Practical 8: To implement concept of permission and perform request for permission to access different hardware components of mobile.

Code:

```kotlin
class MainActivity : AppCompatActivity()
{


    val CAMERA_CODE = 1
    val STORAGE_CODE = 2
    val GPS_CODE = 3
    override fun onRequestPermissionsResult(requestCode: Int,
permissions: Array<String>, grantResults: IntArray)
    {
        super.onRequestPermissionsResult(requestCode, permissions,
grantResults)

        if (requestCode == CAMERA_CODE) {
            if (grantResults.isNotEmpty() && grantResults[0] ==
PackageManager.PERMISSION_GRANTED)
            {
                Toast.makeText(this,"Camera Permission
Granted",Toast.LENGTH_SHORT).show()
            }
            else{
                Toast.makeText(this,"Camera Permission not
Granted",Toast.LENGTH_SHORT).show()
            }
        }

        if (requestCode == STORAGE_CODE)
        {
            if (grantResults.isNotEmpty() && grantResults[0] ==
PackageManager.PERMISSION_GRANTED)
            {
                Toast.makeText(this,"Storage Permission
Granted",Toast.LENGTH_SHORT).show()
            }
        }

        if (requestCode == GPS_CODE)
        {
            if (grantResults.isNotEmpty() && grantResults[0] ==
PackageManager.PERMISSION_GRANTED)
            {
                Toast.makeText(this,"GPS Permission
Granted",Toast.LENGTH_SHORT).show()
            }
        }


    }

    override fun onCreate(savedInstanceState: Bundle?)
    {
```

```kotlin
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)


        storageBtn.setOnClickListener {
checkPermission(Manifest.permission.WRITE_EXTERNAL_STORAGE,STORAGE_CODE
) }

        gpsBtn.setOnClickListener {
checkPermission(Manifest.permission.ACCESS_COARSE_LOCATION,GPS_CODE) }

        }

    fun checkPermission(permission:String,requestCode: Int)
    {
        if (ContextCompat.checkSelfPermission(this, permission) ==
PackageManager.PERMISSION_DENIED)
        {
            ActivityCompat.requestPermissions(this,
arrayOf(permission),requestCode)
        }else {
            Toast.makeText(this,"Permission already
granted",Toast.LENGTH_SHORT).show()
        }
    }



}
```
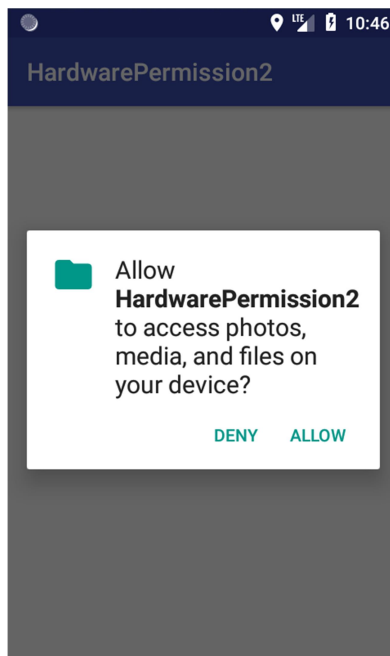
Output 1:

Output 2: