

<b>Project Management Plan of Custom Computer Express Mobile Application</b>		
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## 1.1 Introduction

The following document will describe the work breakdown structure of the development for the Custom Computer Express Mobile Application. The development team consists of 4 members, each with a unique role. These roles include Database Administrator, Senior Android Developer, Tester, and Human Interface Designer.

## 2.1 Database Administrator

The Database Administrator (DBA) role has been designated to Christopher Bickelhaupt. He will be responsible for designing the database, implementing the database, and maintaining the database.

### 2.1.1 Database Design

The DBA will be responsible for designing models of the database. He will design an ER diagram to describe the data and use that as a foundation for the implementation. He will also be responsible for deciding which platforms to host the data and query the data with.

### 2.1.2 Database Implementation

The DBA will be responsible for creating all the tables of the database. He will also need to populate all the tables with data. In addition, he will have to write the queries needed to access or manipulate the database. He will work closely with the Human Interface Designer to come up with a user friendly GUI that users can use when they have an action requesting the database.

### 2.1.3 Database Maintenance

Maintaining the database will be left to the DBA. Once the Custom Computer Express Mobile Application is implemented, the database will need to be maintained. The DBA will be responsible for backing up the database and making sure that if a crash occurs the data will not be lost. He will also have to patch any broken queries and eliminate excess data.

## 3.1 Senior Android Developer

The Senior Android Developer role has been designated to Beverly Wertz. She is responsible for developing the application's logic development/design, back end connectivity to the database and overall connectivity to the user interface.

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### 3.1.1 Application logic Development/Design

The Senior Android Developer is responsible for the underlying application/framework that ties the database and user interface together into a logically oriented end-user application. She will use UML models to develop and design the underlying logic and flow of the application. She will also decide which tools to utilize in the development process and assist with testing of the application as development progresses.

### 3.1.2 Database Connectivity

The Senior Android Developer will also connect the application logic with the database to utilize the database information where appropriate. She will work with the DBA to determine which data and tables are appropriate to utilize for the various activities within the android application and what data to push into the database when saving customer information.

### 3.1.3 User Interface Connectivity

The Senior Android Developer will finally connect the application logic to the graphical user interface. She will work closely with the Human Interface Designer to determine when and where interactions should take place and how to best implement the user experience in terms of screen changes and button interactions. There will be focus placed on intuitive design along with methods that represent the UML models that emphasize responsiveness to reduce load time for the user.

## 4.1 Quality Assurance/Testing

Evan Wang will manage all testing for the application to ensure that it meets the requirements specified in the SRS and works as expected. In addition, performance and usability by a wide demographic will be tested.

### 4.1.1 Requirements

The application will be rigorously tested to ensure that all requirements in the SRS documents are satisfied. Functional testing will be used to determine if any defects or failures exist within the code.

### 4.1.2 Performance

As speed is crucial in the operation of a mobile application, the performance will be tested. Menu transitions, application load times, and response time will be tested to ensure that the speed of the application meets the requirements listed in the SRS.

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### 4.1.3 Usability

User studies will be conducted to ensure that the application is usable for a wide demographic. Issues such as ease of use, a user-friendly interface, and concise navigation throughout the application will be checked through the use of willing participants in our testing phase.

## 5.1 Human Interface Design

The Human Interface Designer role has been designated to Justin Sosa. The Human Interface Designer will be responsible for designing a user interface that follows all principle guidelines for human computer interaction. These guidelines will ensure the application is functional, attractive, and easy to use.

### 5.1.1 Diagramming

The key to designing a great user interface starts with an interface diagram. This will serve as a guide for how the user will progress through the application from building a custom computer to final checkout. Using an interface diagram will allow the Human Interface Designer to easily track the different steps the user will take.

### 5.1.2 Prototype

After having a good diagram of what steps the user will take and understanding the user's needs, the next step is to implement a basic prototype of the user interface. This will basically be a nonfunctional skeleton of the application that will implement the views and give a better understanding of how the user will progress through them.

### 5.1.3 Finalization and User Testing

During this stage, the Human Interface Designer will work closely with the Android Developer in connecting the underlying logic with the finalized user interface. When all functionality is connected, user testing will take place to ensure that the user interface is intuitive and still follows all principle guidelines of human computer interaction theory.

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## 1.1 Introduction

The following document will describe the resource breakdown structure of the development for the Custom Computer Express Mobile Application. The resource document will be broken up into 3 components; people, materials, and equipment.

## 2.1 People

The Custom Computer Express Mobile Application consists of 4 people; Justin Sosa, Christopher Bickelhaupt, Beverly Wertz, and Evan Wang. Listed below is the estimated time required by each individual through each phase of the project.

### Requirements Phase

<b>People</b>	<b>Hours Per Week</b>
Justin Sosa	6
Christopher Bickelhaupt	6
Beverly Wertz	6
Evan Wang	6

### Design Phase

<b>People</b>	<b>Hours Per Week</b>
Justin Sosa	8
Christopher Bickelhaupt	8
Beverly Wertz	2
Evan Wang	2

### Implementation Phase

<b>People</b>	<b>Hours Per Week</b>
Justin Sosa	8
Christopher Bickelhaupt	6

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Beverly Wertz	8
Evan Wang	6

#### Verification Phase

People	Hours Per Week
Justin Sosa	4
Christopher Bickelhaupt	4
Beverly Wertz	8
Evan Wang	8

#### Maintenance Phase

People	Hours Per Week
Justin Sosa	2
Christopher Bickelhaupt	4
Beverly Wertz	4
Evan Wang	4

## 3.1 Software Development/Design Tools

The following software design/development tools will be utilized:

- Eclipse IDE for Java SE
- Android SDK supporting 2.2
- Android Virtual Device software (AVD)
- Gimp Image manipulation/creation
- mySQL

## 4.1 Equipment

- Windows PC
- USB to USB micro cable to application download to device
- The Hardware emulation tests will be run on a simulated AVD Android phone

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with the following specifications:

- Screen with WVGA800 format
- Simulated ARM processor
- 256MB memory
- 10GB storage space
- Wi-Fi
- Android 2.2
- Available android phones
  - Galaxy S & Galaxy S II
  - Samsung
  - Android 2.3.5
  - IGH987
  - 256MB memory
  - 3.5" AMOled screen
  - 16GB Storage

## 5.1 Summary

This document establishes the resources needed to complete the work given in the work breakdown structure document. This is a basis for how the project will be implemented and it is a tentative list that can be adjusted as the project continues.