

## Permissions-demo

In build.gradle (app)

Define target SDK >23 (I choose 29) support down to 15 or so

bummer about importing the snackbar

Add the following packages to

build.gradle (app)

**dependencies {**

**implementation 'androidx.appcompat:appcompat:1.1.0'**

implementation 'androidx.constraintlayout:constraintlayout:1.1.3'

implementation 'com.google.android.material:material:1.1.0'

**}**

In manifest ask for permission

**<uses-permission android:name="android.permission.CAMERA"/>**

in mainactivity.xml give the main layout an ID

**android:id="@+id/main\_layout"**

add a start camera button and an onClick listener (doCamera) for it

alt enter to create doCamera in main

in MainActivity.java

mainactivity should

**implements ActivityCompat.OnRequestPermissionsResultCallback**

**In onCreate(..)**

**mLayout = findViewById(R.id.main\_layout);**

add a couple of member vars to the Activity

//ID for a permission request,

**private static final int PERMISSION\_REQUEST\_CAMERA = 0;**

//layout that I'm going to replace with a camera view (BTW I'm cheating here, I'm going to use an intent to ask for the camera, that app will run under that apps permissions)

**private View mLayout;**

**algorithm**

**click button showcamera preview which checks permissions**

**if you have em then start the camera**

**else**

**request camera permissions**

**private void showCameraPreview() {**

```

// BEGIN_INCLUDE(startCamera)
// Check if the Camera permission has been granted
if (ActivityCompat.checkSelfPermission(this, Manifest.permission.CAMERA)
    == PackageManager.PERMISSION_GRANTED) {
    // Permission is already available, start camera preview
    Snackbar.make(mLayout,
        R.string.camera_permission_available,
        Snackbar.LENGTH_SHORT).show();
    startCamera();
} else {
    // Permission is missing and must be requested.
    requestCameraPermission();
}
// END_INCLUDE(startCamera)
}

```

## requestCameraPermission

sees if you denied permission before, if so it tells you why its needed  
then it requests camera permissions (pops up a dialog)

```

private void requestCameraPermission() {
    // Permission has not been granted and must be requested.
    if (ActivityCompat.shouldShowRequestPermissionRationale(this,
        Manifest.permission.CAMERA)) {
        // Provide an additional rationale to the user if the permission was not granted
        // and the user would benefit from additional context for the use of the permission.
        // Display a Snackbar with cda button to request the missing permission.
        Snackbar.make(mLayout, R.string.camera_access_required,
            Snackbar.LENGTH_INDEFINITE).setAction(R.string.ok, new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // Request the permission
                ActivityCompat.requestPermissions(MainActivity.this,
                    new String[]{Manifest.permission.CAMERA}, PERMISSION_REQUEST_CAMERA);
            }
        }).show();
    } else {
        Snackbar.make(mLayout, R.string.camera_unavailable, Snackbar.LENGTH_SHORT).show();
        // Request the permission. The result will be received in onRequestPermissionsResult().
        ActivityCompat.requestPermissions(this,
            new String[]{Manifest.permission.CAMERA}, PERMISSION_REQUEST_CAMERA);
    }
}
}

```

the app goes on, the user interacts with the permissions dialog with a yes or no  
Which calls back into our apps mainactivity

```

public void onRequestPermissionsResult(int requestCode, @NonNull String[] permissions,
    @NonNull int[] grantResults) {
    // BEGIN_INCLUDE(onRequestPermissionsResult)
    if (requestCode == PERMISSION_REQUEST_CAMERA) {
        // Request for camera permission.
        if (grantResults.length == 1 && grantResults[0] == PackageManager.PERMISSION_GRANTED) {
            // Permission has been granted. Start camera preview Activity.
            Snackbar.make(mLayout, R.string.camera_permission_granted,
                Snackbar.LENGTH_SHORT)
                .show();
            startCamera();
        } else {
            // Permission request was denied.
            Snackbar.make(mLayout, R.string.camera_permission_denied,
                Snackbar.LENGTH_SHORT)
                .show();
        }
    }
    // END_INCLUDE(onRequestPermissionsResult)
}
}

```