

Project Management

Inventory Management System

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Work Breakdown Structure

The goal of our project is to create both an inventory management system (IMS), and a mobile application that will allow users to easily interface with our system. This means that there will be two major build phases of our project. Firstly, we will build the IMS along with an API that can be used to access the IMS. We will then develop an app that will utilize our API to smoothly interface with our IMS. The tasks we will need to complete have been broken up into the following categories.

Task	Description
Research	Determine what will be needed for the project
Gather Resources	Gather the necessary items for the project
Configure Database	Set up the necessary backend database
Write API	Get an API the application will be able to use for all necessary functions
Develop Android App	Develop the actual application the user will download on their phone and use
Automate Deployment	The whole process will need an automated installer in order to be easily setup
Setup Backup	To conform to our standards for disaster recover we will have a full backup solution

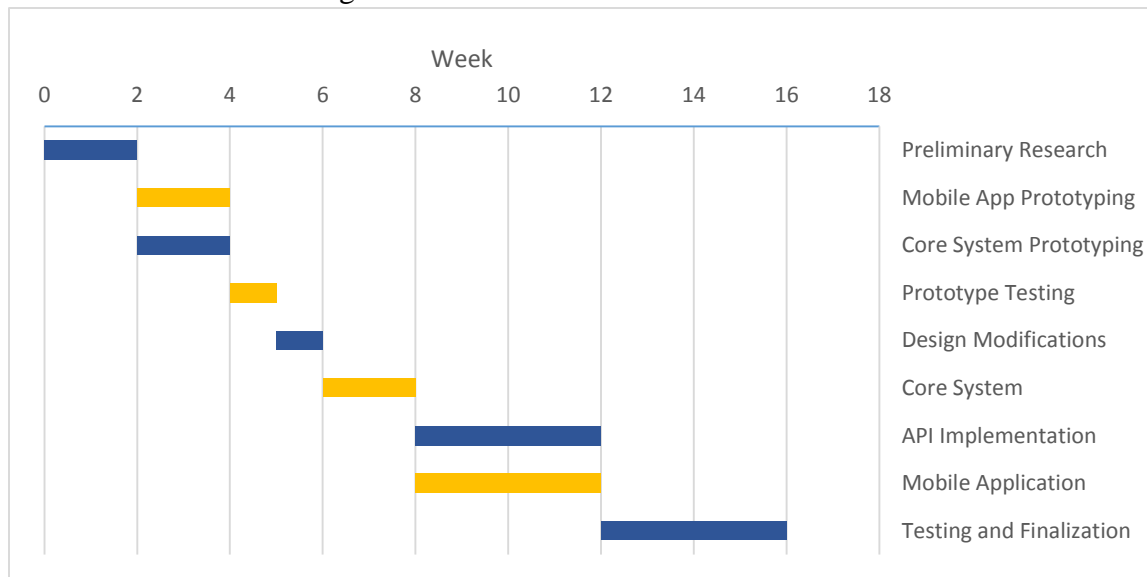
Personnel Assignments

Our group contains three members who each have our own skills and specialties. The work for our project has been broken up as follows:

Task	Contributors	Necessary Resources
Research	Bradley	Internet
Gather Resources	Mark	Server Hardware, Software Licenses, Android Phone
Configure Database	Group	Set up server with licensing
Write API	Group	Configured Database
Develop Android App	Group	Android Phone
Automate Deployment	Group	Completed with setup tasks along the way
Setup Backup	Brian	Server completed with sample data loaded, secondary server or drive to save backups

Gantt Chart

The following Gantt chart details our plan of work for the build semester of our senior project. We intend to spend the first two weeks doing preliminary research in order to do analyze our project and ensure that our design suits our needs. The next two weeks we will begin building our mobile application. This prototype will primarily focus on the layout and UI of our application since our API won't yet be available for us to build the functionality into our application. During this time we will also begin building the prototype of our core system. After completing the prototypes of both our mobile system and our core system we will spend one week testing our prototypes and looking for major issues. Afterwards we will make any modifications to our design that we deem necessary. This will be followed by another two weeks to complete the final iteration of our core system. We will then spend four weeks building both the API for the core system and the mobile application. Once those are complete we will have a final four weeks for testing and finalization.



Milestones

The following chart shows the major milestones we will pursue throughout the lifetime of our project.

Task	Lead	Due Date
Mobile App Prototype	Brad Griffiee	February 5
IMS Prototype	Mark Morrison	February 5
IMS	Mark Morrison	March 5
System API	Brian Sizemore	April 2
Mobile Application	Brad Griffiee	April 2

Contingency Plans

There are a few things which we have set up contingency plans for so that no matter what happens we will still be able to be successful in our project. In the event that acquiring server hardware is too difficult we have the ability to rent an AWS instance (for very little money to nothing due to being students), as well as a few laptops which can easily serve as the server. In the case that MySQL proves too difficult to work with and develop an appropriate API for we have taken looks at other database programs from as simple as storing a large CSV to slightly different services like NoSQL. Finally, in the event we cannot secure a single android device for exclusively testing we have the ability to use phone emulators within Android Studio to develop the Android Application. With our timeline we do not believe there should be anything that would be a major setback, as most of our requirements are easily substituted or already fulfilled by hardware or knowledge we already have.