Podržavanje različitih android uređaja

Zastupljenost android uređaja

Worldwide Smartphone OS Market Share (Share in Unit Shipments)
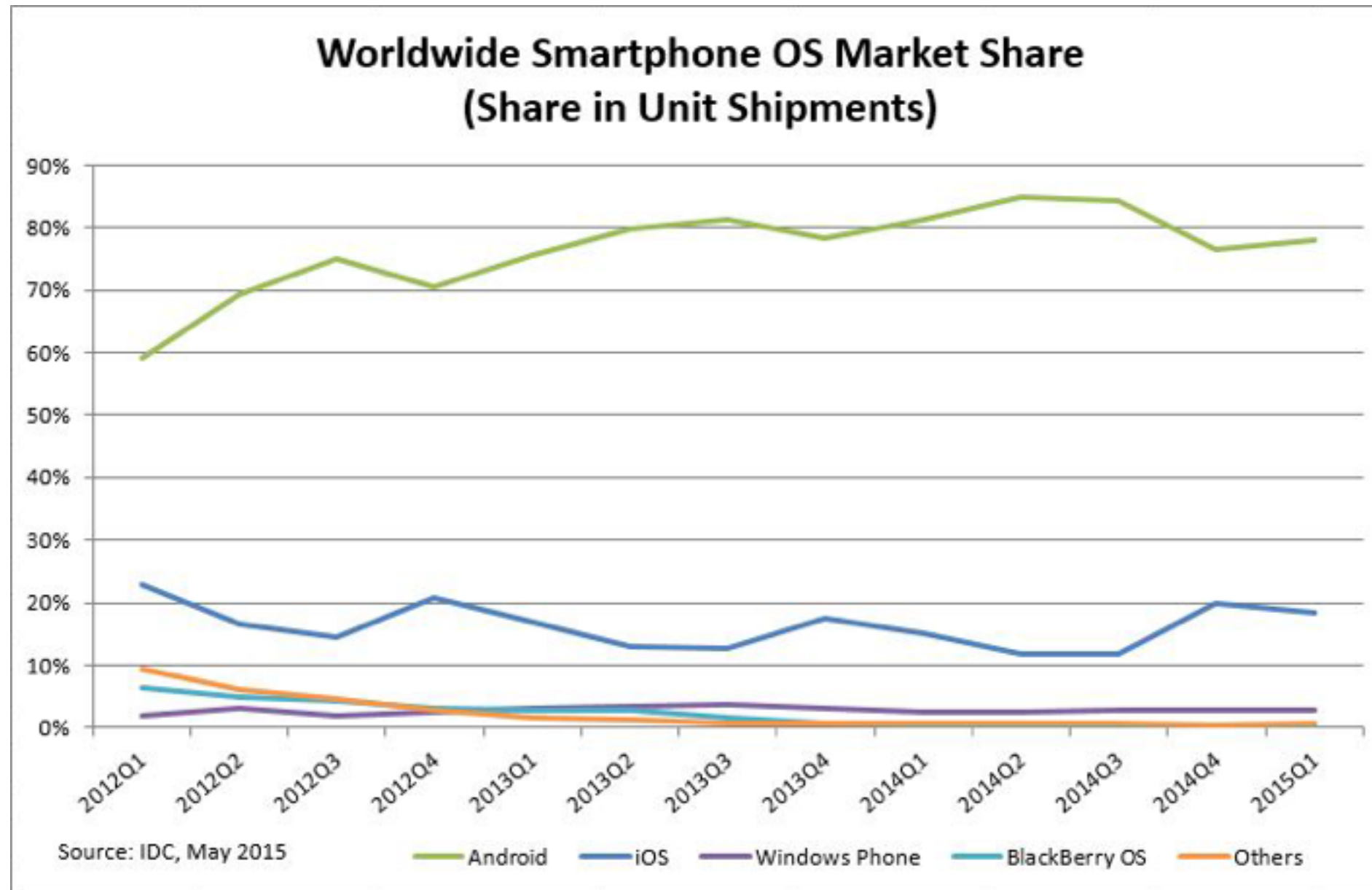
Ali...

Razlike

- 18k+ uređaja

- Veličina ekrana

- Gustoća piksela na ekranu (density)

- Jezik

- Verzije sustava

Resource qualifiers

✦ Android automatski odabire resurs ovisno o trenutnoj konfiguraciji

✦ `<resources_name>-<config_qualifier>`

```
MyProject/
    src/
        MyActivity.java
    res/
        drawable/
            graphic.png
        layout/
            main.xml
            info.xml
        mipmap/
            icon.png
        values/
            strings.xml
```

http://developer.android.com/guide/topics/resources/providing-resources.html

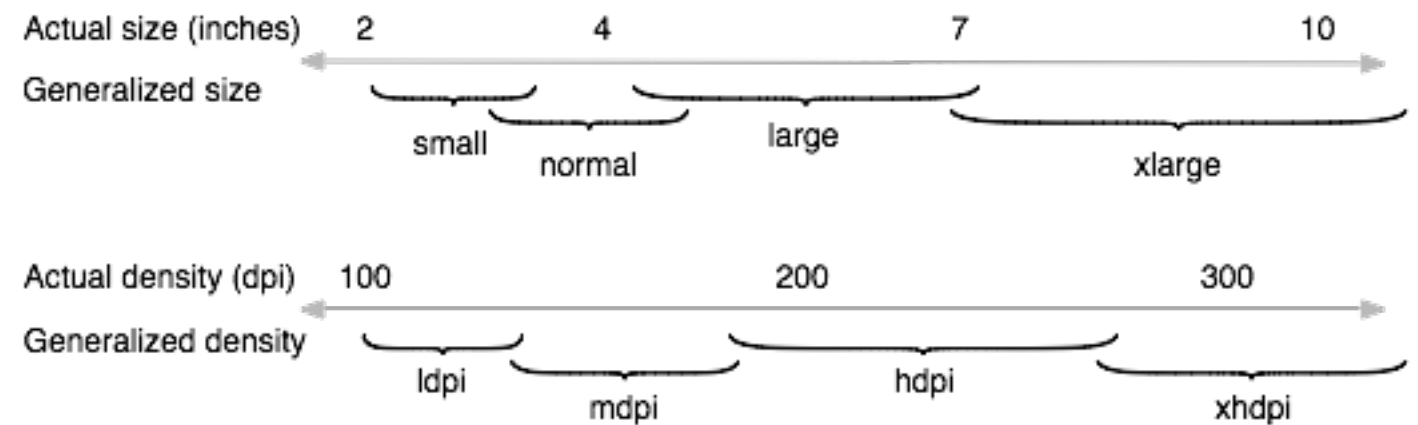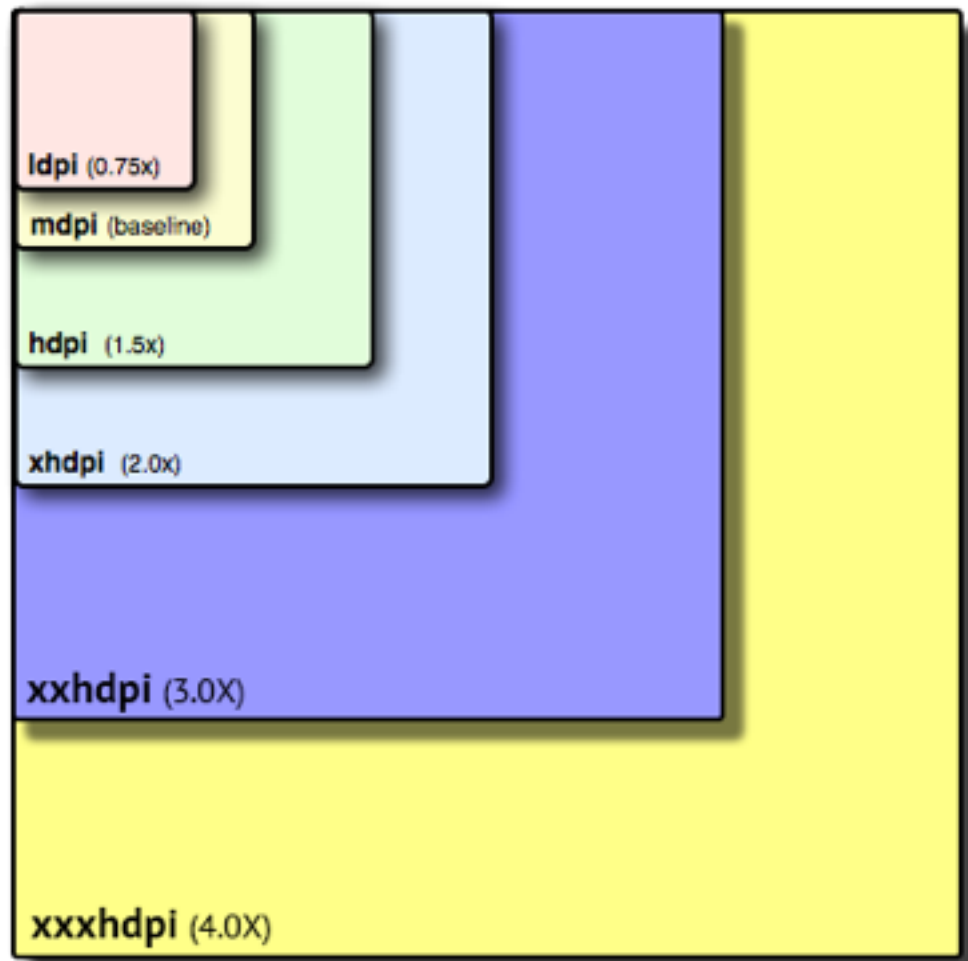# Najčešći kvalifikatori

- Density
    - ldpi, mdpi, hdpi, xhdpi, xxhdpi, xxxhdpi

- Jezik
    - en, hr, en-rUS ...

- Dimenzije ekrana
    - w<N>dp, sw<N>dp, h<N>dp

- Orijentacija
    - port, land

- Veličina ekrana
    - small, normal, large, xlarge

Veličina ekrana

Dimenzije

- dp (dip - density indenpendant pixels)

- sp koristiti za text

Odabir resursa

1. Eliminate qualifiers that contradict the device configuration

2. Identify the next qualifier in the table (MCC first, then MNC, then language, and so on)

3. Do any resource directories use this qualifer?

No

Yes

5. Continue until only one directory for the desired resource is left

4. Eliminate directories that do not include this qualifier *

* If the qualifier is screen density, the system selects the "best match" and the process is done

Primjer

Locale = `en-GB`

Screen orientation = `port`

Screen pixel density = `hdpi`

Touchscreen type = `notouch`

Primary text input method = `12key`

```
drawable/
drawable-en/
drawable-fr-rCA/
drawable-en-port/
drawable-en-notouch-12key/
drawable-port-ldpi/
drawable-port-notouch-12key/
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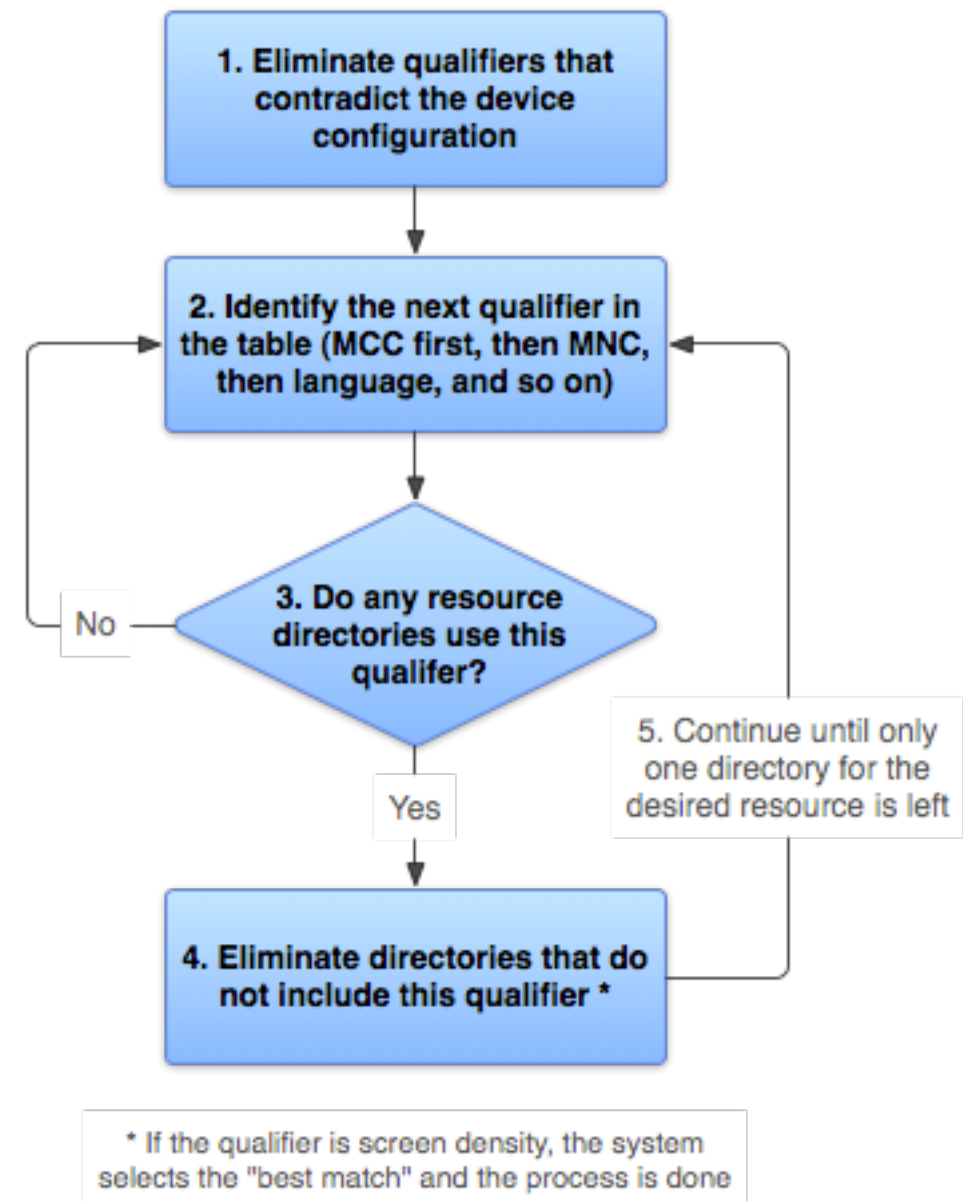
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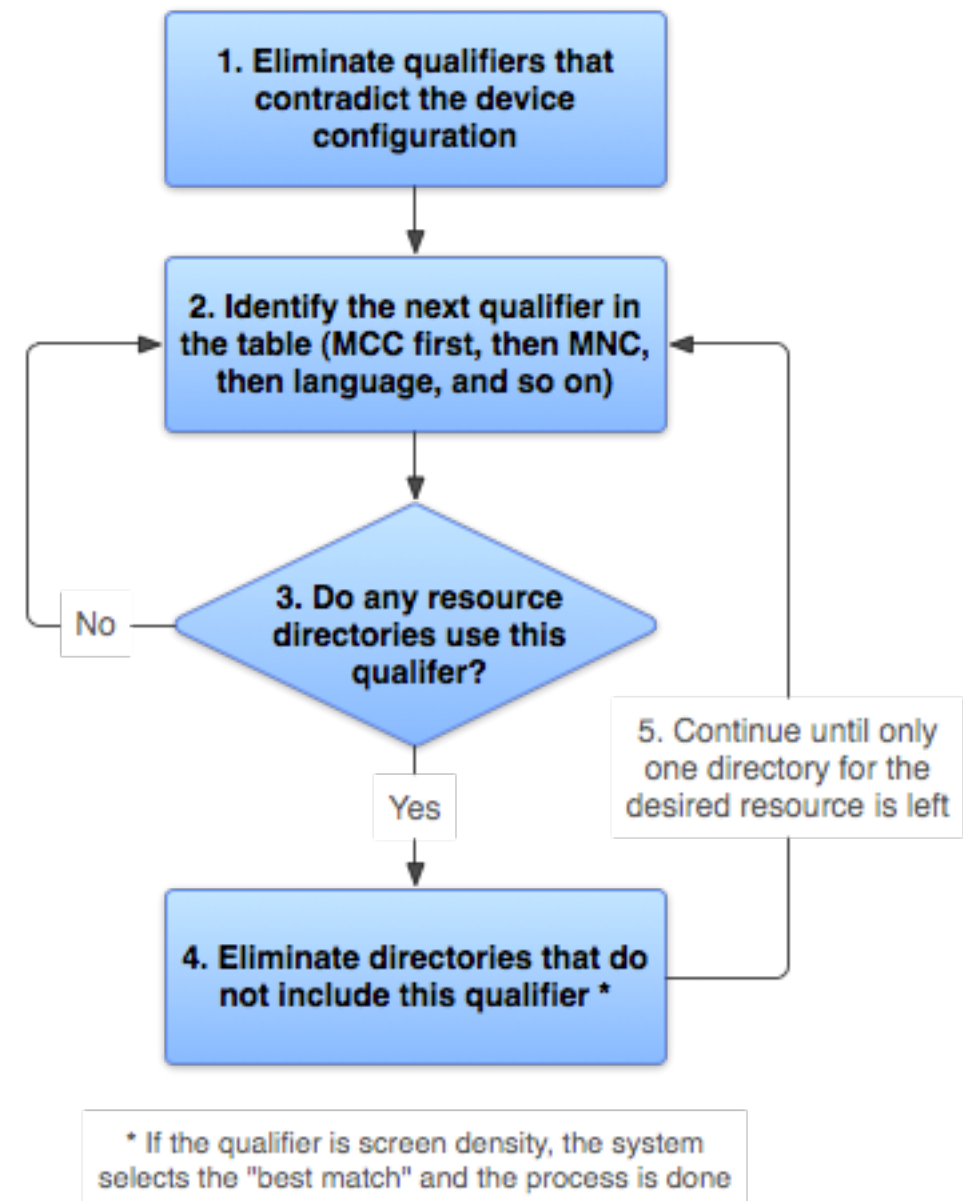
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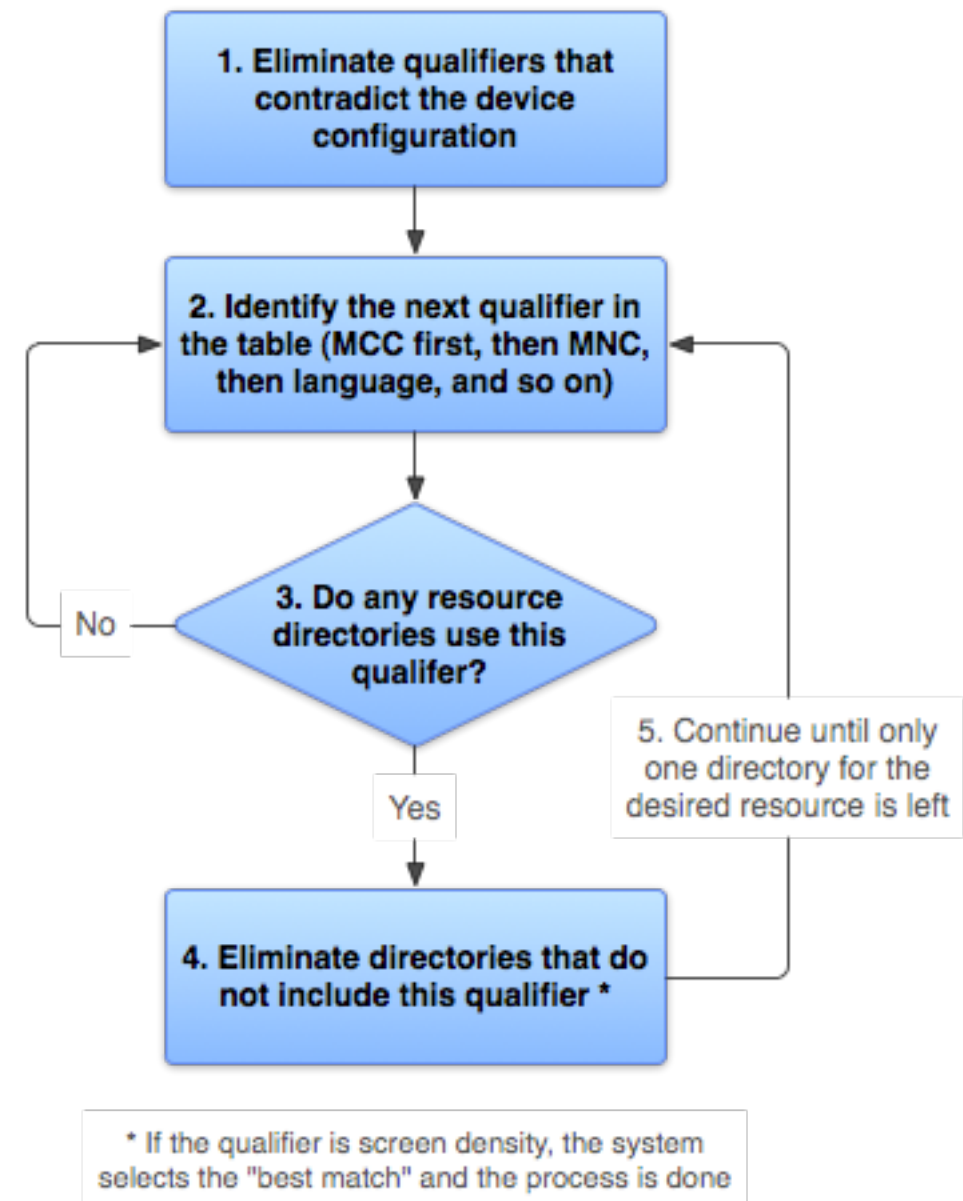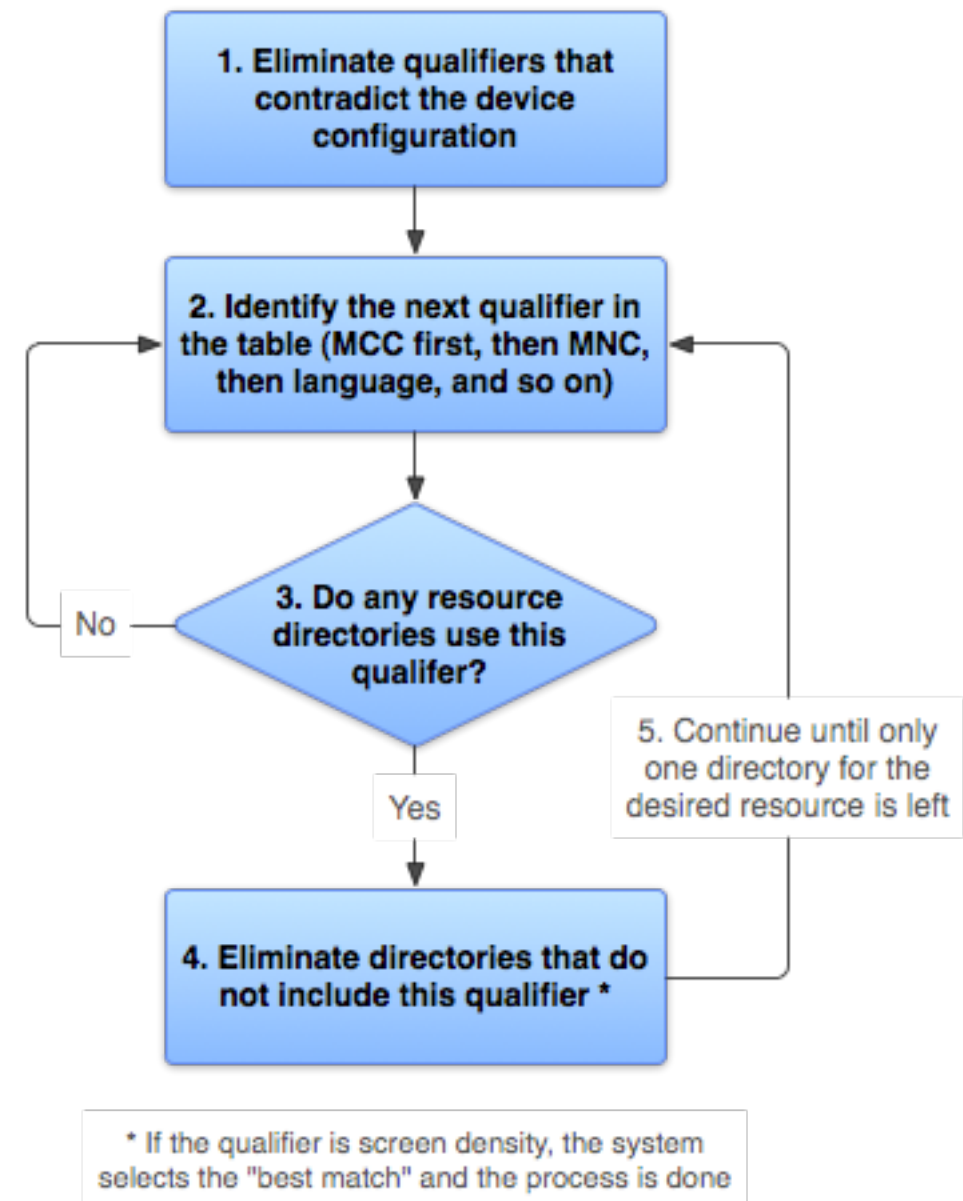
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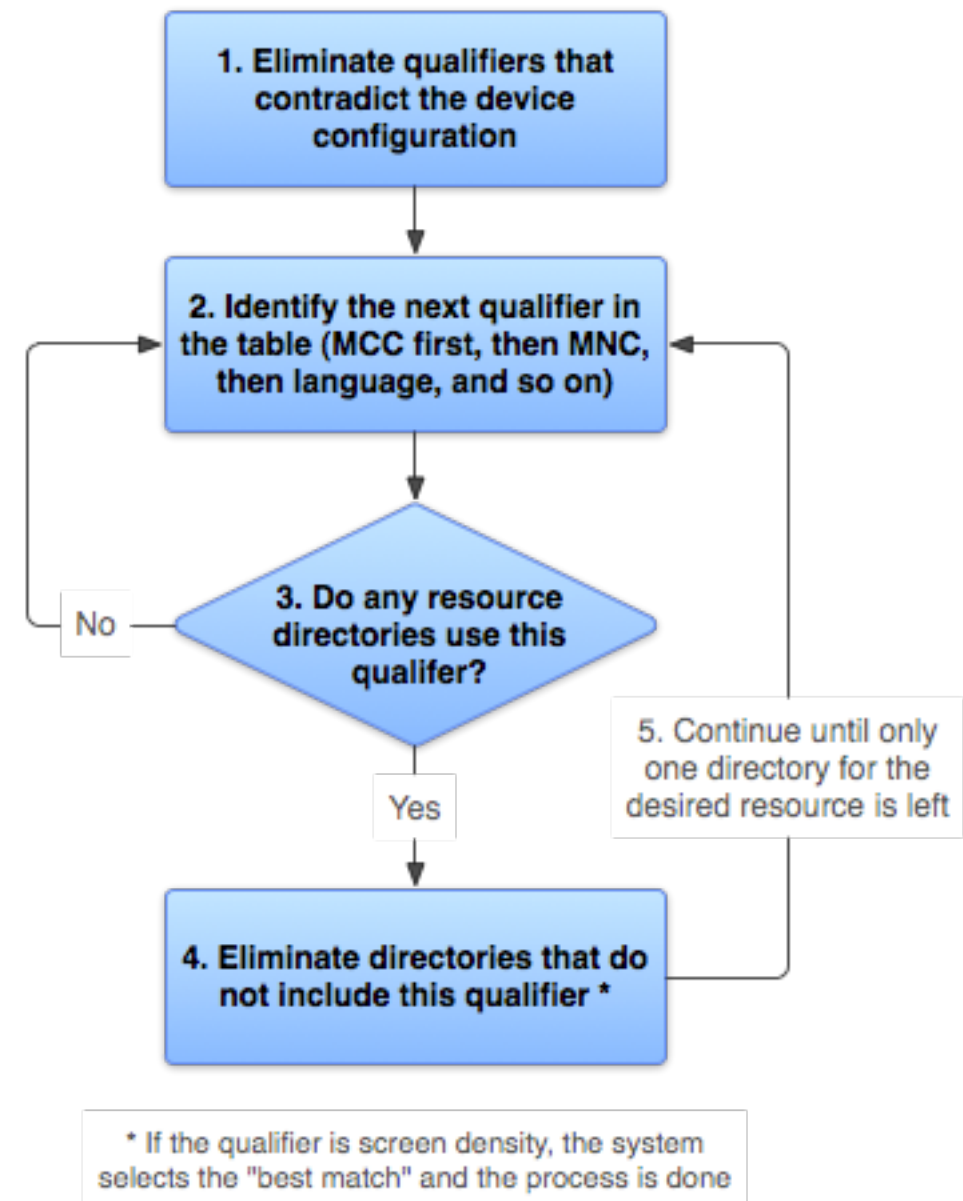
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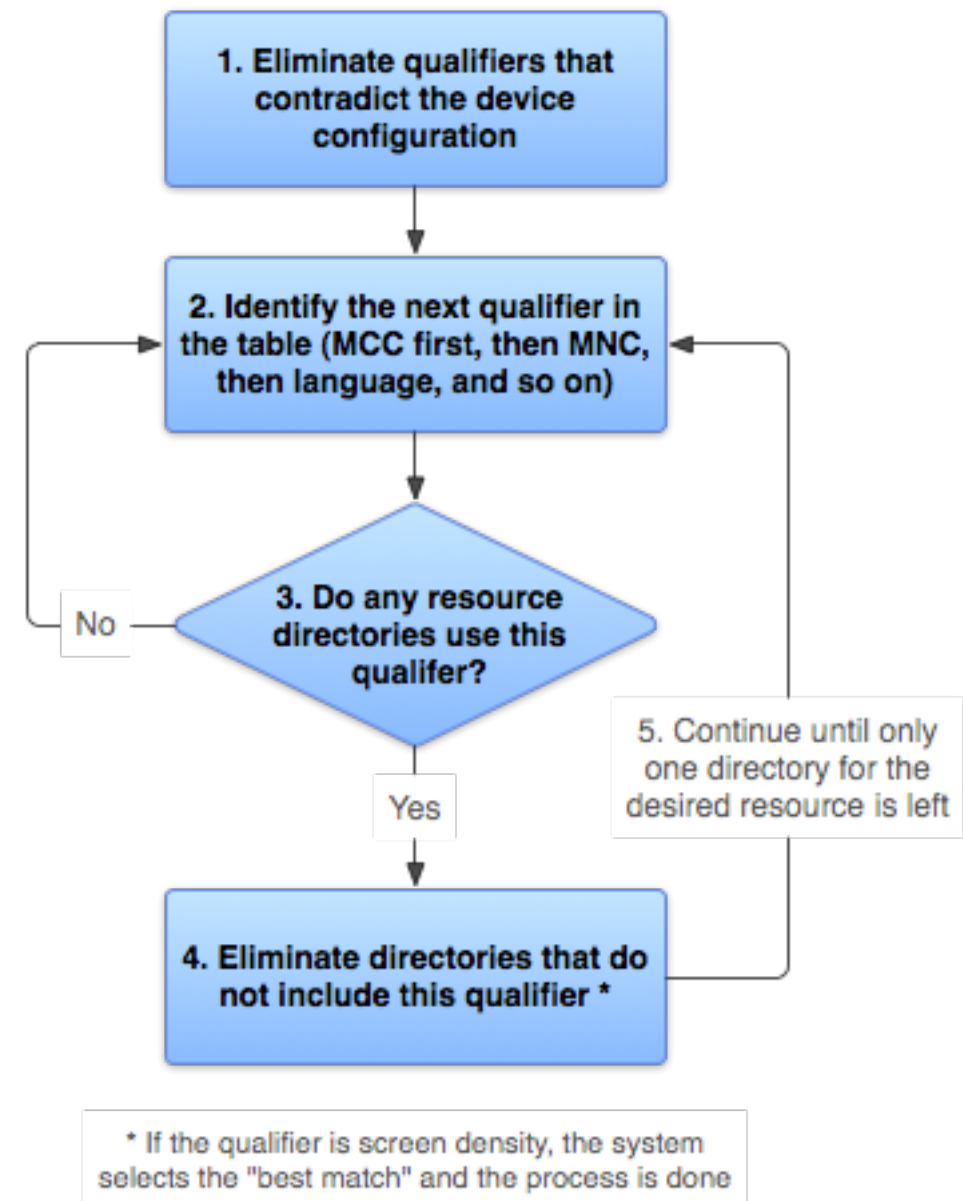
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Code

Fragment

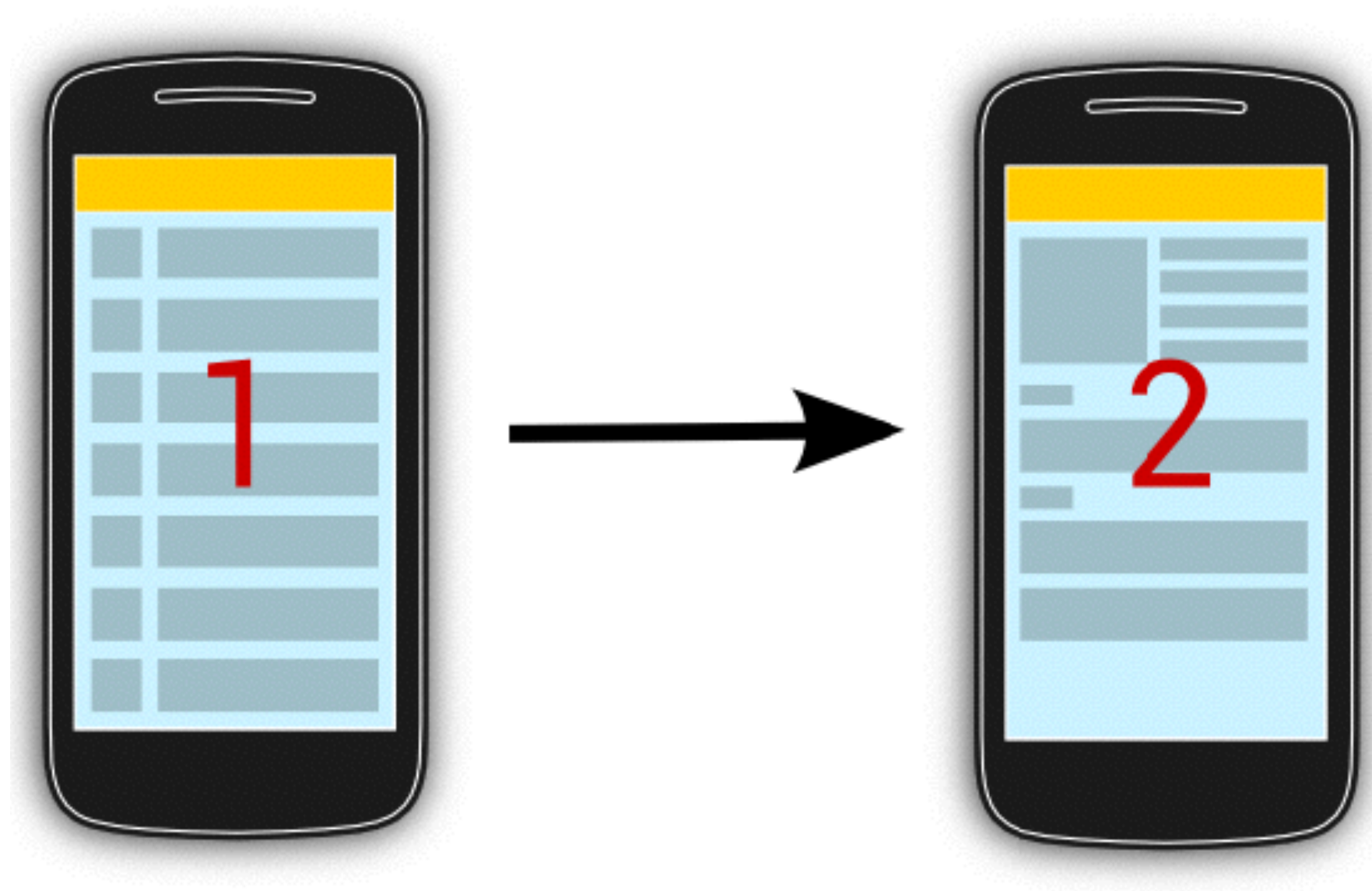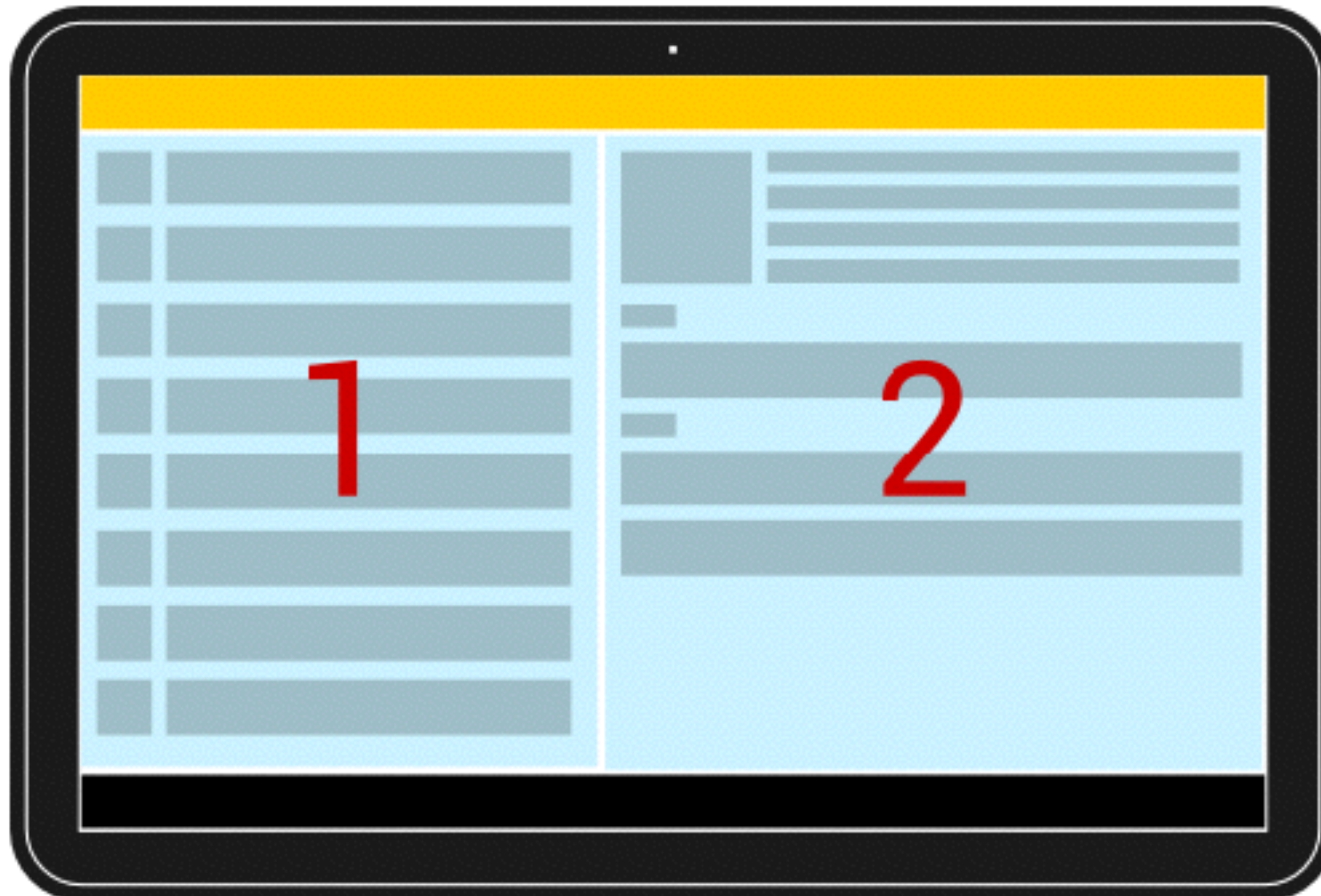# Motivacija

- Fleksibilan UI

- Upravljanje promjenama na UI

- Reusability

- Obavljanje poslova u pozadini

    - Fragment bez UI

Motivacija

Motivacija

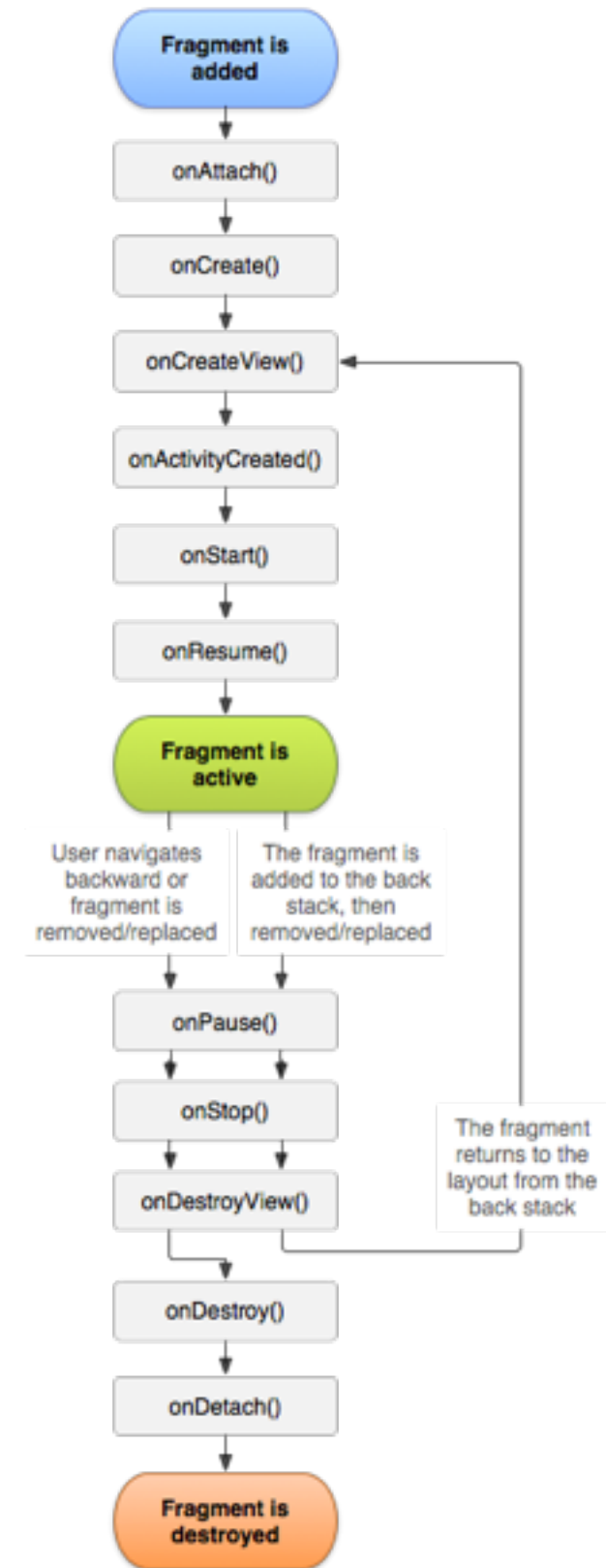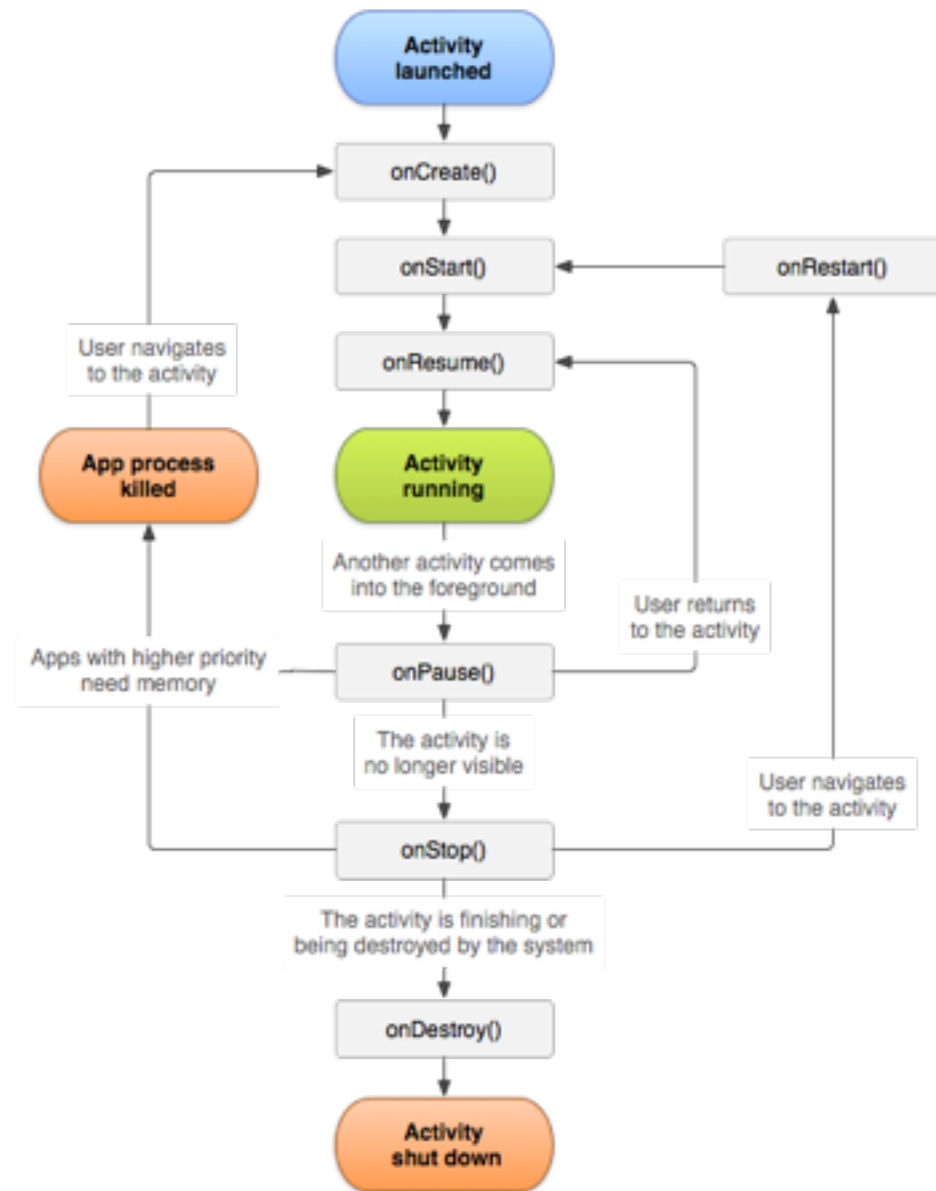# Što je fragment

- ✦ Zaseban dio funkcionalnosti Activitya

- ✦ Dinamički ili kroz layout

  - ✦ *<fragment class="...Fragment">*

- ✦ *Context – getActivity()*

- ✦ Vlastiti lifecycle

Lifecycle

Left diagram — Activity lifecycle:

- Activity launched
- onCreate()
- onStart() ← onRestart()
- onResume()
- Activity running
  - User navigates to the activity → onCreate()
  - App process killed
  - Apps with higher priority need memory
- Another activity comes into the foreground
- onPause()
  - User returns to the activity → onResume()
- The activity is no longer visible
- onStop()
  - User navigates to the activity → onRestart()
- The activity is finishing or being destroyed by the system
- onDestroy()
- Activity shut down

Right diagram — Fragment lifecycle:

- Fragment is added
- onAttach()
- onCreate()
- onCreateView()
- onActivityCreated()
- onStart()
- onResume()
- Fragment is active
  - User navigates backward or fragment is removed/replaced
  - The fragment is added to the back stack, then removed/replaced
- onPause()
- onStop()
- onDestroyView()
  - The fragment returns to the layout from the back stack → onCreateView()
- onDestroy()
- onDetach()
- Fragment is destroyed

Komunikacija između fragmenata

- Fragmenti međusobno ne bi smijeli direktno komunicirati

- Komunikacija se odvija preko Interface

```java
private View.OnClickListener listener;

@Override
public void onAttach(Activity activity) {
    super.onAttach(activity);
    if (activity instanceof View.OnClickListener) {
        listener = (View.OnClickListener) activity;
    }
}
```

Fragment manager

- Sučelje za interakciju s fragmentima unutar activitya

- *getFragmentManager()*

- Dodavanje, zamjena, micanje, animacije ...

- *FragmentTransaction*

- *BackStack*

Prijenos podataka

- Nemoguće kroz layout

- *Bundle - setArguments()*

```java
private static final String SCORE_KEY = "SCORE_KEY";

private static final String USERNAME_KEY = "USERNAME_KEY";

public static MyFragment newInstance(int score, String username, OnClickListener listener) {

    Bundle args = new Bundle();
    args.putInt(SCORE_KEY, score);
    args.putString(USERNAME_KEY, username);

    MyFragment fragment = new MyFragment();
    fragment.setArguments(args);
    fragment.setOnClickListener(listener);
    return fragment;
}
```
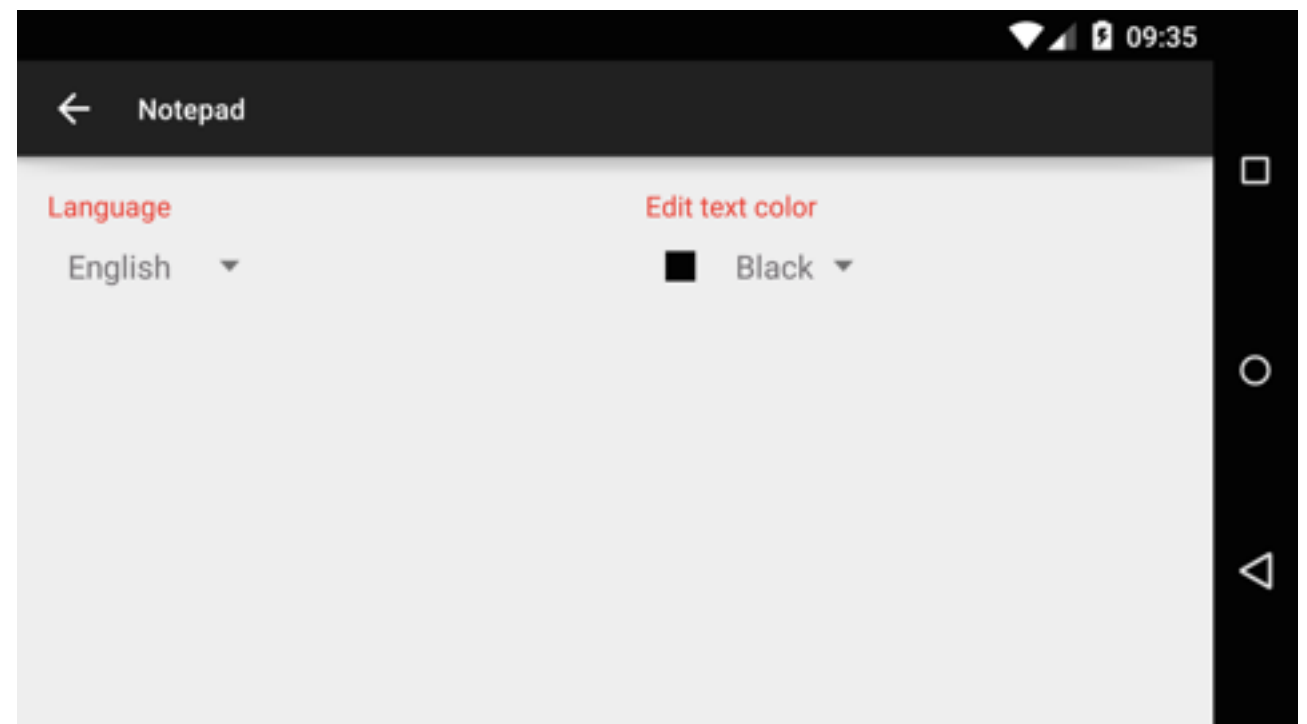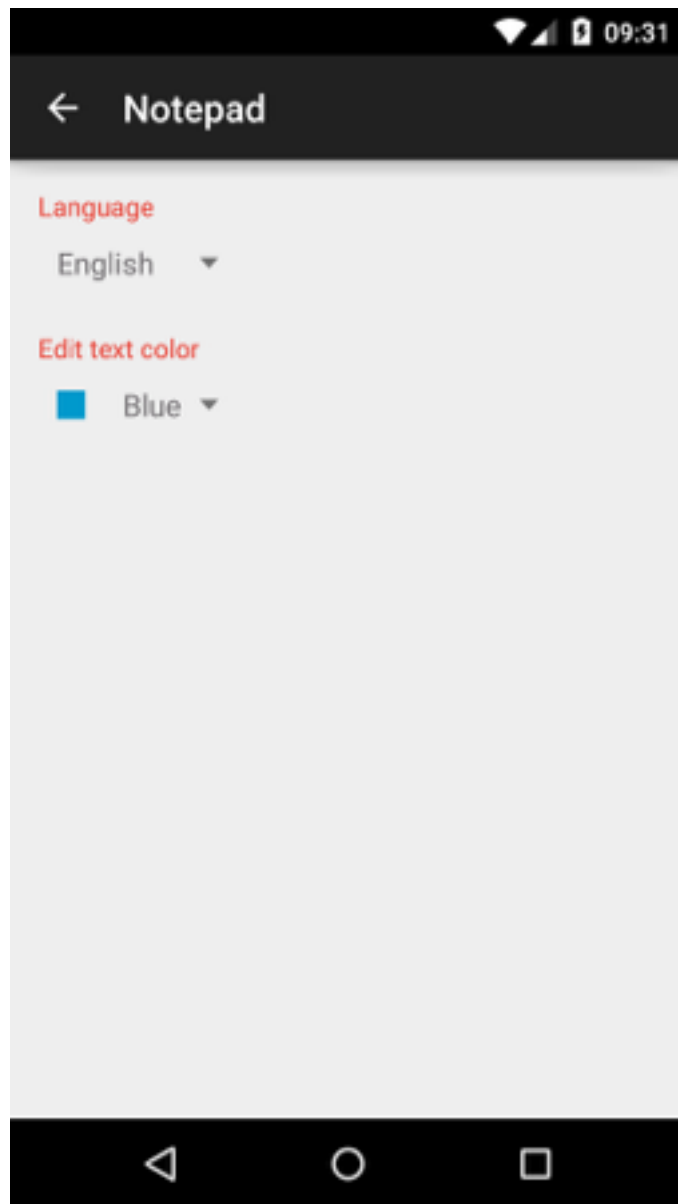
Code

Zadatak

Zadatak 4

Modificirati zadatak 3 tako da se u landscape orijentaciji lista dokumenata i dokument edit ekran prikazuju jedan pored drugoga.

Kreirati settings ekran u kojemu korisnik ima mogućnost izbora jezika aplikacije i boje teksta (za edit dokumenta). Settings ekran također treba imati različite layoute za land i port orijentaciju uređaja. Izbor jezika i boje ostvariti pomoću Spinner komponente. Izbor jezika omogućiti u dropdown modu,a odabir boje teksta prikazati kao dialog.

Zadatak 4

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