

# Uvod u Android 2

## Osnove programskog jezika Java

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# SADRŽAJ PREDAVANJA

- Intenti
- Modeliranje podataka
- Komunikacija sa API servisom
- Prikaz slika

**INTENTI**

# VRSTE INTENTA

- **Implicitni**

- OS bira izvršitelja:

```
Intent i = new  
Intent(Intent.ACTION_CALL,  
URI.parse("tel:09123456789"));
```

- **Pokretanje:**

```
startActivity(i);  
startActivityForResult(i,314);
```

- **EksPLICITNI**

- zadajemo izvršitelja:

```
Intent i = new Intent(this,  
MyActivity.class);
```

- **Pokretanje:**

```
startActivity(i);  
startActivityForResult(i,314);
```

# PRIMJERI IMPLICITNIH INTENATA

- Pozivanje broja telefona, npr. 099 1234567  
Intent intent = new Intent(Intent.ACTION\_CALL,  
Uri.parse("tel:0991234567"));  
startActivity(intent);
- Otvaranje web stranice, npr. www.google.hr  
Intent intent = new Intent(Intent.ACTION\_VIEW,  
Uri.parse("https://www.google.hr/"));  
startActivity(intent);

# PRIMANJE PODATAKA - BUNDLE

- Ako se iz aktivnosti B vraćamo u aktivnost A, onda se podaci čitaju u **onActivityResult** metodi aktivnosti A
- netko nam nešto vraća!

```
@Override
protected void onActivityResult(int requestCode, int resultCode, Intent data) {
    if (requestCode == 314 && resultCode == RESULT_OK) {
        Bundle returningBundle = data.getExtras();
        String message = returningBundle.getString("message");
    }
}
```

**ZADATAK**

## KOMUNIKACIJA MEĐU EKTRANIMA 2

- Nakon interakcije s gumbom na ShowActivity potrebno je vratiti sadržaj input polja na prethodni ekran, te ga ispisati u Toastu.



# HOUSE CLEANING

# ČIŠĆENJE

`findViewById(R.id.nekiid)`

## BUTTERKNIFE

```
implementation 'com.jakewharton:butterknife:  
8.8.1'  
annotationProcessor  
    'com.jakewharton:butterknife-compiler:8.8.1'
```

[https://github.com/  
JakeWharton/butterknife](https://github.com/JakeWharton/butterknife)

# BUTTERKNIFE

```
buildscript {  
    repositories {  
        jcenter()  
        mavenCentral()  
    }  
    dependencies {  
        classpath 'com.android.tools.build:gradle:2.3.1'  
        classpath 'com.jakewharton:butterknife-gradle-plugin:8.6.0'  
        // NOTE: Do not place your application dependencies here;  
they belong  
        // in the individual module build.gradle files  
    }  
}
```

# BUTTERKNIFE

- onCreate - `ButterKnife.bind(this);`

```
@BindView(R.id.image)  
ImageView image
```

# MODELIRANJE PODATAKA

# JSON

- JavaScript notacija
- sintaksa za pohranu i razmjenu podataka
- tekst

```
{  
  "name": "John",  
  "age": 31,  
  "city": "New York"  
}
```



# GSON

- biblioteka Java <-> JSON
- <https://github.com/google/gson>

```
Gson gson = new Gson();
```

```
String jsonString = gson.toJson(obj);
```

```
SomeObject obj =  
    gson.fromJson(str, SomeObject.class);
```

# BUILD.GRADLE

```
implementation 'com.google.code.gson:gson:2.8.5'
```

**ZADATAK**

# SERIJALIZACIJA/DESERIJALIZACIJA

- napravite ImageResponse razred koji sadrži **String**  
**url = "https://www.google.com"**;
- umjesto stringa iz prethodnog zadatka, predajte objekt

**API**

## SQUARE LIBS

```
implementation 'com.squareup.retrofit2:retrofit:2.4.0'
implementation 'com.squareup.retrofit2:converter-gson
2.4.0'
implementation 'com.squareup.okhttp3:okhttp:3.11.0'
```

[http://square.github.io/  
retrofit/](http://square.github.io/retrofit/)



# DEFINICIJA SUČELJA I METODA

```
public interface SomeService {  
    @GET("relative path")  
    Call<SomeObject> methodName(params...);  
}
```

## STVARANJE PRIMJERKA USLUGE

```
Retrofit retrofit = new Retrofit.Builder()  
    .baseUrl("https://base url")  
    .build();
```

```
SomeService service =  
retrofit.create(SomeService.class);
```

# DOHVAT PODATAKA

```
service.getImage().execute();

service.getImage().enqueue(new Callback<Response>() {
    @Override
    public void onResponse(Call<Response> call,
Response<Response> response) {
        ...
    }

    @Override
    public void onFailure(Call<Response> call, Throwable t) {
        ...
    }
});
```

**ZADATAK**

# HTTPS://ANA.BAOTIC.NET/JAVA/ IMAGE.JSON

```
{  
  url_location: "http://www.petmd.com/sites/default/files/4-meow-conversational-cat.gif"  
}
```

- implementirajte dohvat datoteke i učitajte u postojeći model iz prethodnog zadatka
- u onClick metodi pokrenite dohvat, a u "callback-u" otvorite novi ekran, ImageActivity kojem predajete dobiveni podatak.

**PRIKAZ SLIKA**

# DOHVAT SLIKA

```
compile 'com.github.bumpteck.glide:glide:4.7.1'  
annotationProcessor  
com.github.bumpteck.glide:compiler:4.7.1'
```

[https://github.com/  
bumpteck/glide](https://github.com/bumpteck/glide)



```
Glide.with(this)  
    .load(imageLocation)  
    .into(imageView);
```

**ZADATAK**

## PRIKAZ SLIKA

- dodajte ImageView veličine 200dp x 200dp u centar ImageActivity.java ekrana
- učitajte u njega sliku s lokacije iz primljenog objekta

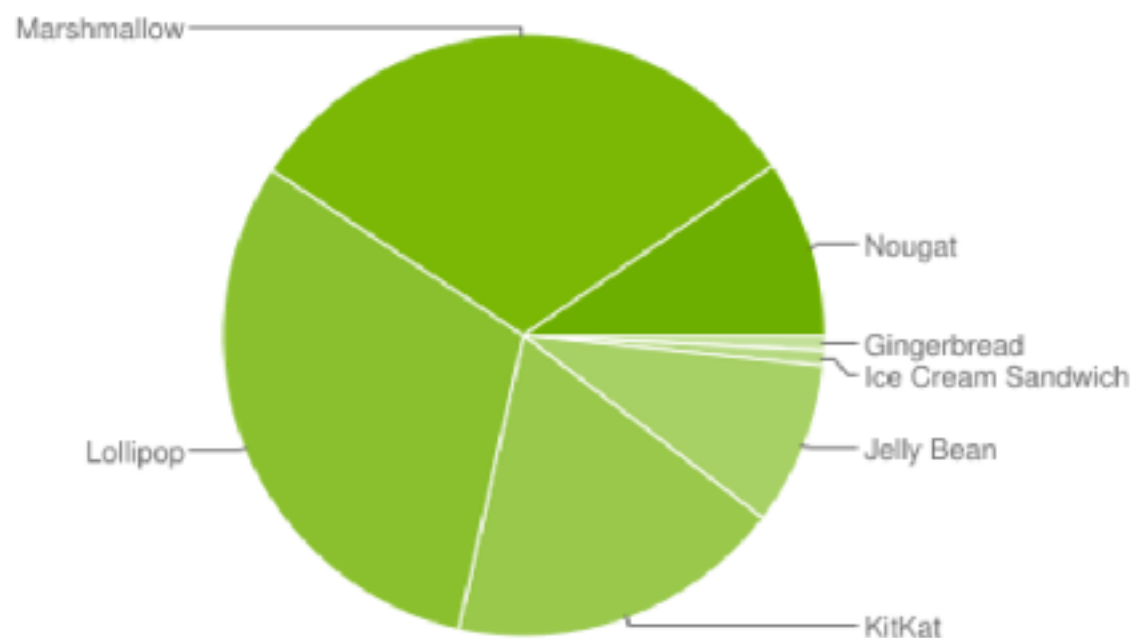
**ZADATAK**

# HTTPS://ANA.BAOTIC.NET/JAVA/CAP.JSON

```
{
  "avatar_location": "http://i.annihil.us/u/prod/marvel/movies/
civilwar/images/captainamerica_hero.png",
  "first_name": "Captain",
  "last_name": "America",
  "phone_no": "0912345679",
  "email_sknf": "captain@america.com",
  "spouse": "",
  "age": 99
}
```

- implementirajte dohvat datoteke i učitajte u novi model
- Implementirajte novi ekran `UserActivity` koji ima sučelje koje je u stanju prikazati sve elemente novog modela
- u `onClick` metodi pokrenite dohvat, a u "callback-u" otvorite taj ekran, te mu pošaljite dobiveni model.
- Prikažite sadržaj elemenata na sučelju ekrana

Version	Codename	API	Distribution
2.3.3 - 2.3.7	Gingerbread	10	0.8%
4.0.3 - 4.0.4	Ice Cream Sandwich	15	0.8%
4.1.x	Jelly Bean	16	3.1%
4.2.x		17	4.4%
4.3		18	1.3%
4.4	KitKat	19	18.1%
5.0	Lollipop	21	8.2%
5.1		22	22.6%
6.0	Marshmallow	23	31.2%
7.0	Nougat	24	8.9%
7.1		25	0.6%



*Data collected during a 7-day period ending on June 5, 2017.*

*Any versions with less than 0.1% distribution are not shown.*

# Distribucija verzija operacijskih sustava



Različiti ekrani i orijentacije



# REFERENCE

- Professional Android 4 development
- Android weekly newsletter
- <https://developer.android.com/index.html>
- Odgovori na sva pitanja, ikad