

Simply Do: An Android Application to Create Shopping List and to Manage Them

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ABSTRACT

The Simply_Do is an Android application is to eliminate all and everything to keep track of in mind. Because of other jobs, the person might forget to do things at the right time when he needed them. And another intention is to eliminate all the manual work that is performed on a sheet in the form of small pawns. The chances of getting lost may be possible very often. As soon as the user goes to the mall, he can use this application to purchase the items he added first in the list, so the chance of losing items will be gradually reduced and things will not be forgotten. The main agenda for developing this application is to store the items in the form of lists that will be useful to the public.

Keywords: Android applications, Lists, Items, Statistics.

I. INTRODUCTION

A shopping list is a list of items that must be purchased by a buyer. Consumers often compile a grocery shopping list to purchase at the next visit to the grocery store. The list can be completed immediately before the shopping trip or incrementally depending on the shopping needs during the week. The shopping list can be a piece of paper or something more elaborate. There are pads with magnets to keep an incremental list at home, usually on the refrigerator. To obtain the same result you can use any magnetic clip with scraps of paper. There is a device that dispenses a strip of paper from a roll for use in a shopping list. Some shopping carts come with a small block for grocery items.

Home computers allow users to print their own custom list so that the articles are simply checked instead of written, or they can manage the list completely on the computer with custom purchase

list software. PDAs completely eliminate the need for a paper list and can be used to facilitate comparative purchases. There is online software to manage shopping lists from mobile phones and from the web. E-commerce sites typically provide a list of online shopping for repeat buyers on the site.

So overall, shopping in today's world has become a daily activity essential for most people. And because of their busy life program they will forget one or the other thing whenever they need it and even the person cannot remember his total spending that he spent throughout the month.

To overcome all these problems, a fully functional Android application called Simply_DOWas developed. This application allows the user to create the list and can add items to that particular list with its price and its quantity. The user can give high priority or low priority to each list he has created. In addition, the user can set the rest for the particular

list, so that the application can understand the user by increasing the notification.

II. BACKGROUND

A. Purpose

The purpose of developing Simply_Do is an android application is to eliminate each and everything to keep track in mind. Due to some other work the person may forget to do the things at the right time when he needed. And another intension is to eliminate all the manual work which is carried out on a paper in the form of small chits. And the chances of getting lost may possible on very often. As soon as the user go to the shopping mall he can use this application to purchase the items which he added in the list earlier, so the possibility of missing the items will gradually reduce and the things will not be forgotten. The main agenda to develop this application because there is no such good android application is developed to store the items in the form of list is introduced in the market.

B. Android Operating System

Android is a mobile operating system (SO) currently developed by Google, based on the Linux kernel and designed primarily for touchscreen mobile devices such as smartphones and tablets. The Android user interface is mainly based on direct manipulation, using tactile gestures that correspond generally to real-world actions, such as scrolling, touch and pinching, manipulation of objects on the screen and a virtual keyboard for entering text.

Android applications run in a sandbox, an isolated area of the system that does not have access to the rest of the system's resources, unless the access permissions are explicitly granted by the user when the application is installed. Before installing an application, Play Store displays all the necessary permissions: a game may have to enable vibration or save data to an SD card, for example, but it should not be necessary to read SMS messages or access the phonebook.

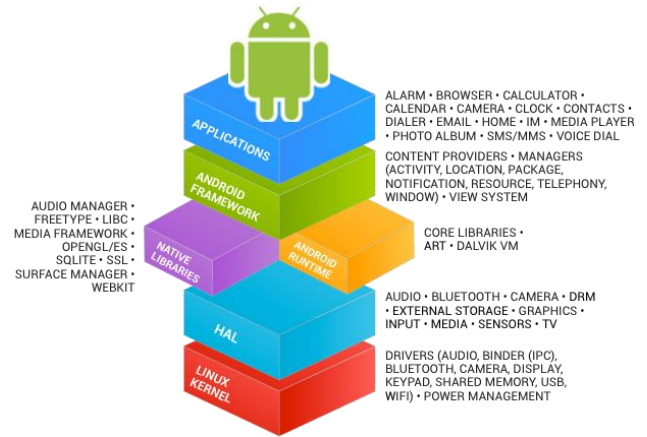


Figure 1. Core android application

C. Existing Solutions

In the present existing system there is no other android application to store the items name in the form of list, and also the remainder cannot be set to that particular list. Everything is done through paper and it is a tedious task to maintain records, also it will be a hectic job for keeping track of everything on mind. Present manual work is time consuming and it takes lot of man power to complete the work. In this age of advanced technology, doing all the work manually and with use of paper leads to decline in productivity. Difficulties in maintaining the records and it will be less secure. These typical processes have a lot of disadvantages which are mentioned below.

- ✓ Manual Work
- ✓ Time Consuming
- ✓ Chances of human error
- ✓ Report Maintenance
- ✓ Wastage of paper
- ✓ Possibility of record destruction
- ✓ Contingency planning.

III. PROPOSED SOLUTIONS

The main purpose of this android application is to create and manages the list of items. It helps the user to keep track about the things which he needs in his day to day life. Also he can set the remainder and can be intimated at the right time whenever he needed. The overall money spent for that particular

week or that month can be visualized through a bar chart. It reduces the time consumption and workload that exists in the current system. It also helps to store various lists for the user to access the records. The proposed system makes the searching of the records easier than the existing system.

A. Objective of the Proposed Solutions

The main objective of this application is to efficiently store the items in the form of lists and it will be available for the user whenever he needs it. This application is fully automated that not only saves a lot of time but also gives the fast results. It is cost effective, the user just needs to create the list with its name and go on adding the items to the lists with its names and its quantity. Also he can add extra notes if he needs to refer for later access. With this proposed system it is easy to maintain record. It will be an easier process and less time consuming.

B. Benefits of the Proposed Solutions

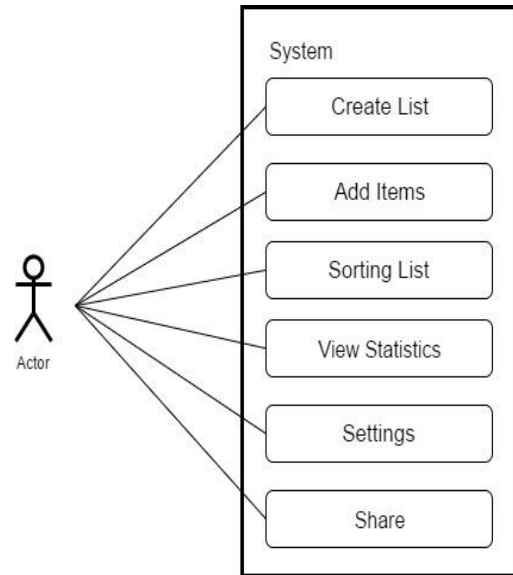
- ✓ Reduces the human effort
- ✓ Reduces the human errors
- ✓ Reduces paperwork and saves paper.
- ✓ Reduces the time for scheduling invigilation duties

C. Feasibility Study

Feasibility is a measure of how beneficial the development of the information system will be to an organization. This is done by investigating the existing system in the area under investigation or generally ideas about a new system. It is a test of a system proposal according to its workability, impact on the organization, ability to meet user needs, and effective use of resources. The simply_do android application will be more helpful for all users who are shopping addict in their day to day activity. While creating the list first they need to make sure that the list which is not existed in the current available list names. Each list will be of with its unique names so that while identifying the items is much easier.

D. Use case diagram

The diagram shown in Fig. 2 is the use case diagram of the application. The purpose of this diagram is to help visualize the scope of the application. It also represents the list of functionalities and depicts the base interactions that might occur between the system and the actors on the application.



Figuer 2. System use case diagram

- Primary Actor: User
- Main Success Scenario (Basic Flow):
 - ✓ User will create the list with the list name, remainder and the priority to set the list to be viewed.
 - ✓ User need to add the items which is purticular to that list.
 - ✓ User can sort the list with its name in alphabetical order, date and time, quantity, price, category.
 - ✓ User can view the statistics which is to be viwed for the day, or else can be viewd for the whole month and a year.
 - ✓ User can share the list via third party applications which are available in his mobile device.

- Extensions (Alternative Flow): *a. at any time system fails: Restart the application.
- Requirements:
 - Android device
 - File sharing app on device

E. System architecture

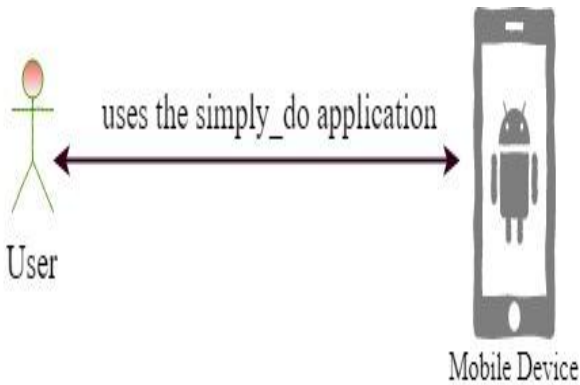


Figure 3. System Architecture

Figure 3 shows a schematic diagram of the overall system. The user going to open an application in an android device and he use the same application. While using the application first he needs to open and he need to create the list. After creating the list, then all the items need to be added particular to that list and need to be sorted based on ascending or descending order. Then overall statistics can be viewed for the day, month or for the whole year where the user had spent.

F. Features

- Prioritization of the list regarding importance of items.
- Setup of deadlines and reminders. The reminder will appear as a notification.
- Visualizing of shopping activities through a bar diagram.
- Adding of categories, stores the additional notes to products. And Possibility to add a product picture.
- Sharing of lists and products as text without the requirement of special system permissions.

IV. SYSTEM MODULES

A. Creating the list

In this module the user need to create the list with its name, setting the priority to that particular list and setting the deadline for that list which is created.

- **List name**

There is unique name for each list which is created in this application. There should not be any duplicate names used for the list as the constraints mismatch may happen in the application. The list name should be related to the items in which the user is adding to that particular list.

- **Setting the priority**

There are two priorities given for each list which is created one is high priority and another one is normal priority. If the user chooses the high priority for the list then the list will appears at the top of all other lists which is available in the application. And if the user chooses normal priority then the list will get stored randomly with the other list.

- **Setting up deadline**

While creating the list if user checks the deadline option then he need to select appropriate date with time for the prior announcement of the list which is getting expired. So that the user will not get forget about the list and its items.

The deadline notification will be raised in the mobile like a alarm and will be at the top of all other notification.

B. Adding products to the lists

This module will add the items or the products to the particular list which is created earlier. The user needs to set the quantity with its price for each items which he created. Also the user can add additional notes particular to that item.

- **Product name**

There is unique name for each product which is created within the list. There should not be

any duplicate names used for the product as the constraints mismatch may happen in the application. The product name should be related to the items in which the user is adding to that particular list.

- **Quantity and Price**

The user has to set the quantity for each product which he add to the list and price for the particular product will be added. The price can be in terms of Rupees or Dollars in which the user has chooses at first while opening the application.

C. Sorting a list

After creating the list with followed by its items then the user can sort out the list which he created based on the different options available in the application. The user can sort the list based on the alphabetical order either in ascending or by descending of the list. The user can also sort the list based on its price, quantity, date and time.

D. Stastics

After all the items purchased the user needs to mark or check all the items with its quantity and its total. The user in this module need to select the date range in which the price vs month or quantity vs month should display in the application. The user can group the products based on month, week and day or by category, the store name in which he bought and by product wise. At last the total expenditure of the particular group which is chosen will be displayed in this module.

V. BENEFITS

- Simply_Do is an android application which completely relinquishes the advertisement.
- Sharing of list or product data without access of the phone contacts.
- All saved data in the statistics can be deleted permanently with just a few clicks. All this data

lives only inside Privacy Friendly Shopping List and cannot be accessed from outside.

- Only the camera permission is needed, so you can take a picture for a particular product.
- All other features will be at your disposition.

VI. CONCLUSION

Simply_Do is an android mobile application which helps the people to keep track of their shopping list with created date and time. This application is easy to use, robust and offers the ability to track your shopping list. The main purpose of this android application is to create and manages the list of items. This application helps the user to keep track of each things which comes in day to day life. Also he can set the remainder and can be intimated at the right time whenever he needed. The overall money spent for that particular week or that month can be visualized through a bar chart. It reduces the time consumption and workload that exists in the current system it also helps to store various lists for the user to access the records. The proposed system makes the searching of the records easier than the existing system. In the next stage of development, using Cordova this application will be moved for IOS, windows phones and Blackberry using cross platform development.

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