Screen 1 (2:45)

The Animals :

🔍

Panda | Frog

Raccoon | Cat

Screen 2 (2:48)

Animals Descrption

Cat

Cats are popular domestic pets known for their independence and various breeds.

Main Activity Stopped

Screen 3 (2:51)

The Animals :

F ✕

Frog | Fish

Screen 4 (2:43)

The Animals :

🔍

Panda | Frog

Raccoon | Cat

Main Activity Restarted

Screen 5 (2:54)

The Animals :

Ra ✕

Raccoon | Rabbit

Suggest contact names? Touch for info.

q w e r t y u i o p
a s d f g h j k l
z x c v b n m
?123 , .

Screen 6 (2:56)

Animals Descrption

Raccoon

Raccoons are small to medium-sized mammals with masked faces, known for their curiosity.

Main Activity Paused

MainActivity JAVA

```java
package com.example.labquiz2;
import android.widget.GridView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;
import androidx.appcompat.widget.SearchView;
import android.app.SearchManager;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
public class MainActivity extends AppCompatActivity {
    private Adapter animalAdapter;
    private GridView animalGridView;
    private static final String[] NamesOfAnimal = { "Panda", "Frog",
"Raccoon", "Cat", "Rabbit", "Dog", "Monkey", "Fish" };
    private static final int[] ImgId = { R.drawable.img1, R.drawable.img2,
R.drawable.img3, R.drawable.img4, R.drawable.img5, R.drawable.img6,
R.drawable.img7, R.drawable.img8 };
    private static final String[] Descriptions = { "Panda, a beloved symbol
of China, is known for its striking black and white fur and bamboo diet.",
                                         "Frogs are amphibians
with smooth, moist skin, famous for their croaking sounds.",
                                         "Raccoons are small to
medium-sized mammals with masked faces, known for their curiosity.",
                                         "Cats are popular
domestic pets known for their independence and various breeds.",
                                         "Rabbits are small
mammals with long ears and fluffy tails, commonly kept as pets.",
                                         "Dogs are known for
their loyalty and come in various breeds, serving as companions and working
animals.",
                                         "Monkeys are agile and
intelligent primates found in various species across the world.",
                                         "Fish are aquatic
vertebrates with gills, scales, and fins, playing vital roles in aquatic
ecosystems." };
    @Override
    protected void onStart() {
        super.onStart();
        displayMessage("Main Activity Started"); }
    @Override
    protected void onResume() {
        super.onResume();
        displayMessage("Main Activity Resumed"); }
    @Override
    protected void onPause() {
        super.onPause();
        displayMessage("Main Activity Paused"); }
    @Override
    protected void onStop() {
        super.onStop();
        displayMessage("Main Activity Stopped"); }
    @Override
    protected void onRestart() {
        super.onRestart();
        displayMessage("Main Activity Restarted"); }
    @Override
```

```java
    protected void onDestroy() {
        super.onDestroy();
        displayMessage("Main Activity Destroyed"); }
    private void displayMessage(String message) {
        Toast.makeText(this, message, Toast.LENGTH_LONG).show(); }

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        initializeActionBar();
        initializeGridView();
        initializeGridViewClickListener();
        SearchView customSearchView =
findViewById(R.id.custom_search_view);
        customSearchView.setSearchableInfo(
                ((SearchManager)
getSystemService(Context.SEARCH_SERVICE)).getSearchableInfo(getComponentNam
e()) );
        customSearchView.setOnQueryTextListener(new
SearchView.OnQueryTextListener() {
            @Override
            public boolean onQueryTextSubmit(String query) {
                return false; }
            @Override
            public boolean onQueryTextChange(String searchText) {
                animalAdapter.getFilter().filter(searchText);
                return true; } }); }
    private void initializeActionBar() {
        getSupportActionBar().setTitle("The Animals :"); }
    private void initializeGridView() {
        animalGridView = findViewById(R.id.grid_view);
        animalAdapter = new Adapter(this, NamesOfAnimal, ImgId);
        animalGridView.setAdapter(animalAdapter); }
    private void initializeGridViewClickListener() {
        animalGridView.setOnItemClickListener((parent, view, position, id)
-> { navigateToDescriptionActivity(position); }); }
    private void navigateToDescriptionActivity(int position) {
        Intent intent = new Intent(MainActivity.this, Descreption.class);
        try {
            if (animalAdapter.realIds.isEmpty() == false){
                position = animalAdapter.realIds.get(position);
            }
        }
        catch (Exception e) {}


        String namesOfAnimal = NamesOfAnimal[position];
        int imgId = ImgId[position];
        String descriptions = Descriptions[position];
        Bundle extras = new Bundle();
        extras.putString("name", namesOfAnimal);
        extras.putInt("image", imgId);
        extras.putString("description", descriptions);
        intent.putExtras(extras);
        startActivity(intent);
    }

}
```

Adapter JAVA

```java
package com.example.labquiz2;
import android.content.Context;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.Filter;
import android.widget.Filterable;
import android.widget.ImageView;
import android.widget.TextView;
import java.util.Arrays;
import java.util.ArrayList;
import java.util.List;
public class Adapter extends BaseAdapter implements Filterable {
    private Context c;
    private final String[] names;
    private String[] fNames;
    private final int[] imgId;
    private int[] fImgId;
    public List<Integer> realIds;
    public Adapter(Context context, String[] animalNames, int[] imageIds) {
        this.c = context;
        this.names = animalNames;
        this.imgId = imageIds;
        this.fNames = animalNames.clone();
        this.fImgId = imageIds.clone();
        this.flater = LayoutInflater.from(c); }

    @Override
    public int getCount() {
        return fNames.length;
    }
    @Override
    public Object getItem(int position) {
        return fNames[position];
    }
    @Override
    public long getItemId(int position) {
        return position;
    }

    private LayoutInflater flater;
    @Override
    public View getView(int position, View convertView, ViewGroup parent) {
        ViewHolder holder;
        if (convertView == null) {
            convertView = flater.inflate(R.layout.items, null);
            holder = new ViewHolder();
            holder.textView = convertView.findViewById(R.id.textView);
            holder.imageView = convertView.findViewById(R.id.imageView);
            convertView.setTag(holder); } else {
            holder = (ViewHolder) convertView.getTag(); }
        holder.textView.setText(fNames[position]);
        holder.imageView.setImageResource(fImgId[position]);
        return convertView; }
```

```java
    private static class ViewHolder {
        TextView textView;
        ImageView imageView;    }

    private AnimalFilter filter;
    @Override
    public Filter getFilter() {
        if (filter == null) {
            filter = new AnimalFilter(); }
        return filter; }

    private class AnimalFilter extends Filter {
        @Override
        protected FilterResults performFiltering(CharSequence charSequence)
{
            List<String> filteredList = filterList(charSequence);
            FilterResults results = new FilterResults();
            results.values = filteredList.toArray(new String[0]);
            results.count = filteredList.size();
            return results; }

        @Override
        protected void publishResults(CharSequence charSequence,
FilterResults filterResults) {
            applyFilter((String[]) filterResults.values); }
        private List<String> filterList(CharSequence charSequence) {
            List<String> filteredList = new ArrayList<>();

            String filterString = charSequence.toString().toLowerCase();
            List<Integer> filteredImagesList = new ArrayList<>();
            realIds = new ArrayList<>();
            for (int i = 0; i < names.length; i++) {
                if (charSequence == null || charSequence.length() == 0 ||
names[i].toLowerCase().contains(filterString)) {
                    realIds.add(i);
                    filteredList.add(names[i]);
                    filteredImagesList.add(imgId[i]);   } }
            fImgId = new int[filteredImagesList.size()];
            for (int i = 0; i < filteredImagesList.size(); i++) {
                fImgId[i] = filteredImagesList.get(i); }
            return filteredList; }
        private void applyFilter(String[] filteredNames) {
            fNames = filteredNames;
            notifyDataSetChanged();} }
}
```

Descreption JAVA

```java
package com.example.labquiz2;
import android.content.Intent;
import android.os.Bundle;
import android.widget.ImageView;
import android.widget.TextView;
import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
public class Descreption extends AppCompatActivity {
```

```java
    @Override
    protected void onCreate(@Nullable Bundle savedInstanceState) {
        getSupportActionBar().setTitle("Animals Descrption");
        super.onCreate(savedInstanceState);
        setContentView(R.layout.descriptions);
        Intent intent = getIntent();
        String animalName = intent.getStringExtra("name");
        int animalImageId = intent.getIntExtra("image", 0);
        String animalDescription = intent.getStringExtra("description");
        ImageView imageView = findViewById(R.id.img);
        TextView nameTextView = findViewById(R.id.name);
        TextView descriptionTextView = findViewById(R.id.description);
        imageView.setImageResource(animalImageId);
        nameTextView.setText(animalName);
        descriptionTextView.setText(animalDescription);
    }
}
```

activity_main XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <androidx.appcompat.widget.SearchView
        android:id="@+id/custom_search_view"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:layout_marginEnd="16dp"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintEnd_toEndOf="parent" />
    <GridView
        android:id="@+id/grid_view"
        android:layout_width="0dp"
        android:layout_height="0dp"
        android:layout_marginStart="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginTop="64dp"
        android:layout_marginEnd="16dp"
    android:layout_marginRight="16dp"
    android:layout_marginBottom="16dp"
    android:numColumns="2"
    android:stretchMode="columnWidth"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

description XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center_horizontal"
    android:padding="16dp">
    <TextView
        android:id="@+id/name"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="40sp"
        android:paddingTop="20dp" />
    <TextView
        android:id="@+id/description"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="25sp"
        android:textAlignment="center"
        android:paddingTop="30dp"
        android:paddingBottom="16dp" />
    <ImageView
        android:id="@+id/img"
        android:layout_width="260dp"
        android:layout_height="190dp"
        android:layout_weight="1"
        android:contentDescription="@string/animal_image"
        android:layout_marginTop="32dp"
        android:scaleType="centerCrop" />
</LinearLayout>
```

items XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:padding="5dp">
    <ImageView
        android:id="@+id/imageView"
        android:layout_width="160dp"
        android:layout_height="160dp"
        android:scaleType="centerCrop" />
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:textSize="20sp"
        android:layout_marginTop="8dp" />
</LinearLayout>
```

menu_main XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto">
    <item
        android:id="@+id/action_search"
        android:icon="@android:drawable/ic_menu_search"
        android:title="@string/search"
        app:showAsAction="never"
        app:actionViewClass="androidx.appcompat.widget.SearchView" />
</menu>
```