



Izrada aplikacija za mobilne uređaje

Aplikacijske dozvole i pristup
sistemskim servisima

Teme

- Pozivi i poruke
- Dozvole u AndroidManifest
- *Runtime* dozvole
- Pristup sistemskim servisima

Pozivi

Indirektno

- prikaz aktivnosti za poziv (ne treba dozvola)

```
Intent(Intent.ACTION_DIAL, Uri.parse("tel:" + etNumber.text.toString().trim())).apply {  
    startActivity(this)  
}
```

Pozivi

Direktno

- potrebna dozvola *android.permission.CALL_PHONE* u *AndroidManifest*
- potrebna *runtime* dozvola

```
if (ActivityCompat.checkSelfPermission(this, Manifest.permission.CALL_PHONE) != PackageManager.PERMISSION_GRANTED) {  
    ActivityCompat.requestPermissions(  
        this,  
        arrayOf(Manifest.permission.CALL_PHONE),  
        PHONE_REQ  
    )  
    return  
}  
Intent(Intent.ACTION_CALL, Uri.parse("tel:" + etNumber.text.toString().trim())).apply {  
    startActivity(this)  
}
```

SMS

1. Indirektno

- prikaz aktivnosti za sms(ne treba dozvola)

```
Intent(Intent(Intent.ACTION_SENDTO, Uri.parse("smsto:" + etNumber.text.toString().trim()))).apply {  
    putExtra("sms_body", etMessage.text.toString().trim())  
    startActivity(this)  
}
```

SMS

Direktno

- potrebna dozvola *android.permission.SEND_SMS* u *AndroidManifest*
- potrebna *runtime* dozvola

```
if (ActivityCompat.checkSelfPermission(this, Manifest.permission.SEND_SMS) != PackageManager.PERMISSION_GRANTED) {
    ActivityCompat.requestPermissions(
        this,
        arrayOf(Manifest.permission.SEND_SMS),
        SMS_REQ
    )
    return
}
SmsManager.getDefault().apply { sendTextMessage(
    etNumber.text.toString().trim(),
    null,
    etMessage.text.toString().trim(),
    null,
    null
)
}
```

Runtime dozvole

- Od verzije 5.0 (Lollipop)
- Obavezne restrikcije od verzije 6.0 (Marshmallow)

```
override fun onRequestPermissionsResult(requestCode: Int, permissions: Array<String?>, grantResults: IntArray) {  
    when {  
        PHONE_REQ == requestCode && grantResults.isNotEmpty() && grantResults[0] == PackageManager.PERMISSION_GRANTED  
        -> callDirect()  
        SMS_REQ == requestCode && grantResults.isNotEmpty() && grantResults[0] == PackageManager.PERMISSION_GRANTED  
        -> smsDirect()  
    }  
}
```

Sistemiški servisi

- Pristup servisima omogućuje pristup hardveru
 - InputMethodManager
 - TelephonyManager
 - ConnectivityManager
 - NotificationManager
 - AlarmManager
 - ...

TelephonyManager

- Informacije o
 - Vrsti i identifikatoru uređaja
 - Vrsti mreže, operateru i državi
 - SIM kartici
 - Podatkovnom prometu
 - Promjeni stanja

```
var telephonyManager = getSystemService(TELEPHONY_SERVICE) as TelephonyManager
```

TelephonyManager

// vrsta uređaja

telephonyManager.**phoneType**

TelephonyManager.PHONE_TYPE_GSM

TelephonyManager.PHONE_TYPE_CDMA

TelephonyManager.PHONE_TYPE_SIP

TelephonyManager.PHONE_TYPE_NONE

ConnectivityManager

```
fun Context.isOnline(): Boolean {  
    val cm = getSystemService(Context.CONNECTIVITY_SERVICE) as ConnectivityManager  
    val n = cm.activeNetwork  
    if (n != null) {  
        val nc = cm.getNetworkCapabilities(n)  
        return nc!!.hasTransport(NetworkCapabilities.TRANSPORT_CELLULAR)  
            || nc.hasTransport(NetworkCapabilities.TRANSPORT_WIFI)  
    }  
    return false  
}
```

Demo

- Permissions app



<http://www.jnhsolutions.com/contact-us/request-a-demo/>

Hvala na pažnji!

