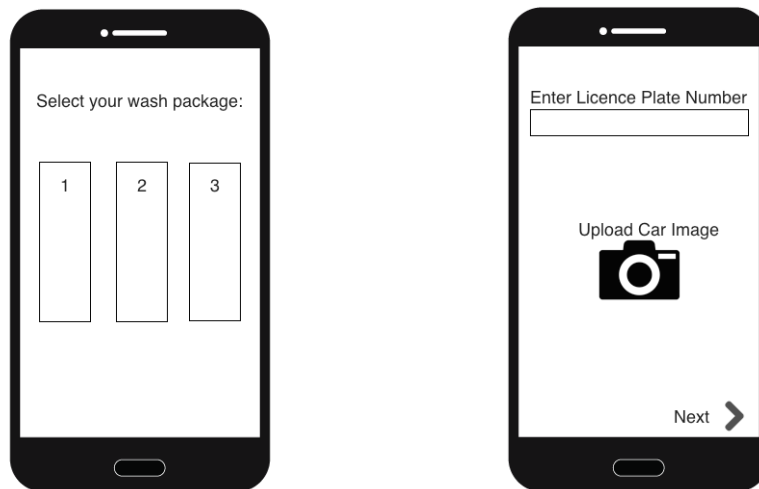
Figure 2. Order Creation (a)

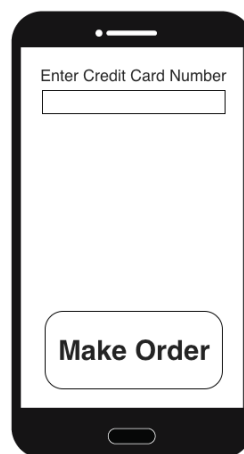The user will then finalize the order by entering their credit card information and tapping Make Order.

Figure 3. Order Creation (b)

6. List Of Known Bugs and Deficiencies

During the process of the Washu app development, the team came across a couple of bugs. It is important to note that the system still works perfectly and these bugs do not cause a crash of the app they just slightly hinder performance and response times of some more advanced functionality in the application.

The first bug we noticed was a delay in response times and also a lag in general performance due to including payment processing. The bug did not come light until a couple of weeks ago; we were not able to identify this bug at the start of the project because our app was still in the infancy stage and did not have any major functionality added to it.

Currently, only Visa and Mastercard credit cards are accepted for payment, but we plan to support additional credit cards in the future in order to support as many customers as possible.

We plan to rectify these bugs and deficiencies before the final version of the application is released on April 7th, 2016. Besides the bug stated above the Washu app runs perfectly and executes all of its basic functionality without any hinderances.

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