

Dobavljači sadržaja

Fakultet tehničkih nauka, Novi Sad

Pregled sadržaja

- 1 Deljena podešavanja
- 2 Datoteke

Deljena podešavanja

- Deljena podešavanja (SharedPreferences) olakšavaju perzistentno skladištenje prostih tipova podataka
- Ti podaci se skladište u datoteci kao uređeni parovi ključ-vrednost

Deljena podešavanja

Deljenim podešavanjima se može pristupiti na dva načina:

- `SharedPreferences` `getPreferences(int mode)` - koriste se podrazumevana deljena podešavanja aktivnosti
- `SharedPreferences` `getSharedPreferences(String name, int mode)` - moguće je koristiti više deljenih podešavanje čija imena se navode kao parametar

Deljena podešavanja

Konstanta	Opis
MODE_PRIVATE	The created file can only be accessed by the calling application
MODE_WORLD_READABLE	Allow all other applications to have read access to the created file (deprecated)
MODE_WORLD_WRITEABLE	Allow all other applications to have write access to the created file (deprecated)

Tabela: Vrednosti parametra "mode".

Deljena podešavanja

Vrednosti prostog tipa `T` mogu se zapisati u tri koraka:

- 1 Pozvati `edit()` metodu koja započinje transakciju
- 2 Dodati vrednost(`i`) tipa `T` metodama oblika:
 - `SharedPreferences.Editor putT(String key, T value)`
- 3 Pozvati `commit()` metodu koja završava transakciju

Deljena podešavanja

Zapisane vrednosti mogu se pročitati metodama oblika:

- `T getT(String key, T defaultValue)`

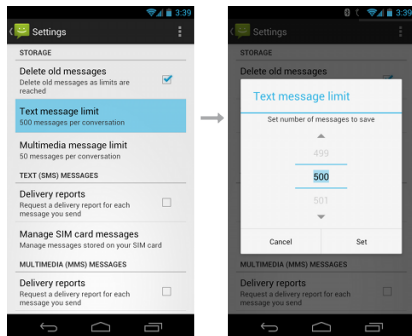
ExampleActivity.java

```
1  SharedPreferences settings = getPreferences(Context.MODE_PRIVATE);  
2  SharedPreferences.Editor editor = settings.edit();  
3  editor.putBoolean("silentMode", silentMode);  
4  editor.commit();
```


ExampleActivity.java

```
1  SharedPreferences settings = getPreferences(Context.MODE_PRIVATE);  
2  boolean silentMode = settings.getBoolean("silentMode", false);
```

PreferenceActivity



- Mnoge aplikacije omogućavaju korisnicima da prilagode svoje ponašanje
- U tu svrhu treba koristiti PreferenceActivity kako bi korisnici imali konzistentan grafički korisnički interfejs (i da bi sebi olakšali posao)

Slika: PreferenceActivity.

AndroidManifest.xml

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <manifest ... >
3      <application ... >
4          <activity android:name=".ExampleActivity">
5              <!-- ... -->
6          </activity>
7      </application>
8  </manifest>
```

ExampleActivity.java

```
1 public class ExampleActivity extends PreferenceActivity {  
2     @Override  
3     public void onCreate(Bundle bundle) {  
4         super.onCreate(bundle);  
5         addPreferencesFromResource(R.xml.preferences);  
6     }  
7 }
```

preferences.xml

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <PreferenceScreen xmlns:android="http://schemas.android.com/apk/res/android">
3      <CheckBoxPreference
4          android:key="pref_sync"
5          android:title="@string/pref_sync"
6          android:summary="@string/pref_sync_summ"
7          android:defaultValue="true" />
8
9      <ListPreference
10         android:dependency="pref_sync"
11         android:key="pref_syncConnectionType"
12         android:title="@string/pref_syncConnectionType"
13         android:entries="@array/pref_syncConnectionTypes_entries"
14         android:entryValues="@array/pref_syncConnectionTypes_values"
15         android:defaultValue="@string/pref_syncConnectionTypes_default" />
16
17  </PreferenceScreen>
```

Pregled sadržaja

1 Deljena podešavanja

2 **Datoteke**

Datoteke

- Podaci koji se nalaze u operativnoj memoriji se ne čuvaju kada se uništi proces
- Komponente koje se nalaze u različitim procesima ne mogu da razmenjuju podatke koji se nalaze u operativnoj memoriji (ne dele adresni prostor)
- Najjednostavniji način da se prevaziđu ova ograničenja je korišćenje datoteka (Android je ipak distribucija Linux-a)

Datoteke

- Za rad sa datotekama koriste se klase iz java.io paketa (na isti način na koji se koristi u Java SE)
- Međutim, mogu se koristiti metode klase Context koje olakšavaju pristup internom i/ili eksternom skladištu podataka, rad sa privremenim datotekama i upravljanje pravima pristupa
 - `FileInputStream openFileInput(String name)`
 - `FileOutputStream openFileOutput(String name, int mode)`
 - `String[] fileList()`
 - `boolean deleteFile(String name)`
 - `File getDir(String name, int mode)`
 - `File getCacheDir()`
 - `File getExternalCacheDir()`
 - `File getFilesDir()`
 - `File getExternalFilesDir(String type)`

ExampleService.java

```
1  private void write() {
2      FileOutputStream fos = null;
3      try {
4          fos = openFileOutput("test.txt", Context.MODE_PRIVATE);
5          fos.write(bytes);
6      } catch (FileNotFoundException e) {
7          Log.e(Constants.LOG_TAG, "File not found", e);
8      } catch (IOException e) {
9          Log.e(Constants.LOG_TAG, "IO problem", e);
10     } finally {
11         try {
12             fos.close();
13         } catch (IOException e) {
14         }
15     }
16 }
```

Datoteke

Konstanta	Opis
MODE_PRIVATE	The created file can only be accessed by the calling application
MODE_APPEND	if the file already exists then write data to the end of the existing file instead of erasing it
MODE_WORLD_READABLE	Allow all other applications to have read access to the created file (deprecated)
MODE_WORLD_WRITEABLE	Allow all other applications to have write access to the created file (deprecated)

Tabela: Vrednosti parametra "mode".

ExampleService.java

```
1 private void read() {
2     FileInputStream fis = null;
3     Scanner scanner = null;
4     StringBuilder sb = new StringBuilder();
5
6     try {
7         fis = openFileInput("test.txt");
8         scanner = new Scanner(fis);
9         while (scanner.hasNextLine()) {
10             sb.append(scanner.nextLine() + LINE_SEP);
11         }
12     } catch (FileNotFoundException e) {
13         Log.e(Constants.LOG_TAG, "File not found", e);
14     } finally {
15         if (fis != null) {
16             try {
17                 fis.close();
18             } catch (IOException e) {
19             }
20         }
21         if (scanner != null) {
22             scanner.close();
23         }
24     }
25 }
```

Datoteke

- Interno skladište podataka se nalazi u mobilnom uređaju
 - Uvek je dostupno
 - Obično je manjeg kapaciteta (i nije ga moguće proširiti)
 - Privatno je
- Eksterno skladište podataka se (obično) nalazi na SD kartici
 - Nije uvek dostupno
 - Obično je većeg kapaciteta (i moguće ga je proširiti)
 - Javno je

ExampleService.java

```
1 String state = Environment.getExternalStorageState();
2 if (Environment.MEDIA_MOUNTED.equals(state)) {
3     // We can read and write the media
4 } else if (Environment.MEDIA_MOUNTED_READ_ONLY.equals(state)) {
5     // We can only read the media
6 } else {
7     // Something else is wrong. It may be one of many other states,
8     // but all we need to know is we can neither read nor write
9 }
```

Datoteke

- Privremene datoteke treba skladištiti u cache direktorijumu (Android ih automatski briše kada ponestane slobodnog prostora)
 - `File getCacheDir()`
 - `File getExternalCacheDir()`
- Datoteke koje deli više aplikacija treba snimiti u javni eksterni direktorijum
 - `File getExternalStoragePublicDirectory(String type)`

Datoteke

Konstanta	Opis
DIRECTORY_ALARMS	Standard directory in which to place alarms
DIRECTORY_DCIM	The traditional location for pictures and videos when mounting the device as a camera.
DIRECTORY_DOCUMENTS	Standard directory in which to place documents that have been created by the user.
DIRECTORY_DOWNLOADS	Standard directory in which to place files that have been downloaded by the user.
DIRECTORY_MOVIES	Standard directory in which to place movies that are available to the user.

Tabela: Tip javnog eksternog direktorijuma.

Datoteke

Konstanta	Opis
DIRECTORY_MUSIC	Standard directory in which to place any audio files that should be in the regular list of music for the user.
DIRECTORY_NOTIFICATIONS	Standard directory in which to place any audio files that should be in the list of notifications that the user can select.
DIRECTORY_PICTURES	Standard directory in which to place pictures that are available to the user.
DIRECTORY_PODCASTS	Standard directory in which to place any audio files that should be in the list of podcasts that the user can select (not as regular music).
DIRECTORY_RINGTONES	Standard directory in which to place any audio files that should be in the list of ringtones that the user can select (not as regular music).

Tabela: Tip javnog eksternog direktorijuma.



All images copyrighted by Android Open Source Project (CC BY)