

# ANDROID DEVELOPMENT – S5

LISBON, FEBRUARY 2025

ERASMUS+



# CAMERAX

CameraX is a Jetpack library, built to help make camera app development easier.

*(Jetpack is a suite of libraries to help developers follow best practices, reduce boilerplate code, and write code that works consistently across Android versions and devices so that developers can focus on the code they care about.)*



CameraX

# CAMERAX

Adding  
Permission in  
Manifest

Adding  
Dependencies

Adding  
Camera View  
in Layout

Setting up  
CameraX in  
Activity

# ADDING PERMISSION IN MANIFEST

1. Open `AndroidManifest.xml` and add these lines before the `application` tag.

```
<uses-feature android:name="android.hardware.camera.any"/>
<uses-permission android:name="android.permission.CAMERA"/>
<uses-permission android:name="android.permission.RECORD_AUDIO"/>
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>
<uses-permission android:name="android.permission.READ_EXTERNAL_STORAGE" />
```

# ADDING DEPENDENCIES

- build.gradle.kts (app)

```
// CameraX core library using the camera2 implementation
val camerax_version = "1.4.1"
implementation("androidx.camera:camera-core:${camerax_version}")
implementation("androidx.camera:camera-camera2:${camerax_version}")
implementation("androidx.camera:camera-lifecycle:${camerax_version}")
implementation("androidx.camera:camera-view:${camerax_version}")
}
```

```
// Camerax implementation
implementation(libs.camera.core)
implementation(libs.camera.camera2)
implementation(libs.camera.view)
implementation(libs.camera.lifecycle)
// Camerax implementation
```

# ADDING CAMERA VIEW IN LAYOUT

```
<androidx.camera.view.PreviewView  
    android:id="@+id/previewView"  
    android:layout_width="300dp"  
    android:layout_height="0dp"  
    android:layout_marginTop="50dp"  
    android:layout_marginBottom="168dp"  
    app:layout_constraintBottom_toTopOf="@+id/captureButton"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toTopOf="parent" />
```

## SETTING UP CAMERAX IN ACTIVITY (1/2)

```
//Get the id of the PreviewView.  
previewView = findViewById(R.id.previewView);  
  
ListenableFuture<ProcessCameraProvider> cameraProviderFuture = ProcessCameraProvider.getInstance(this);  
  
cameraProviderFuture.addListener(() -> {  
    try {  
        ProcessCameraProvider cameraProvider = cameraProviderFuture.get();  
        bindCameraToLifecycle(cameraProvider, previewView);  
    } catch (ExecutionException | InterruptedException e) {  
        e.printStackTrace();  
    }  
}, ContextCompat.getMainExecutor(this)) ;
```

## SETTING UP CAMERAX IN ACTIVITY (2/2)

```
private void bindCameraToLifecycle(ProcessCameraProvider cameraProvider, PreviewView previewView) {  
    Preview preview = new Preview.Builder().build();  
    preview.setSurfaceProvider(previewView.getSurfaceProvider());  
    CameraSelector cameraSelector = new CameraSelector.Builder()  
        .requireLensFacing(CameraSelector.LENS_FACING_BACK)  
        .build();  
    cameraProvider.bindToLifecycle(this, cameraSelector, preview);  
}
```





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THANK YOU

OBRIGADO

SEE YOU TOMORROW!