

KARITON MOBILE APPLICATION REPORT

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Kariton

The name of the app “Kariton” came from the word “cart” in Tagalog. The reason for this is to describe the main function of the app which is adding items to the user’s shopping cart.

Specifications:

Runs on mobile devices with at least Android 5.0 (API Level 21)

Installation Guide:

Simply open the **Kariton.apk** file to allow the application to be installed on your mobile device.

Functions:

1. **Browse Shop** – The users can view the different items being offered in the shop. Tapping the product’s image will show the different sizes available, its description, and recommendations that are similar to the item currently viewed (ex. If a **computer** is viewed, the app will recommend other **computers**)
2. **Add Items to Cart** – The users can add the items they want to the cart, they can also change the quantity of the items they want to buy.
3. **Like Items** – The users can add the items they want/are interested into their “Favorites” with a simple press of a button,

Technologies Used:

1. **Java** - This is the main programming language used to develop the functions of the mobile application
2. **XML** - This is used to format the design of the graphic user interfaces found in the mobile application.
3. **SQLite** - This was implemented since it allows the app to have its built-in database to keep track of the items added to the cart and its favorites.
4. **Retrofit** - This was implemented to facilitate sending the application's request to the backend in order to get the list of products and send it back to the application as a response.
5. **Picasso** - Picasso was implemented to easily retrieve the image file to be shown based on the URL provided in the response.

Constraints of the Application:

- The “Recommended for You” section of the application does not reflect which items have been added to favorites already.
- When you remove an item from the favorites, the pages do not refresh automatically. You have to leave the activity and enter again to see the changes made.
- The application can only be used by one user since there is no log-in and sign-up function in the app.

Design Choices:

I decided to go the minimalist approach and used a few colors which consist of (black, white, gray, and teal similar to the one shown in the coding exam’s instruction).

Development Progress Log:

- I studied the nature of the response that will be given if I used the link for retrieving the products from the link provided in the instructions. This gave me the idea of how I should design the database that was implemented in the application.

Here are my findings regarding the response after studying its nature:

- It will always send 20 items stored in an array “d”
 - The items in the response always change each time you send the request.
 - There is no unique ID for each of the items in the array which heavily affects how I designed the in-app database.
- I designed the Graphic User Interface based on the images provided in the instructions. I also implemented my designs to make them interactable with each other to simulate a full-on mobile application.
- After designing the user interface, I worked on ensuring that the application will send the appropriate request and display the response properly which includes ensuring the pages that display the shop (the list of products) and the page that displays the information about the product works as intended.
- After that, I proceeded with designing the database that will store the data of items being liked and added to the cart.

Here are the tables used in the database:

Cart Table – This table holds the information regarding the user’s cart. The table consists of the following columns:

COLUMN NAME	DATA TYPE ACCEPTED	DESCRIPTION
name	String	Name of the product
originalPrice	String	Original price of the product
salePrice	String	Sale/Discounted price of the product
percentOff	String	Discount of the item
description	String	Description About the item
size	String	Size of the product availed by the user
quantity	Integer	Quantity of the product
bitmap	String	String containing the encoded array of bytes after compressing the product image’s bitmap

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Favorite Table – This table holds the information regarding the items that are liked by the user.

COLUMN NAME	DATA TYPE ACCEPTED	DESCRIPTION
name	String	Name of the product
originalPrice	String	Original price of the product
salePrice	String	Sale/Discounted price of the product
percentOff	String	Discount of the item
description	String	Description about the item
bitmap	String	String containing the encoded array of bytes after compressing the product image's bitmap

- Once I finished designing the database, I implemented it to the application through the use of SQLite Database to build the functions that make up the application's built-in database. I programmed the Cart and Favorites pages and develop functions that will help in displaying and making changes to the database.
- Once I checked that all of the key functions work as intended, I exported the app into an APK file for testing and submission.