

GROCERY APP GROCERYAPP TITLE : To build an grocery app by using android.

SOFTWARE REQUIRED : android studio.2021.2.1 and some other tools. INTRODUCTION

: An online grocer is either a brick-and-mortar supermarket or grocery store that allows online ordering, or a standalone e-commerce service that includes grocery items. There is usually a delivery charge for this service. Brick-and-mortar supermarkets that have built internet channels to better service their clients are known as online grocers. Online grocery delivery services are available throughout Europe, Asia and North America, mostly in urban centers. The online ordering is done through e-commerce websites or mobile apps. The COVID-19 pandemic greatly accelerated the growth of online grocers, and in the first few months of the pandemic online grocery shopping increased by 300%. In addition, first-time online grocery shoppers accounted for 41 percent of online grocery shoppers. The epidemic of COVID-19 has hastened the uptake of online grocery shopping. Pre-COVID-19 food shopping activity accounted for 9 percent of the market, but 63 percent of consumers worldwide purchased more groceries online after the outbreak than they did before they were socially isolated. Most local online grocers have their own drivers. The most common type of personal delivery involves storing grocery inventory in a warehouse to deliver to customers once orders are placed. Another type of personal delivery which is less common is based on just-in-time business in which there is no warehouse or inventory. In this type of delivery, customers place orders for next-day delivery. The online grocer shops for the groceries on the morning of the delivery day. Some grocery fulfillment centers are set up as dark stores. Online-only grocers typically have warehouses or distribution centers nearby, to allow local shipping of refrigerated items. Online grocers with a large regional or national delivery area may ship groceries using courier services. If the order contains cold or frozen items, this involves "flash freezing" the goods and pack them into special shipping containers. Companies have experimented with automated delivery modes including drone delivery and robots. For instance, in Fall 2016 Washington, D.C. approved a trial run of rolling delivery drones produced by Starship Technologies. The earthbound robots are similar to wheeled coolers and carry around 40 pounds of groceries. Online grocery stores may allow facilitating local food which may reduce the environmental impact of food transport. Small-scale farmers have been embracing digital technologies as a way to sell produce directly, and community-supported agriculture and direct-sell delivery systems are on the rise during the coronavirus pandemic. Furthermore, weekly grocery deliveries can be a better choice than individual trips to a store. STEPS FOR THE PROJECT: STEP-1: Create a New Project To create a new project in Android Studio I refer to How to Create/Start a New Project in Android Studio. Note that select Java as the programming language. STEP-2 : Add dependency of Slider View in build.gradle file

Navigate to the Gradle scripts and then to build.gradle(Module) level. Add below line in build.gradle file in the dependencies section. CODE: // dependency for slider view implementation 'com.github.smarteist:autoimageslider:1.3.9' // dependency for loading image from url implementation "com.github.bumptech.glide:glide:4.11.0"

STEP-3 : Add internet permission in the AndroidManifest.xml file Navigate to the app > Manifest to open the Manifest file and add below two lines. CODE: STEP-4 : Working with the activity_main.xml file Go to the activity_main.xml file and refer to the following code. Below is the code for the activity_main.xml file. CODE FOR XML : STEP-5 : Create a new Modal class for storing data Navigate to app > Java > your app's package name and then right-click on it and New > Java class and name your Model class as SliderData and below code inside that Java class. Below is the code for the SliderData.java file. Comments are added inside the code to understand the code in more detail. CODE FOR JAVA :

```
public class SliderData { // image url is used to // store the url of image
    private String imgUrl; // Constructor method.
    public SliderData(String imgUrl) { this.imgUrl = imgUrl; } // Getter method
    public String getImgUrl() { return imgUrl; } // Setter method
    public void setImgUrl(String imgUrl) { this.imgUrl = imgUrl; } }
```

STEP - 6: Create an XML file for the items of SliderView Navigate to the app > res > layout > Right-click on it and select New > Layout Resource File and then name your XML file as slider_layout.xml. After creating this file add the below code to it. CODE FOR XML : STEP - 7: Create Adapter Class for setting data to each item of our SliderView Navigate to app > Java > your app's package name and then right-click on it and New > Java class and name your class as SliderAdapter and below code inside that Java class. Below is the code for the SliderAdapter.java file. Comments are added inside the code to understand the code in more detail. CODE FOR JAVA :

```
import android.content.Context;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ImageView;
import com.bumptech.glide.Glide;
import com.smarteist.autoimageslider.SliderViewAdapter;
import java.util.ArrayList;
import java.util.List;

public class SliderAdapter extends SliderViewAdapter { // list for storing urls of images.
    private final List mSliderItems; // Constructor
    public SliderAdapter(Context context, ArrayList sliderDataArrayList) { this.mSliderItems = sliderDataArrayList; } // We are inflating the slider_layout // inside on Create View Holder method.
    @Override public SliderAdapterViewHolder onCreateViewHolder(ViewGroup parent) { View inflate = LayoutInflater.from(parent.getContext()).inflate(R.layout.slider_layout, null); return new SliderAdapterViewHolder(inflate); } // Inside on bind view holder we will // set data to item of Slider View.
    @Override public void onBindViewHolder(SliderAdapterViewHolder viewHolder, final int position) { final SliderData sliderItem = mSliderItems.get(position);
```

```
// Glide is use to load image // from url in your image view.
Glide.with(viewHolder.itemView) .load(sliderItem.getImgUrl()) .fitCenter()
.into(viewHolder.imageViewBackground); } // this method will return // the count of our
list. @Override public int getCount() { return mSliderItems.size(); } static class
SliderAdapterViewHolder extends SliderViewAdapter.ViewHolder { // Adapter class for
initializing // the views of our slider view. View itemView; ImageView
imageViewBackground; public SliderAdapterViewHolder(View itemView) {
super(itemView); imageViewBackground = itemView.findViewById(R.id.myimage);
this.itemView = itemView; } } } STEP-8: Working with the MainActivity.java file Go to the
MainActivity.java file and refer to the following code. Below is the code for the
MainActivity.java file. Comments are added inside the code to understand the code in
more detail. CODE FOR JAVA : import android.os.Bundle; import
androidx.appcompat.app.AppCompatActivity; import
com.smarteist.autoimageslider.SliderView; import java.util.ArrayList; public class
MainActivity extends AppCompatActivity { // Urls of our images. String url1 =
"https://www.geeksforgeeks.org/wpcontent/uploads/gfg_200X200-1.png"; String url2 =
"https://qphs.fs.quoracdn.net/main-qimg8e203d34a6a56345f86f1a92570557ba.webp";
String url3 = "https://bizzbucket.co/wp-content/uploads/2020/08/Life-inThe-Metro-
Blog-Title-22.png"; @Override protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState); setContentView(R.layout.activity_main); // we are
creating array list for storing our image urls. ArrayList sliderDataArrayList = new
ArrayList<>(); // initializing the slider view. SliderView sliderView =
findViewById(R.id.slider); // adding the urls inside array list sliderDataArrayList.add(new
SliderData(url1)); sliderDataArrayList.add(new SliderData(url2));
sliderDataArrayList.add(new SliderData(url3)); // passing this array list inside our
adapter class. SliderAdapter adapter = new SliderAdapter(this, sliderDataArrayList); //
below method is used to set auto cycle direction in left to // right direction you can
change according to requirement.
sliderView.setAutoCycleDirection(SliderView.LAYOUT_DIRECTION_L TR); // below
method is used to // set adapter to slider-view. sliderView.setSliderAdapter(adapter); //
below method is use to set // scroll time in seconds. sliderView.setScrollTimeInSec(3);
// to set it scrollable automatically // we use below method.
sliderView.setAutoCycle(true); // to start auto cycle below method is used.
sliderView.startAutoCycle(); } } OUTPUT : 1.By opening app .if you have an account give
your mail and password. if you don't have an account click on sign up. 2. Then the app
will be 3. if we want Beverage then click on beverage . 4. Alternatively, if we want canned
then click on canned then the app will be 5. Alternatively, if we want condiment then
```

click on condiment 6. select the item we want then the payment will be 7. if we place order then