WHICH BIN

Android Application Proposal

MAP524
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March 4, 2016
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Summary of Application

Is it in the blue bin, green bin, or is it just garbage waste? These are questions which we ask ourselves every time we want to throw an item in the garbage bins. Recycling is something that most of us look forward to, to reduce the amount of trash that is built up in our landfills and to increase the amount of items which we are able to recycle to make more reusable products and keep our environment healthy.

My proposal for this app is to create an application which allows users to view many of the items that are thrown out and to help them decide where each item goes. This way users can know in which bin to place the correct garbage and or what to do which items which do not go into any of the available bins in their homes. In addition not only will the users be able to scroll through the list and view the description of the item, but users can also quickly search a product and the app will respond by displaying to the user the detailed information of what to do with that garbage item.

Item information will be accessed by the database created by the City of Toronto which contains a list of common garbage items and where to place these items.

Why an Android application?

I think this application works great for mobile devices because users can quickly look up what to do with an item wherever they are. Since this application does not require use of internet services, users can access this application without having a connection online and decide quickly in which bin the garbage goes in to. This app I find to very useful as well because many times when we go to throw out our trash, we stand in-front of the bins trying to decide in which bin to place the garbage. People who care about the environment may decide to go back into their homes and search online to know where to place the item, but since most people are always carrying their phones in their pockets, now there will be no need to waste time going back inside. Now they can pull out their phone, search the name of the item and in no time know which bin to place the item; hence the name of the app.

Application features

- Application will hold database of items with a detailed description of what to do with the item and in which bin to place it.
- Application will have a screen displaying a list of items in which the user can scroll through to find the item.
- User can search for an item instead of scrolling to quickly find the item they are looking for.
- Database contains a list of alternate words for certain items in which if the user does not know the name of the item, they can use alternate words which will guide them to the specific product they are looking for by narrowing their search results. For example, if a user does not know to search for Drain Cleaner, they may search for things like, “cleaning products”, “cleaner”, “cleanser”, “Draino”, “chemical” and give suggestions to the product they are looking for.
- Application will also have a favorite tab. This tab will allow users to add items to a local list on their phones so that they will not have to search for the item the next time. Instead users can click on this tab and see the items on their list.
- Users will also have a feature to add the days in which garbage is collected around their neighbourhood. The app will then provide a notification some hours before the due day to remind the users not to forget to place the items in the correct garbage bin and to take the garbage out.

Intended Audience

With this app, I believe there are several targeted audiences which would all benefit from using this app.
First is home owners. Home owners which are the main users are the ones who every week are taking out the garbage. These users are the ones most likely to not know which items go into which bin, and so this app is intended to help them make that decision for them.
The second target audience is schools and learning centers. Schools can use this application to teach kids and teens of where to throw out their garbage. This will teach kids to be responsible and care about the environment.

The last target audience would have to be companies who also want their employees taking care of the environment and the spaces around them. With many buildings now being more aware of what it means to help the environment, they are now taking responsibility and adding the three different bins to their facilities. With this also comes uncertainty of where each item goes like stated in the case of the home owners. With this application employees can now be certain of where to place the garbage items.

Most common use-cases

*1. Select Item in main List: (*User has application opened on home screen). Home screen displays a large list of alphabetically ordered items in which the user can scroll through to find garbage item. User finds specific item. User clicks on item. A new activity is displayed which contains a description of the item including in which bin the item must be placed in.

2. Search item: (User has application opened on home screen). User clicks on action bar options. Selects the "Search item" from the android application Action Bar. A new activity screen is displayed. The activity contains a text input field in which the user can search for an item. User types input. Application display all search result. Item is selected. Application displays product description as a dialog pop up window.

3. *Add item to favorites:* (User has application opened on home screen). User selects item either through the scrolling list or by search option found on the Action bar. Once item is selected, in the description of the product user will see a star image to add item to favorites. User clicks on the star. Item is added to favorites list.

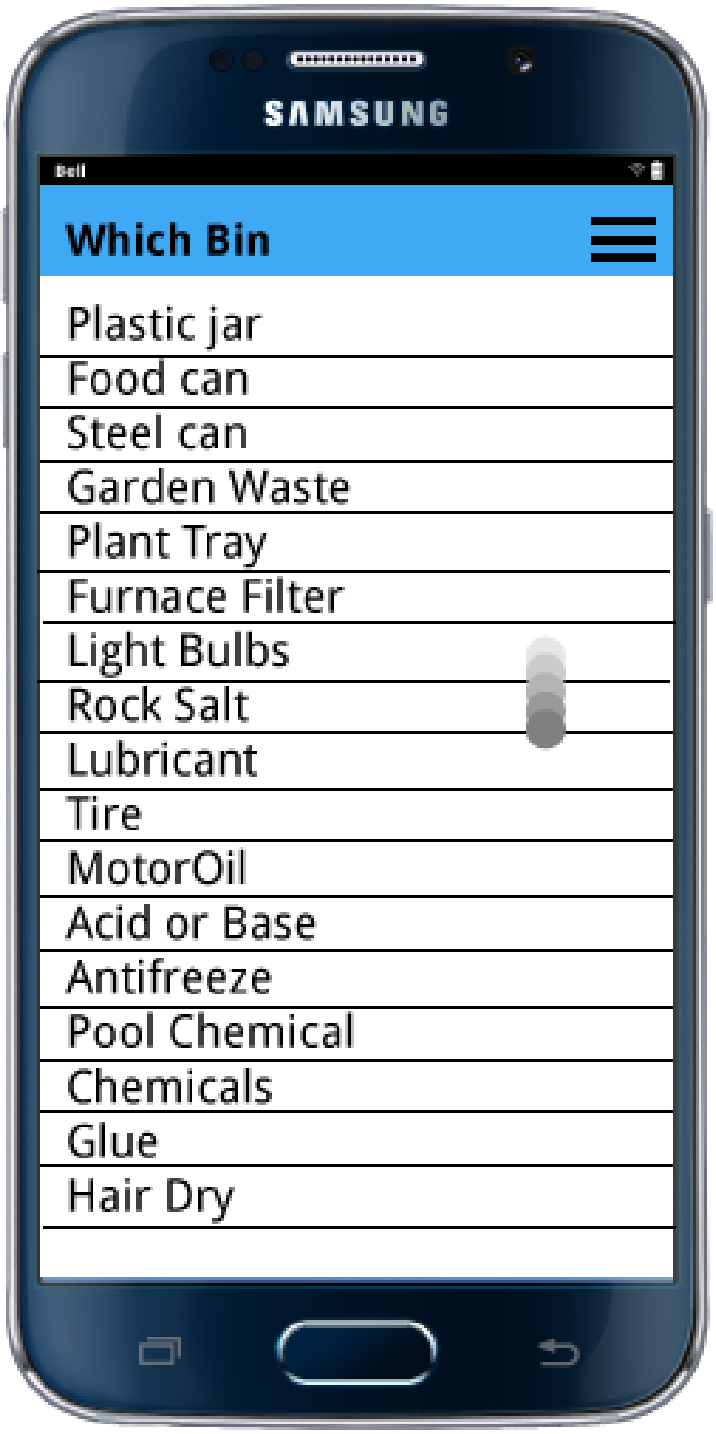
4. *Add garbage day notification:* (User has application opened on home screen).User clicks on "Create notification". User is taken to Create Notification activity. Application request garbage collection day,

reminder day, reminder hour and notification sound mode (sound, vibrate, muted). User inputs data. Application creates notification

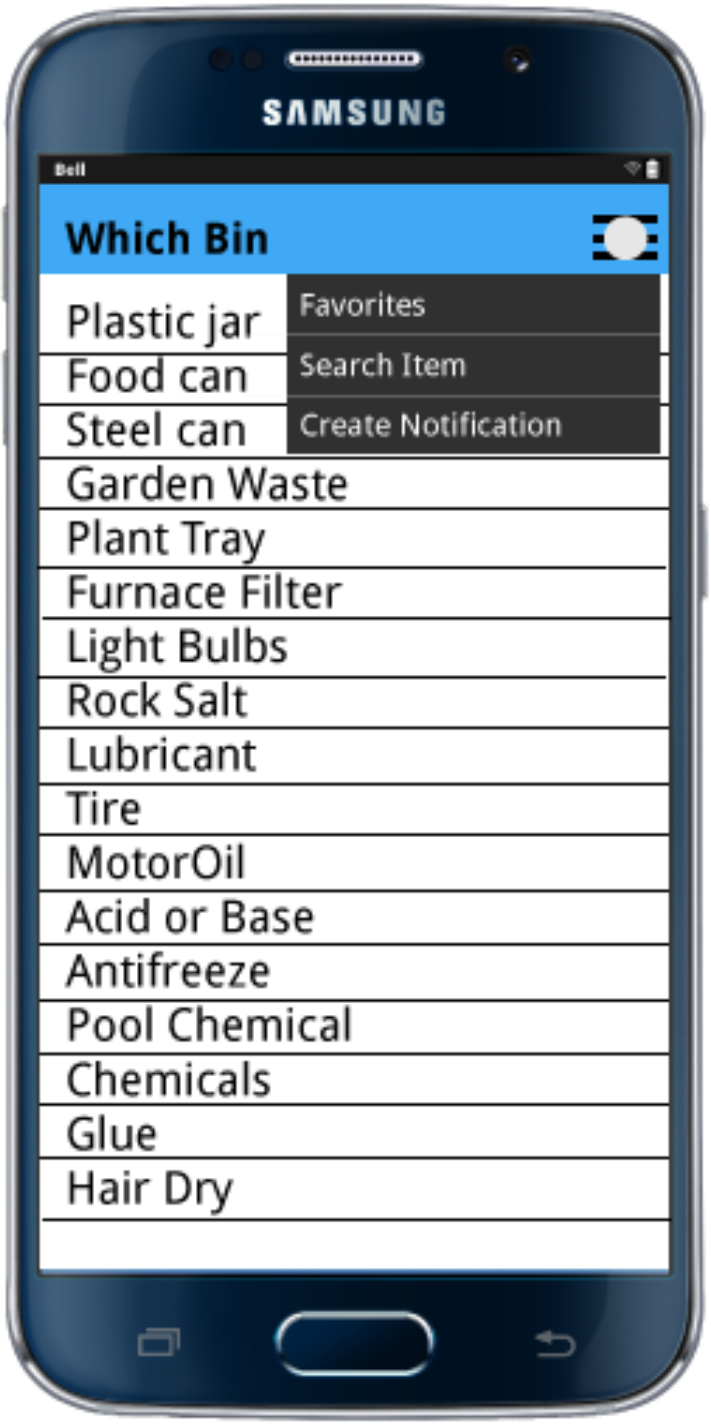
Possible application display views

Home Screen

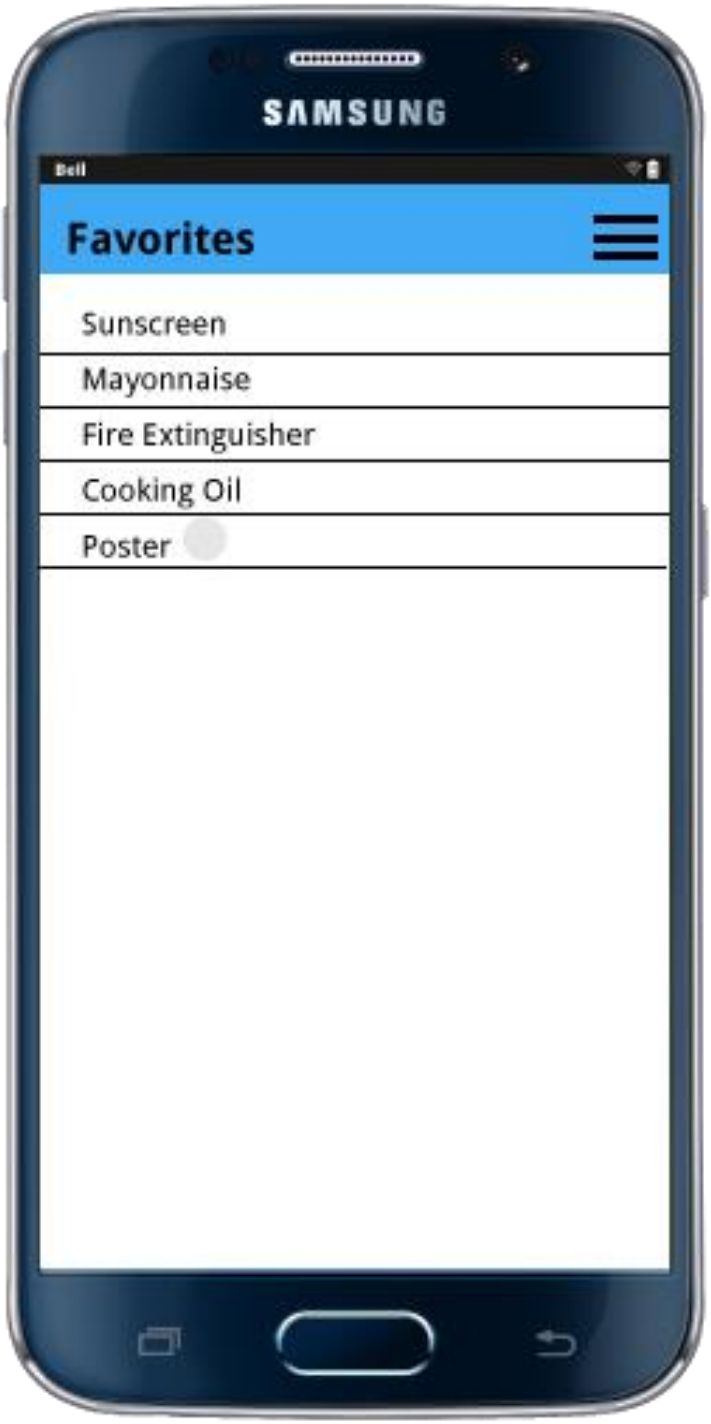
Scroll View


SAMSUNG
Bell
Which Bin
Plastic jar
Food can
Steel can
Garden Waste
Plant Tray
Furnace Filter
Light Bulbs
Rock Salt
Lubricant
Tire
MotorOil
Acid or Base
Antifreeze
Pool Chemical
Chemicals
Glue
Hair Dry

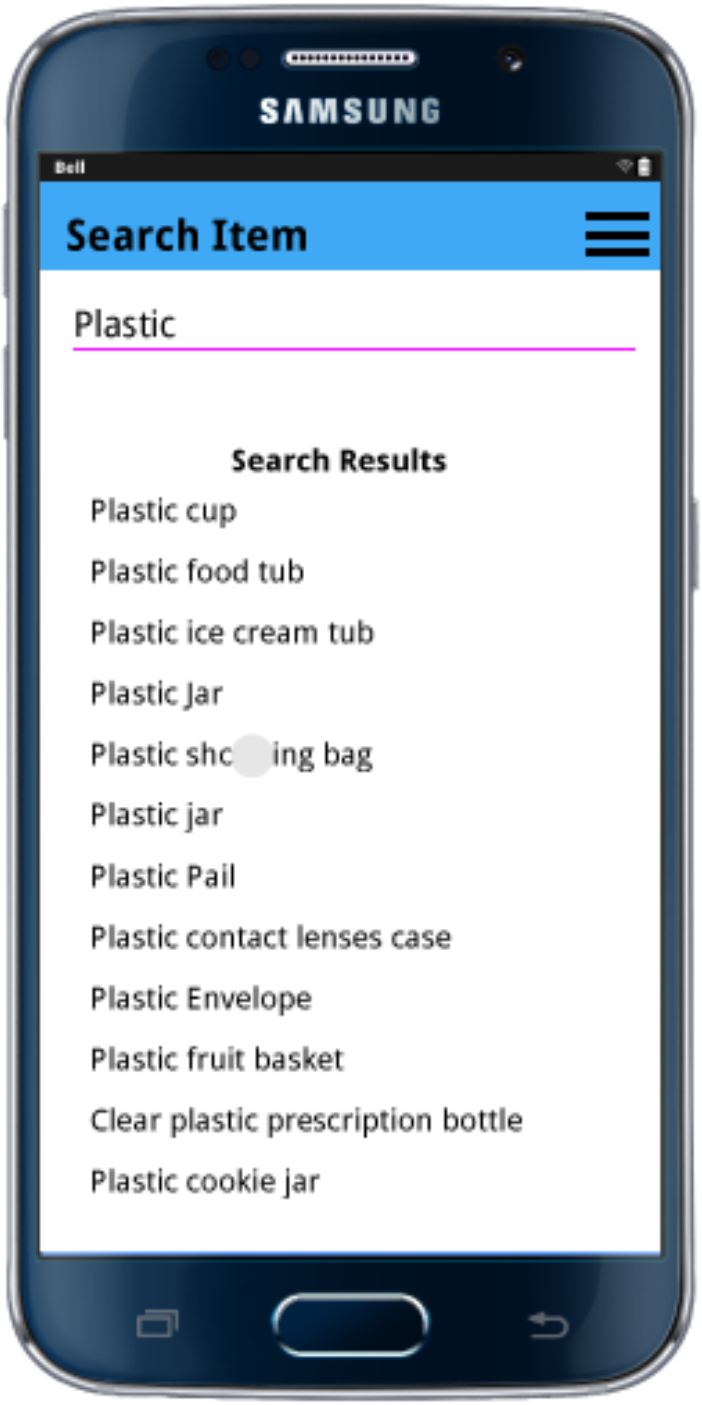
Menu Items


SAMSUNG
Bell
Which Bin
Plastic jar
Food can
Steel can
Favorites
Search Item
Create Notification
Garden Waste
Plant Tray
Furnace Filter
Light Bulbs
Rock Salt
Lubricant
Tire
MotorOil
Acid or Base
Antifreeze
Pool Chemical
Chemicals
Glue
Hair Dry

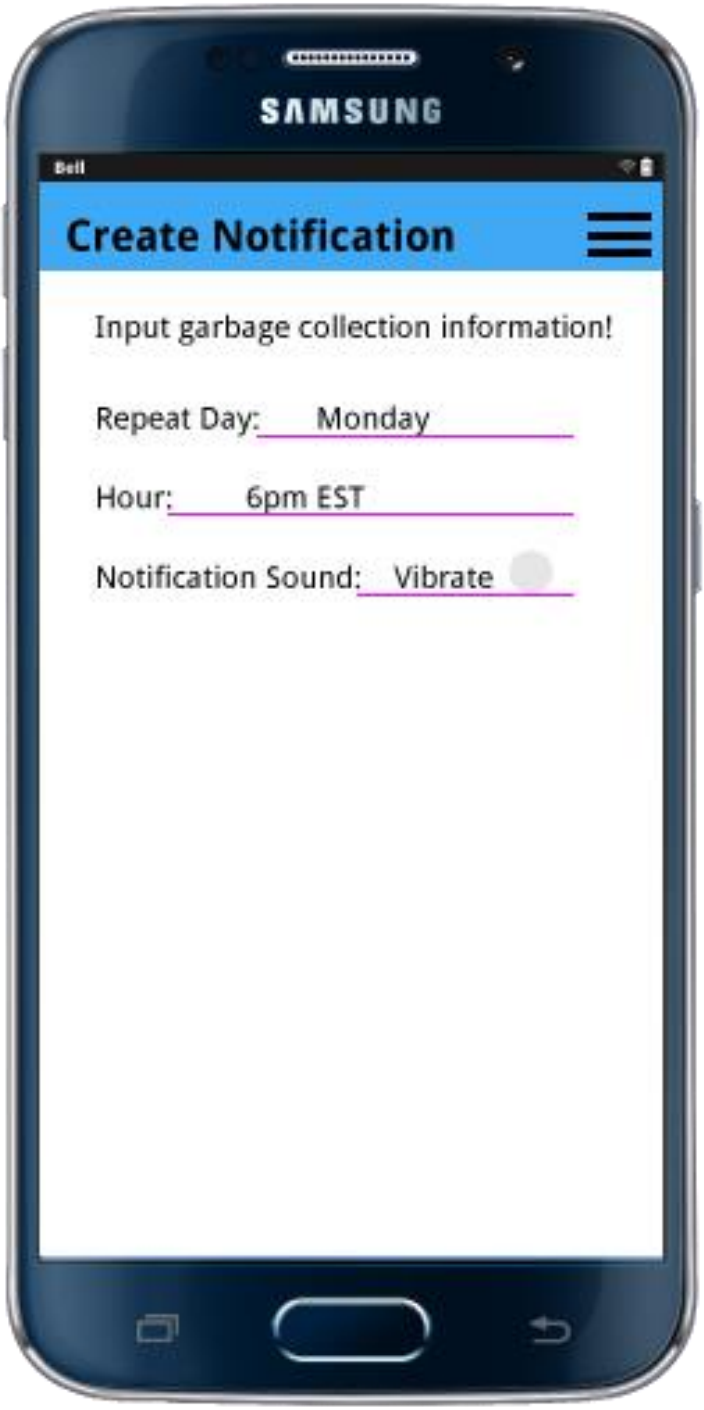
Favorites


SAMSUNG
Bell
Favorites
Sunscreen
Mayonnaise
Fire Extinguisher
Cooking Oil
Poster

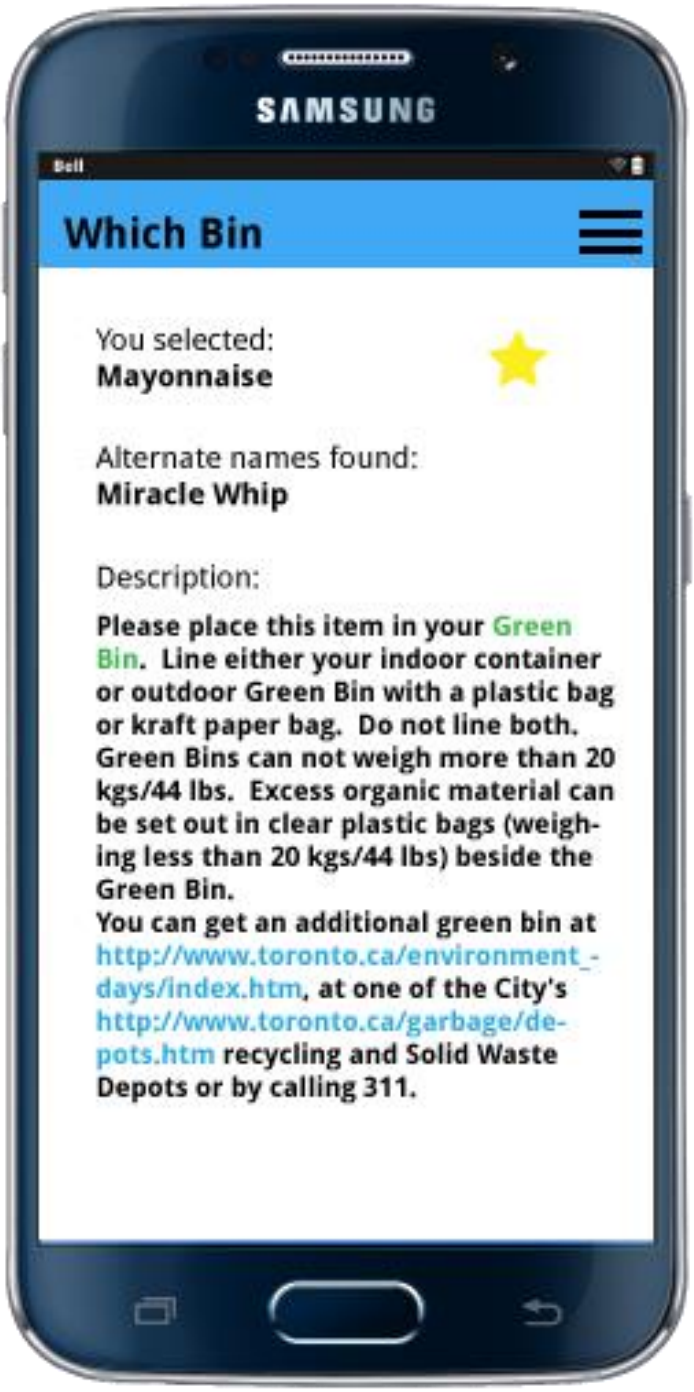
Search Item


SAMSUNG
Bell
Search Item
Plastic
Search Results
Plastic cup
Plastic food tub
Plastic ice cream tub
Plastic Jar
Plastic shc ing bag
Plastic jar
Plastic Pail
Plastic contact lenses case
Plastic Envelope
Plastic fruit basket
Clear plastic prescription bottle
Plastic cookie jar

Create Notification



Item Selected



Application Implementation Timeline

Week of March 7 to March 11:

- Creation of database folders and files.
- Application design is looked into.

Week of March 14 to March 18:

- Database table is implemented in application.
- Scroll View Activity is created and list of items are displayed to the users.
- Search item activity is created. This activity will hold an input field asking the user the search for an item in the database.
- Search result list is populated with user search.
- Ongoing application test.
- Bugs are fixed.

March 21 to March 25:

- Context Menu is created with three possible user options (Favorites, Search Item, and Create notification).
- User selection activity is created. Activity text fields are populated with corresponding database records.
- Favorite star option is created.
- Ongoing application test.
- Bugs are fixed.

Week of March 28 to April 1:

- Favorite activity is created to populate a list which will hold the items favorited by the user.
- Functionality is created which will link the star clicked on the “User Selection” activity to the list holding the unique items which the user wants to use for future reference.
- Ongoing application test.
- Bugs are fixed.

Week of April 4 to April 8:

- Notification activity is created.
- Java code is implemented to receive the user given information of requested day and hour and notification is created and tested.
- Bugs are fixed.
- Final application test.
- Submit final application report.
- Upload application to android market.

Database information

Database can found on the City of Toronto public website. (A link below is provided).
This database has the name "*Waste Wizard Lookup table*".
Owner: Solid Waste Management Services.
Currency: August 2015.
Format: Excel.
Refresh rate: Quarterly.
Website: http://www.toronto.ca/wastewizard.
Contact: Open Data Team opendata@toronto.ca**.**

*This data currently exists in an excel spreadsheet, and comprises four columns namely: Title, Alt words (alternative words), Desc Id (description ID), and Description. The first column "**Title**" contains the primary name of the waste material; the second column "**Alt Words**" contains alternative words or synonyms (including misspelled words) of the "Title" words. The third column **"Desc Id"**contains a number ID that groups items based on "Description" and finally, the**"Description"** column contains information describing the handling and disposal of the associated waste type*

Database download:
http://opendata.toronto.ca/solid.waste/waste.management/WasteWizard_Item_Description.xlsx

http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=859d258b2262e410VgnVCM10000071d60f89RCRD&vgnextchannel=02e6e03bb8d1e310VgnVCM10000071d60f89RCRD