

# ScanShop: Milestone 1

## Abstract

With online shopping becoming the preferred method of shopping, it is important that the consumer find the best deal without much time or effort.. SnapShop is an effective solution in the form of an android application that allows users to find the best deal (in terms of price) by simply scanning the barcode of the product they are looking for, or by searching for by name. The application will store data pertaining to a subset of products found on a large amazon dataset. This data will then be sorted when launching the app, ready to display the item along with pricing information.

## Scope

The amazon dataset which is referred to in the abstract section is much too large for practical use in a mobile application. In order to feasibly integrate the dataset into an application, we must consider a subset of the data. To make a subset of the data, we will be using Python script and amazon API to get the information of the products that still exists on the API which are also in the dataset. If the integration of the mobile application does not work then we will print the output on the console or text file. Initially it was planned that the project will get the price of product from all local store's website (online retailers), but if there is not enough time then the project will not implement other store's API to get the information of the products, it will just look up for the product on the amazon's dataset.

## Roles

Role	Tasks	Member
Project Leader/Scrum Master	Keep track of Due dates, Verify the work done by each member while helping them, Set up retrospectives, sprint review sessions, Walk the product owner through more technical user stories.	Harsh
Tester	Come up with test cases and strategies to test the code,	Saad
Log/Meeting manager	Organize group meetings and fill out Meeting Minutes Template, After every part finished, make a log for it	Rafay
Product Owner/ Backend	Code in java for mobile	Daniel

Programmer	application, Make sure that the team members working on the product are on schedule with their work.	
Backend Programmer	Code in java for mobile application	Thomas

## Project Planner

Start Date – End Date	Tasks	Implementing Team
Feb 9, 2017 – Feb 11, 2017	Requirements Specifications	Everyone
Feb 13, 2017 – Feb 24, 2017	Work on reading dataset and test it	Saad, Rafay, Thomas
	Implement Barcode scanner, test it, setup Android app	Harsh, Daniel
Feb 27, 2017 – Mar 3, 2017	Work with API's and web scraping and test it	Saad, Rafay
	Apply dataset work to Android app and barcode implementation	Daniel, Harsh, Thomas
Mar 6, 2017 – Mar 24, 2017	Apply API's and web scraping to Android app	Everyone
Mar 27, 2017 – Apr 10, 2017	Test it and final touch ups	Everyone

## Description of Planner:

1. **Requirements Specifications:** outline the requirements and specifications of our project. Describe in detail the project modules and their interaction with one another.
2. **Working on reading dataset:** analyze the dataset in order to efficiently extract and process the necessary information to accomplish our project.
3. **Implement barcode scanner:** research ways to implement a barcode scanner app on Android - use libraries that allow barcode scanning to be done easily and efficiently.
4. **Setup Android app:** work with Android Studio to develop a basic Android app to run our project on. (Will have to use Java).

5. **Get API's / Web scraping:** (optional) expand our project to include API's and web scraping data from other sources. This allows for more barcode scans to land results in our database.
6. **Apply dataset to Android App:** integrate our work with dataset analysis into our Android app while the rest of the team works on getting additional data from API's. This will require using data from the barcode scanner to search our dataset for a result.
7. **Apply API's and Web Scraping to Android App:** combine any work done with API's and web scraping to the Android app.
8. **Testing and deployment:** Several unit testing programs will test each module of the project to ensure correctness. Product deployment will occur once the individual modules put together are working as intended.

## Methodology:

The software development methodology we will use to implement our product is the agile-Scrum method. This method involves the following:

- A team manager, known as the *Scrum Master* (Harsh Patel), whose main purpose is the manage the productivity of the group.
- A Product Owner, whose main purpose is to point the team in the right direction when developing the project.
- A Development Team, including the Scrum Master and Product Owner, who all have the same purpose of strictly focusing on the product's development.
- Scrum Sprints during the weekdays, where all team members work strictly on implementing the features of the project using the waterfall method. The goal for the end of the sprint is to have potentially "shippable" code. Frequent but short meetings will be held to update other team members on what work has been done.
- Scrum Sprint reviews on the weekends, where the previous sprint is reviewed and we optimize the sprint process, and the features of the project.