#### KIV/MKZ Cvičení 4, 2016, v2 L. Pešička



- Notifikace události
- Shared Preferences
- Webview
- Interní úložiště
- Interní úložiště, cache
- Externí úložiště

• Přístup k souborům - ladění

# SCREENSHOT, POUŽITÉ PRVKY

			Ş 🛔					
्चि। Cviceni4a								
MKZ 4. cvičení								
Notifikuj	Notifikuj Ulož Načti Zobraz							
Zadej data								
Uložená data								
WebView								

Původní relativní layout smažeme a použijeme lineární layout

🗄 Outline	83	
⊿ 📃 Line	arL	ayout
Ab t	text	View1 - "MKZ 4. cvičení"
⊿ 🔲	Line	earLayout
	ок	button1 - "Notifikuj"
(	ок	button2 - "Ulož"
(	ок	button3 - "Načti"
(	ок	button4 - "Zobraz"
I	edit	Text1
I	edit	Text2
<b>(</b> )	web	oView1



<?xml version="1.0" encoding="utf-8"?> <resources>

<string name="app\_name">Cviceni4a</string> <string name="action\_settings">Settings</string> <string name="hello\_world">Hello world!</string> <string name="nadpis">MKZ 4. cvičeni</string> <string name="tlacitko\_Notifikuj">Notifikuj</string> <string name="hint\_ZadejData">Zadej data</string> <string name="hint UlozenaData">Uložená data</string> <string name="tlacitko\_Uloz">Ulož</string> <string name="tlacitko\_Nacti">Načti</string> <string name="tlacitko\_Zobraz">Zobraz</string> </resources>



# v designeru najdeme mezi Widgets právo přístupu na Internet do manifestu: (před Application)

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

#### • Otevře nové okno, co s tím:

http://stackoverflow.com/questions/5561709/openingwebview-not-in-new-browser

## WEBVIEW - NAČTENÍ URL, ZOBRAZENÍ TEXTU

• načtení URL:

public void tlacitko\_Zobraz (View v) {
 WebView prohlizec = (WebView) findViewById(R.id.webView);
 prohlizec.loadUrl("http://m.idnes.cz");
 }

#### • zobrazení lokálního textu HTML:

prohlizec.loadData("<html><body><h1>Ahoj,</h1>
svete!</body></html>","text/html" ,"UTF-8");

## SPUŠTĚNÍ PROHLÍŽEČE MÍSTO WEBVIEW

public void tlacitko\_Zobraz (View v) {

Uri uri = Uri.parse("http://m.idnes.cz"); Intent intent = new Intent(Intent.ACTION\_VIEW, uri);

startActivity(intent);

}

## OBSLUHA NOTIFIKACE

```
public void tlacitko_Notifikuj (View v) {
  int N_ID = 55;
  Notification n;
  NotificationCompat.Builder builder = new NotificationCompat.Builder(this);
  n = builder
    .setContentTitle("titulek")
    .setContentText("text")
    .setSmalllcon(R.drawable.robot)
    .build();
```

```
n.defaults |= Notification.DEFAULT_SOUND;
```

```
NotificationManager notificationManager =
```

```
(NotificationManager) this.getSystemService(this.NOTIFICATION_SERVICE);
```

```
notificationManager.notify(N_ID, n);
```

}

### PENDING INTENT

přidáme do obsluhy tlacitko\_Notifikuj():

final Intent emptyIntent = new Intent();
PendingIntent pi = PendingIntent.getActivity(this, 0,
 emptyIntent, PendingIntent.FLAG\_UPDATE\_CURRENT);

n = builder

.setContentTitle("titulek").setContentText("text")

.setSmallIcon(R.drawable.ic\_launcher)

.setContentIntent(pi)

.build();

## ID NOTIFIKACE

 Při opakovaném stisknutí tlačítka stále jen jedna notifikace (N\_ID 55)

 Vyzkoušejte, aby každé stisknutí tlačítka vytvořilo další notifikaci
 zvětšovat ID notifikace

 two different apps can use the same notification id, it will spawn 2 different notifications without issue. the system look at both the id & the app where it comes from.



Přidáním do Builderu:

.setAutoCancel(true)

Po kliknutí notifikace zmizí, nezůstane v seznamu notifikací

## ČÍSLO + NOTIFIKACE

- Dále možnost zobrazit číslo s notifikací (např. počet nepřečtených zpráv)
- => .setNumber(pocitadlo)

n = builder

.setContentTitle("titulek").setContentText("text")
 .setSmallIcon(R.drawable.ic\_launcher)
 .setContentIntent(pi).setNumber(pocitadlo)
 .build();





 Modifikujte notifikaci tak, aby se po kliknutí na notifikace otevřel webový prohlížeč se stránkou m.idnes.cz

 Modifikujte notifikaci tak, aby po každém kliknutí přibyla další notifikace

int notCislo = 0; notCislo++

## SDÍLENÉ PREFERENCE - ULOŽENÍ

public void tlacitko\_Uloz (View v) {

SharedPreferences settings = getSharedPreferences("MyPref", 0);

EditText ed1 = (EditText) findViewById(R.id.editText);

SharedPreferences.Editor preferencesEditor = settings.edit();

preferencesEditor.putString("Textik", ed1.getText().toString());

preferencesEditor.commit();

}

## SDÍLENÉ PREFERENCE - NAČTENÍ

public void tlacitko\_Nacti (View v) {

SharedPreferences settings = getSharedPreferences("MyPref", 0); EditText ed2 = (EditText) findViewById(R.id.editText2);

String preferencesString = settings.getString("Textik", "Defaultni text");

```
if (preferencesString != null) {
    ed2.setText(preferencesString);
  }
}
```

## PRÁCE S ADB

- v adresáři c:\sw\android\sdk\platform-tools
- adb start-server
- adb devices
- adb shell
- ocd /data/data
- o cd cz.pesi.mkz2015.cviceni4a
- ocd shared\_prefs
- cat MyPref.xml

Je také možné využít: monitor.bat

#### ANDROID DEVICE MONITOR

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## INTERNÍ ÚLOŽIŠTĚ, CACHE, EXTERNÍ ÚLOŽIŠTĚ

• Úprava: odstraníme Webview, přidáme další tlačítka

nezapomenout do manifestu pridat práva pro zápis na SD kartu:

<uses-permission
android:name="android.permission.WRITE\_EXTERNAL\_STORAGE" />

- přístup přes adb server-start ; adb shell atd.
- Přístup k file systemu přes device monitor

/data/data/... /storage/sdcard/

## POZNÁMKY K APLIKACI

	<b>\$</b>
🥁 C5	
Práce s da	ty
Zadejte text:	
Přečtený text:	
Save internal	
Load internal	
Save cache	
Load cache	
Stav externího	
otav externino	

aplikace využívá:

- interní úložiště soubory
- interní úložiště cache
- externí úložiště

při práci s externím úložištěm kontrola, zda je k dispozici (např. vyndaná SD karta...)

u emulátoru můžeme nastavit, zda a jak velké má externí úložiště

# FUNKCE ULOŽ DO SOUBORU

public void UlozVnitrni(View v) {

```
FileOutputStream fos;
String retez;
EditText ed1 = (EditText) findViewById(R.id.editText);
retez = new String(ed1.getText().toString());
try {
 fos = openFileOutput("data.txt", Context.MODE_PRIVATE);
fos.write(retez.getBytes());
```

```
fos.close();
} catch (Exception e) {}
}
```

# FUNKCE NAČTI ZE SOUBORU

#### public void NactiVnitrni(View v) {

```
FileInputStream fis;
byte [] buffer = new byte[1024];
String vysledek;
EditText ed2 = (EditText) findViewById(R.id.editText2);
try {
fis= openFileInput("data.txt");
Toast.makeText(this,getFilesDir().getPath(), Toast.LENGTH_LONG).show();
fis.read(buffer);
fis.close();
```

```
vysledek = new String(buffer);
ed2.setText(vysledek);
```

```
} catch (Exception e) { }
```



#### Při načtení ze souboru Toast vypisuje:



# FUNKCE ULOŽ CACHE

#### public void Uloz\_cache(View v) {

String retez;

```
EditText ed1 = (EditText) findViewByld(R.id.editText);
```

```
retez = new String(ed1.getText().toString());
```

```
File file = new File(this.getCacheDir(), "cache.txt");
```

try {

```
file.createNewFile();
```

```
FileWriter fw = new FileWriter(file);
```

```
BufferedWriter bw = new BufferedWriter(fw);
```

```
bw.write(retez);
```

```
bw.newLine();
```

```
bw.close();
```

```
} catch (Exception e) { }
```

}

## FUNKCE NAČTI Z CACHE

public void Nacti\_cache(View v) {

```
char [] buffer = new char[1024];
 String vysledek;
EditText ed2 = (EditText) findViewById(R.id.editText2);
 File file = new File(this.getCacheDir(), "cache.txt");
 Toast.makeText(this,getCacheDir().getPath(), Toast.LENGTH_LONG).show();
 try {
  FileReader fr = new FileReader(file);
  BufferedReader br = new BufferedReader(fr);
  br.read(buffer);
  vysledek = new String(buffer);
  ed2.setText(vysledek);
  br.close();
 } catch (Exception e) { }
}
```



#### Toast zobrazí při čtení z cache:



# EXTERNÍ SD KARTA

```
public void Stav_ext (View v) {
```

```
EditText ed1 = (EditText) findViewByld(R.id.editText);
```

String retez;

```
retez = new String(ed1.getText().toString());
```

String state = Environment.getExternalStorageState();

```
Toast.makeText(this, state, Toast.LENGTH_LONG).show();
```

```
File f = new File("/sdcard/file1.txt");
```

```
try {
```

```
f.createNewFile();
```

```
FileWriter fw = new FileWriter(f);
```

```
BufferedWriter bw = new BufferedWriter(fw);
```

```
bw.write(retez); bw.newLine(); bw.close();
```

```
} catch (Exception e) {
```

```
Toast.makeText(this, "nejde to", Toast.LENGTH_LONG).show();
}
```