

Shopping Helper

Report Name	Outline Project Specification
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1. Project description

The subsequent project is about constructing an app for shoppers to help make their daily tasks of shopping much easier due to us living in the twenty-first century, which has also been referred to as the era of technology. Likewise, individuals are able to access the internet through their fingertips by the use of their electronic smart-phones that are with people; either at most or all times. The following project will allow me build the said app from scratch by coding it in Android studio or Net Beans. The main aspect that I will be focusing on during the construction process of this app, will be the scanner aspect, as I find that to be the most difficult bit that is focused on making sure that individuals are able scan objects in, as well as remove them from the desired purchased list; thus making sure that it registers properly. Also the image recognition which will be tied with the scanner when scanning making sure it recognises it. This will involve a lot of research by looking up code and reports as to know how it works as well as repetition.

This app will be made to assist shoppers in constructing a grocery list on the spot, which will save them time; rather than looking through various items and spend an unnecessary amount of time in the supermarkets.

The final objective for this project is to make an efficient and completely functional working app, which helps shoppers with their daily tasks by making sure that the app can register products when scanned through the use of the application's built in scanner, as well as providing the choice of editing the items within the electronic shopping list, such as removing products that the buyer no longer wishes to purchase. Furthermore, the said app will have a checkout feature with a total of items that have been scanned by the shopper through the app, thereby, saving the buyer a significant amount of time from standing in line.

2. Proposed tasks

There will be a lot of research reading involved as I have linked a few in the bibliography, which have assist me with what I am looking for on a general baseline. Similarly, I will have to look for scanner APIs as which are the most versatile ones. Furthermore, in regards to the platform choice for which the said app shall be built on, I have decided on using android; as I am more comfortable and accustomed with open source such as in the case of using an android platform rather than using an iOS. Moreover, I am more confident with android as I have been using it for a long time and I find that it is more user friendly in terms of its simplistic and comfortable layout.

I have put down a list of tasks to start me off to show what I will be doing throughout this project (later will be improved with more detail).

1. **Research on proper API's for scanner-** task will be to look up proper reliable scanners whether it be internal or external and the differences between.
2. **Research on other shopper apps-** task will be to do research online and look up and compare other shopper helper apps.

3. **Research on papers on how to make a more versatile shopper app-** task will be to look up online articles and blog posts and compare what other kinds of shopper helper apps there are and how they are different.
4. **Comparisons between a basic shopper app and a more featured one-** task will be to research online or compare with android or iOS app see the differences.
5. **Ways to include vouchers, coupons and discounts-** task will be to find a way to implement voucher codes externally internally if its possible (aesthetics)
6. **Decide on if coding in android or iOS is better-** research based task must look up whether iOS or android is better and why it is so.
7. **Research papers on shopper helper or something along the lines of this-** task will be research based to look up online for papers and compare notes to get a better understanding on how it works.
8. **Development-** will branch off into 3 sections:
 - a. **Information is displayed properly**._– making sure that when objects are scanned in they are displayed properly and making sure that you are scanning in correct items i.e. carrots (displays something else).
 - b. **Editable data** – making sure that the items stored in the shoppers basket can be edited in case there is a problem if they scanned the wrong item, as well as being able to remove items from the shopping list.
 - c. **Image recognition-** making sure that the images can be identified as well as registered into the device through the camera, as well as having a training set to compare and be able to distinguish. As this will be one of the key points to this project which will take the most amount of time and be very difficult, so a lot of research is needed.
9. **Project Meetings and Project Diary-** project meetings will be held weekly by the project supervisor and a Project Diary will be kept every week logging what has happened making it easier to remember what has happened that week as well as provide a report of that week, the diary will be in the form of a blog on WordPress.
10. **Preparation for demonstrations** –There will be two demonstrations for this work one will be held on the 13th of March which will be the mid-project demonstration and the final project demonstration will be held on 15th of May. At this point, for the mid-project demonstration the point is to show the functionality and to have a somewhat nearly finished app. It should be able to at least manage to log information from the scanner and register it onto the device.
11. **More features** – if given more time when all the major features are done I will also try and implement a barcode scanner into the app, to make scanning items in a different way. This will only be achieved if all other major aspects of the project have been met with.

3. Project deliverables

- **Mid-Project demonstration notes**- a set of Project notes that will be produced to summarise what was presented at the demonstration. This will be included as an appendix in the final report. A draft will be discussed with the project supervisor before the demonstration.
- **Testing** – a script to show the basic features making sure everything is working well together as well as showing the progress of the work from how it was to where it is so far. As well as graphs or screenshots or where the progress is as well as what went wrong and how I solved it.
- **Final Report** – This document will be the report and associated appendices. In addition to discussing the work, there will be acknowledgment for 3rd party libraries, frameworks and tools that are used in this project.
- **Final demonstration** – No documentation will be produced for this demonstration, but it is noted here as it is one of the deliverables that should be considered when planning this work.

4. Initial annotated bibliography

- J. BRIGGS, "How Digital Shopping Lists Work", *How Stuff Works Tech*. [Online]. Available: <http://electronics.howstuffworks.com/gadgets/kitchen/digital-shopping-lists.htm>. [Accessed: 03- Feb- 2017].

"A general idea behind how digital shopping lists came into play and how to create a digital shopping list as well as the benefits behind them and how they make life easier. Their different companies that incorporate them such as amazon and other retail websites as they are jumping on the bandwagon that is the digital shopping list."

- M. Brown, "Hiku review: This tiny scanner is the ultimate tool for creating grocery-store shopping lists", *www.techhive.com*, 2004. [Online]. Available: <http://www.techhive.com/article/2852644/hiku-review-this-tiny-scanner-is->

the-ultimate-tool-for-creating-grocery-store-shopping-lists.html. [Accessed: 03-Feb- 2017].

“This article talks about the HIKU external scanner and how it is beneficial to the average shopper making them stop with impulse buying and how it makes life easier as everything you need you just scan at home and then can be found on the app in your phone instead of carrying a shopping list and maybe losing it .”

- K. McElhearn, "Six grocery shopping apps to replace your paper list", *www.pcworld.com*, 2014. [Online]. Available: <http://www.pcworld.com/article/2455133/six-grocery-shopping-apps-to-replace-your-paper-list.html>. [Accessed: 04- Feb- 2017].

“Article is about the different types of shopper apps and the many ways they can be implemented for idea purposes and how I can compare them with each other but in a general sense they are all the same in core concepts.”

- I. Pototska, "Shopping List App Development: Everything You Need to Know about Grocery Apps", *www.Yalantis.com*. [Online]. Available: <https://yalantis.com/blog/shopping-list-app-development-everything-you-need-to-know-about-grocery-apps/>. [Accessed: 06- Feb- 2017].

"The general idea of what makes a shopper app and what you will need to do in order to make one, this helps me a lot with understanding what I need to do when making it as well more features I can think of adding if I need to."