Assignment 1 Documentation

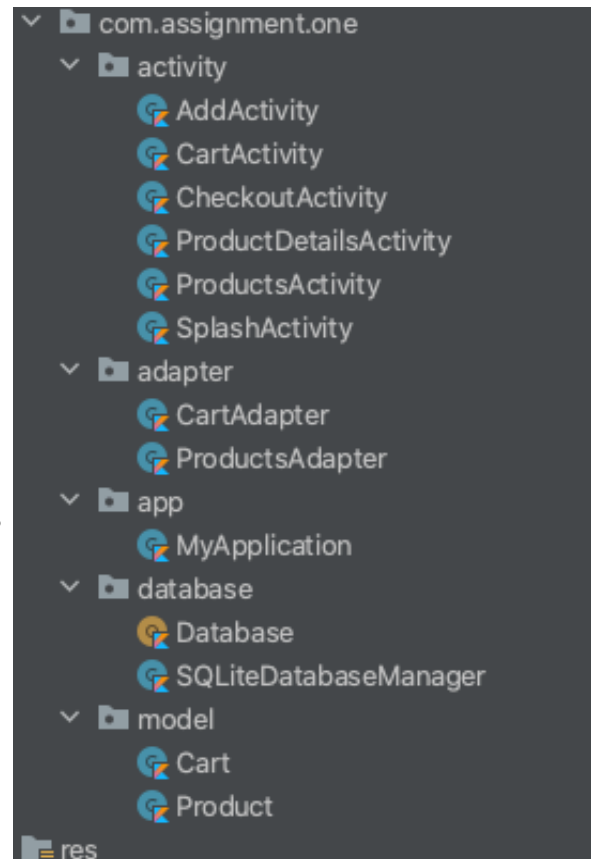**Application components:**

Activity package: This package includes all the
6 activities inside the app

Adapter package: This package includes the 2
application adapters. The Products adapter inside
Products activity and Cart Adapter inside CartActivity

App package:
 This package includes the application class which will start with the application, and it will instantiate the database to create the products

Database package:
                  This package has 2 class. Database object class for database constants and Sqlite Class for database creation and operations

Model package:
                  This package has 2 classes the Product class and the Cart class for representing the data
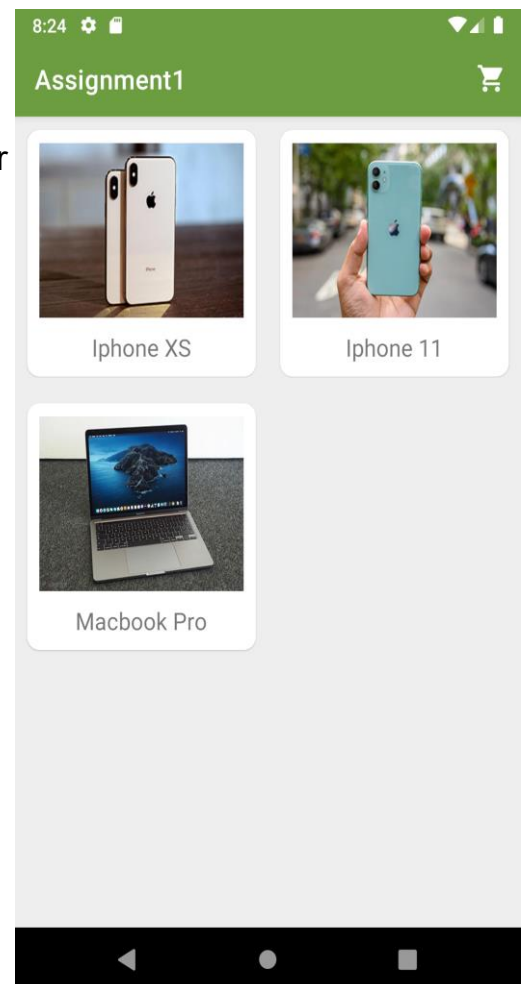
Products Activity:

This page shows all the products saved in the database. Design was built using constraint layout and recycler view inside it. Which has a gridview layout manger to show 2 products per row. Every product include the product image and product name. You have also the option to click on the product to show more details and
top button for showing the cart

Recycler View

Recycler View makes it simple to display enormous amounts of data. You provide the data and define how each item should appear, and the Recycler View library builds the elements as needed.
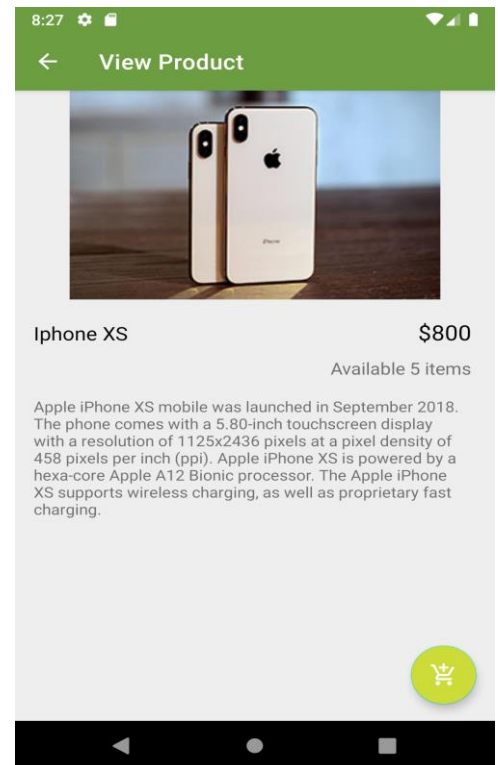
Grid view

Grid View is a view group that displays items in a two-dimensional scrolling grid (rows and columns). Grid elements are not predetermined and are automatically put into the layout using a ListAdapter. Users can then click on any grid item to pick it. We don't need to utilize ScrollView or anything else with GridView because it's scrollable by default.
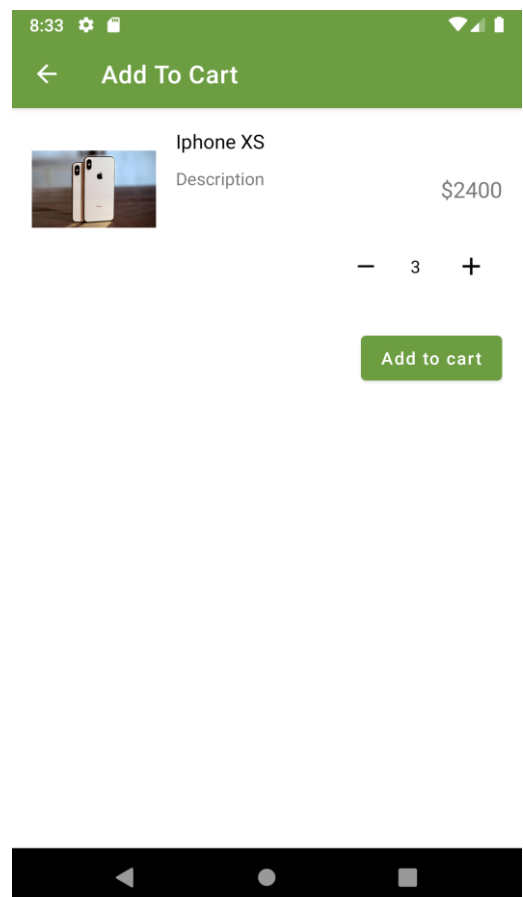
View Product Activity:

This page shows the full data for a product including name, image, price, quantity, and description. Also a button at the bottom to take you to add activity where you can add item to cart. Back button on the top to return back
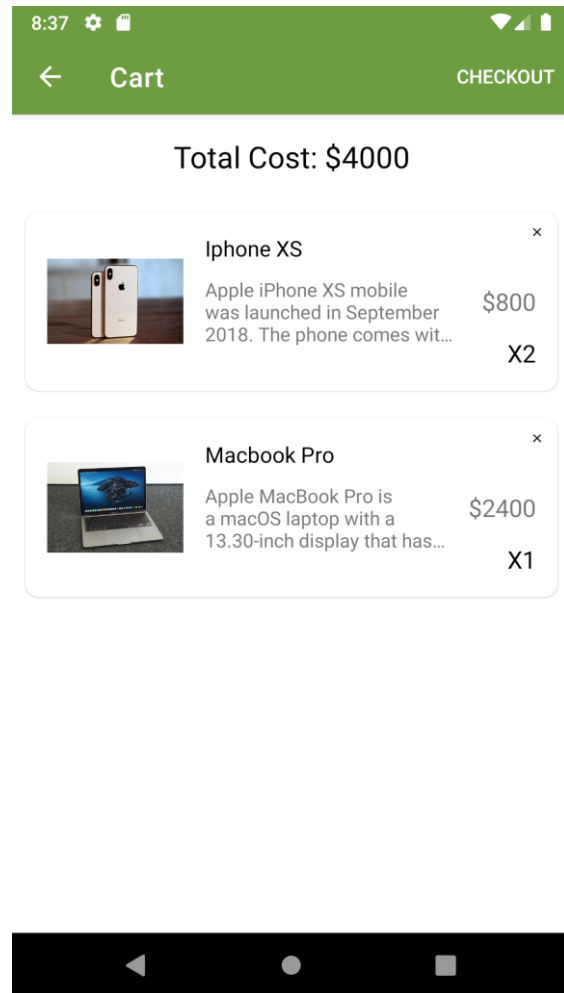

Add To Cart Activity:

This page is for adding a product to cart. You can click on the plus and minus button to increase / decrease the quantity you want to purchase. Also there is a validation on the quantity so max quantity depend on the quantity shown on prev page. For example here iphone XS quantity is 5. So the max you can purchase here is 5 items and finally add to cart button submits the time to the cart.

Cart Activity:

This page shows your cart items. Every item includes the name, image, a part from the description, total costs and quantity. Above it shows the total cost for all the items and checkout button to proceed for fake payment. Once you click it will clear your cart and it will say "Purchase completed"

SQlite database manager functions

fun insetProduct

insert product takes a product as a parameter and it inserts it into the products table

fun getProducts(): MutableList<Product>

get products function this function get all the products from products table and we add it in a mutable list and return it back as a return to the caller

fun addToCart(productId: Int, quantity: Int): Long

Add to cart function adds a product to cart table. It takes 2 parameters the product id and the quantity selected by the user, and it inserts the item in the cart table

fun getCartProducts():

get cart products function gets all the cart items in the table and also find the product for every card and it gets it's data from the products table

private fun getProduct(id: Int): Product

get product function finds only one product by id from the database so it takes the product id as a parameter and it looks for then use the cursor to get the product data in a model and return it back to the function caller as a return

fun deleteItemFromCart(id: Int):

delete item from cart take the cart id and it looks for that item in the database and it deletes it

fun clearCart()

clear cart is for wiping all the cart table items

override fun onCreate(db: SQLiteDatabase)

This override function gets called first time when we do any action on the database like inserting or retrieving any items so here, I'm creating the tables and inserting the products dummy data

DATABASE OBJECT

object Database

This class for all the database constants.
This is object class so we can easily call these constants from any where in the app

Research

https://kotlinlang.org/docs/functions.html#function-usage

https://developer.android.com/reference/android/widget/GridView

https://www.tutorialspoint.com/android/android_grid_view.htm