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Practical Related Questions

1. List all the methods related to camera class.

Sr.No	Activity function description
1	**startActivityForResult(Intent intent, int requestCode, Bundle options)** It starts an activity , but can take extra bundle of options with it
2	**startActivityFromChild(Activity child, Intent intent, int requestCode)** It launch the activity when your activity is child of any other activity
3	**startActivityFromChild(Activity child, Intent intent, int requestCode, Bundle options)** It work same as above , but it can take extra values in the shape of bundle with it
4	**startActivityFromFragment(Fragment fragment, Intent intent, int requestCode)** It launches activity from the fragment you are currently inside
5	**startActivityFromFragment(Fragment fragment, Intent intent, int requestCode, Bundle options)** It not only launches the activity from the fragment , but can take extra values with it

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Exercise

MainActivity.java

```java
package com.example.cameracentricapp;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.graphics.Bitmap;
import android.net.Uri;
import android.os.Build;
import android.os.Bundle;
import android.os.Environment;
import android.provider.MediaStore;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.MediaController;
import android.widget.Toast;
import android.widget.VideoView;

import java.io.File;

public class MainActivity extends AppCompatActivity {

    private ImageView imgvw;
    private Button captureBtn, videoBtn;
    private VideoView videovw;
    private static final int Image_Capture_Code = 1;
    private static final int VIDEO_CAPTURE = 101;
    Uri videoUri;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        imgvw = (ImageView) findViewById(R.id.imageView);
        captureBtn = (Button) findViewById(R.id.button);
        videoBtn = (Button) findViewById(R.id.button2);
        videovw = (VideoView) findViewById(R.id.videoView);

        MediaController mediaController= new MediaController(this);
        mediaController.setAnchorView(videovw);
        videovw.setMediaController(mediaController);


        captureBtn.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view){
                Intent cam = new Intent(MediaStore.ACTION_IMAGE_CAPTURE);
                startActivityForResult(cam, Image_Capture_Code);
            }
```

```java
        });
        videoBtn.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View view){
                File mediaFile =
                        new File(Environment.getExternalStorageDirectory()
                                + "/myvideo.mp4");
                if (Build.VERSION.SDK_INT < 24) {
                    videoUri = Uri.fromFile(mediaFile);
                } else {
                    videoUri = Uri.parse(mediaFile.getPath()); // My work-around for
new SDKs, worked for me in Android 10 using Solid Explorer Text Editor as the
external editor.
                }

                Intent cam = new Intent(MediaStore.ACTION_VIDEO_CAPTURE);

                cam.putExtra(MediaStore.EXTRA_OUTPUT, videoUri);
                startActivityForResult(cam, VIDEO_CAPTURE);
            }
        });
    }
    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data){
        super.onActivityResult(requestCode, resultCode, data);

        if(requestCode == Image_Capture_Code){
            if(resultCode == RESULT_OK){
                videovw.setVisibility(View.INVISIBLE);
                Bitmap bp = (Bitmap) data.getExtras().get("data");
                imgvw.setVisibility(View.VISIBLE);
                imgvw.setImageBitmap(bp);
            }
            else if(resultCode == RESULT_CANCELED){
                imgvw.setVisibility(View.INVISIBLE);
                videovw.setVisibility(View.INVISIBLE);
                Toast.makeText(this, "Cancelled", Toast.LENGTH_LONG).show();
            }
        }
        else if(requestCode == VIDEO_CAPTURE){
            if(resultCode == RESULT_OK){
                videovw.setVisibility(View.VISIBLE);
                imgvw.setVisibility(View.INVISIBLE);
                videovw.setVideoURI(videoUri);

                videovw.start();
            }
            else if(resultCode == RESULT_CANCELED){
                imgvw.setVisibility(View.INVISIBLE);
                videovw.setVisibility(View.INVISIBLE);
                Toast.makeText(this, "Cancelled", Toast.LENGTH_LONG).show();
            }
        }
    }
}
```

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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">

    <Button
        android:id="@+id/button"
        android:layout_width="171dp"
        android:layout_height="65dp"
        android:text="Take Picture"
        app:layout_constraintBottom_toTopOf="@+id/button2"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/imageView" />

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="275dp"
        android:layout_height="280dp"
        android:visibility="invisible"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        tools:layout_editor_absoluteY="140dp"
        tools:srcCompat="@tools:sample/avatars" />

    <Button
        android:id="@+id/button2"
        android:layout_width="169dp"
        android:layout_height="55dp"
        android:layout_marginBottom="32dp"
        android:text="Capture Video"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.504"
        app:layout_constraintStart_toStartOf="parent" />

    <VideoView
        android:id="@+id/videoView"
        android:layout_width="295dp"
        android:layout_height="298dp"
        android:visibility="invisible"
        app:layout_constraintBottom_toTopOf="@+id/button"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.653" />
</androidx.constraintlayout.widget.ConstraintLayout>
```