Design Document

Author: Team 10

## 1 Design Considerations

\*The subsections below describe the issues that need to be addressed or resolved prior to or while completing the design, as well as issues that may influence the design process.\*

One big issue needed to finish design is information about the utility software we will be using for (1) credit-card scanning, (2) payment processing, and (3) email management capabilities. It would also be good to know what the primary devise the program will be run on (small tablet, large tablet etc.). We also need information about the GUI and how they want the design to look. Lastly, will other people and companies use the software? This would change the design to allow different users to customize.

Lastly, will the data be stored in the cloud? Or will all the customer information be stored in the app? How will customer’s information and privacy be secured? Will this be left to the third party software provided with Android Utility?

### 1.1 Assumptions

\*Describe any assumption, background, or dependencies of the software, its use, the operational environment, or significant project issues.\*

We assume there will only be one user at a time but an issue might arise if they experience growth and need to have two registers with multiple accesses to same software.

Another big assumption is cost benefit. This software production needs to be justified and should show the value added to the company.

### 1.2 Constraints

\*Describe any constraints on the system that have a significant impact on the design of the system.\*

Common constraints are budget and time. These shouldn’t be a big issue for this project but will affect the quality of the GUI and additional functionality. The time constraints are subject to the deadlines of the class and the capacity of our group.

### 1.3 System Environment

\*Describe the hardware and software that the system must operate in and interact with.\*

The program will likely run on a tablet at a kiosk. It will need to be wifi enabled or have data package to upload data to central storage, process credit cards, and send email. It will be an Android application programed in Java and available to run on any Android device.

## 2 Architectural Design

\*The architecture provides the high-level design view of a system and provides a basis for more detailed design work. These subsections describe the top-level components of the system you are building and their relationships.\*

### 2.1 Component Diagram

\*This section should provide and describe a diagram that shows the various components and how they are connected. This diagram shows the logical/functional components of the system, where each component represents a cluster of related functionality. In the case of simple systems, where there is a single component, this diagram may be unnecessary; in these cases, simply state so and concisely state why.\*

### 2.2 Deployment Diagram

\*This section should describe how the different components will be deployed on actual hardware devices. Similar to the previous subsection, this diagram may be unnecessary for simple systems; in these cases, simply state so and concisely state why.\*

## 3 Low-Level Design

\*Describe the low-level design for each of the system components identified in the previous section. For each component, you should provide details in the following UML diagrams to show its internal structure.\*

### 3.1 Class Diagram

\*In the case of an OO design, the internal structure of a software component would typically be expressed as a UML class diagram that represents the static class structure for the component and their relationships.\*

### 3.2 Other Diagrams

\*<u>Optionally</u>, you can decide to describe some dynamic aspects of your system using one or more behavioral diagrams, such as sequence and state diagrams.\*

## 4 User Interface Design

\*For GUI-based systems, this section should provide the specific format/layout of the user interface of the system (e.g., in the form of graphical mockups).\*