

CameraApp.txt

``Project 6 : Camera App``

1. AndroidManifest.xml :

```
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>
```

2. shape_btn.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="rectangle">
    <corners android:radius="10px"/>
    <solid android:color="#C2F4C4"/>
    <stroke android:width="2dp" android:color="#040404" />
</shape>
```

3. activity_camera_app.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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".cameraApp">
```

```
<ImageView
    android:id="@+id/imagePlate"
    android:layout_width="419dp"
    android:layout_height="526dp"
    android:background="@drawable/shape_btn"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.0" />
```

```
<Button
    android:layout_width="141dp"
    android:layout_height="59dp"
    android:gravity="center"
    android:onClick="showMyCamera"
    android:text="Click & Save"
    android:textColor="#FFFFFF"
    android:textSize="17dpp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.174"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.904" />
```

```
<Button
```

```

        android:layout_width="108dp"
        android:layout_height="54dp"
        android:layout_marginTop="16dp"
        android:gravity="center"
        android:text="Back"
        android:textColor="@color/white"
        android:textSize="17dp"
        android:textStyle="bold"
        android:onClick="cameraApp_to_mainMenu"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.788"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="@+id/imagePlate"
        app:layout_constraintVertical_bias="0.895" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

4. cameraApp.java :

```

package com.example.assignmenthub;

import android.Manifest;
import android.content.Intent;
import android.view.View;
import android.content.pm.PackageManager;
import android.graphics.Bitmap;
import android.net.Uri;
import android.os.Bundle;
import android.os.Environment;
import android.provider.MediaStore;
import android.util.Log;
import android.widget.ImageView;
import android.widget.Toast;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import androidx.core.content.ContextCompat;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import java.io.File;
import java.io.FileOutputStream;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Locale;
import java.util.Objects;

public class cameraApp extends AppCompatActivity {

    ImageView imageView;
    Bitmap bitmap;
    public static final int CAMERA_REQUEST=9999;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_camera_app);
    }

```

```

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
    Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
    v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
    return insets;
});

imageView=(ImageView) findViewById(R.id.imagePlate);
if (ContextCompat.checkSelfPermission(this, Manifest.permission.CAMERA)
    == PackageManager.PERMISSION_DENIED)
    ActivityCompat.requestPermissions(cameraApp.this, new String[]
        {Manifest.permission.CAMERA}, CAMERA_REQUEST);
}

protected void onActivityResult(int requestCode, int resultCode, Intent data){
    super.onActivityResult(requestCode,resultCode,data);
    if(requestCode==CAMERA_REQUEST){
        bitmap=(Bitmap) Objects.requireNonNull(data.getExtras()).get("data");
        imageView.setImageBitmap(bitmap);
        Toast.makeText(this,"Before save image",Toast.LENGTH_LONG).show();
        Log.d("Image Save","Hello image saved1");
        saveImageToGallery(bitmap);
        Toast.makeText(this,"After save image",Toast.LENGTH_LONG).show();
        Log.d("Image Save","Hello image saved2");
    }
    Log.d("Image Save","Hello image saved201");
}

public void showMyCamera(View v){
    Intent intent=new Intent(MediaStore.ACTION_IMAGE_CAPTURE);
    startActivityForResult(intent,CAMERA_REQUEST);
}

public void saveImageToGallery(Bitmap imageBitmap){
    File storageDir =
        Environment.getExternalStoragePublicDirectory(Environment.DIRECTORY_PICTURES);
    String timeStamp=new SimpleDateFormat("yyyyMMdd_HH:mm:ss",
        Locale.getDefault()).format(new Date());
    String fileName="MyImg_"+timeStamp+".jpg";
    File imageFile=new File(storageDir,fileName);
    try{
        FileOutputStream outputStream=new FileOutputStream(imageFile);

        imageBitmap.compress(Bitmap.CompressFormat.JPEG,100,outputStream);
        bitmap.compress(Bitmap.CompressFormat.JPEG,100,outputStream);
        outputStream.flush();
        outputStream.close();

        Intent mediaScanIntent=new
            Intent(Intent.ACTION_MEDIA_SCANNER_SCAN_FILE);

        mediaScanIntent.setData(Uri.fromFile(imageFile));
        sendBroadcast(mediaScanIntent);

        Toast.makeText(this,"Image saved to gallery",Toast.LENGTH_LONG).show();

    }catch (Exception e){
        Log.d("Exception Image", Objects.requireNonNull(e.getMessage()));

        Toast.makeText(this,"Unable to Image saved to gallery",Toast.LENGTH_LONG).show();
    }
}

```

```
    }  
}
```

```
public void cameraApp_to_mainMenu ( View v ){  
    Intent back = new Intent(this , AssignmentPrompt.class);  
    startActivity(back);  
  
    Toast.makeText(this, "Back to Assignment Hub", Toast.LENGTH_SHORT).show();  
}  
  
}
```