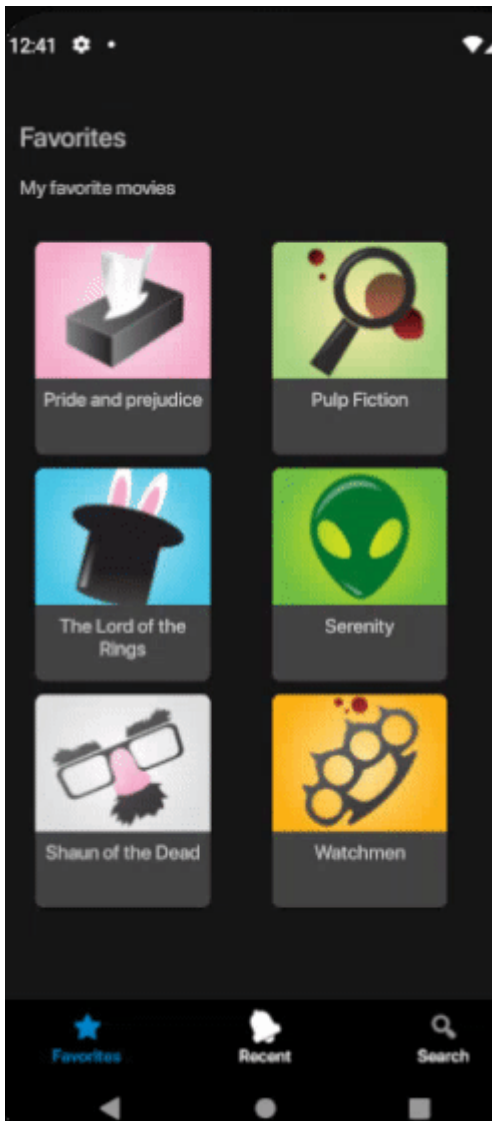


Fragmenti

Zadatak 1

Potrebno je izdvojiti pretragu, nove filmove i favorite u posebne fragmente koji se mijenjaju klikom na donju navigacijsku traku (Bottom navigation bar) Rješenje zadatka:



U sklopu Android-a jedan od najlakših načina navigacije je korištenjem Bottom navigation bar . Ista se koristi kada aplikacija ima 3-5 lokacija, kojima se može direktno pristupati. Jedan od primjera navigacije je **Google Discover Android App**.

`BottomNavigationView` je u ovisnosti od verzije dostupan odmah ili se mora u build gradle dodati:

```
dependencies {  
    implementation 'com.google.android.material:material:1.3.0'
```

```
}
```

U naš `activity_main.xml` ćemo sada imati `FrameLayout` i `BottomNavigationView`.

Kreirat ćemo `res/menu` folder korištenjem desnog klika i `New->Android Resource Directory`. U folder ćemo dodati `navigation.xml` file:

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item
        android:id="@+id/navigation_favorites"
        android:icon="@android:drawable/btn_star_big_off"
        android:title="Favorites"/>
    <item
        android:id="@+id/navigation_upcoming"
        android:icon="@android:drawable/ic_popup_reminder"
        android:title="Upcoming"/>
    <item
        android:id="@+id/navigation_search"
        android:icon="@android:drawable/ic_menu_search"
        android:title="Search"/>
</menu>
```

Kreirajmo sada naše fragment klase i layout-e za sve tri stavke.

- Omiljeni filmovi: `favorites_fragment.xml` :

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    >
    <TextView
        android:id="@+id/textView"
        android:layout_width="398dp"
        android:layout_height="33dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="16dp"
        android:layout_marginEnd="8dp"
        android:text="@string/favorite"
        android:textSize="20sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/favoriteMovies"
        android:layout_width="388dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="8dp"
```

```

        android:layout_marginTop="16dp"
        android:layout_marginEnd="8dp"
        android:clipToPadding="false"
        android:paddingStart="20dp"
        android:paddingTop="10dp"
        android:paddingEnd="20dp"
        android:paddingBottom="10dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/textView2" />
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="16dp"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="16dp"
        android:text="@string/favoritesText"
        app:layout_constraintBottom_toTopOf="@+id/favoriteMovies"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

FavoriteMoviesFragment.kt :

```

class FavoriteMoviesFragment : Fragment() {
    override fun onCreateView(inflater: LayoutInflater, container: ViewGroup?,
        savedInstanceState: Bundle?): View? =
        inflater.inflate(R.layout.favorites_fragment, container, false)
    companion object {
        fun newInstance(): FavoriteMoviesFragment = FavoriteMoviesFragment()
    }
}

```

- Novi filmovi:

recents_fragment.xml :

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    >
    <TextView
        android:id="@+id/textView1"
        android:layout_width="398dp"
        android:layout_height="33dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="16dp"
        android:layout_marginEnd="8dp"

```

```

        android:text="@string/recent"
        android:textSize="20sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
<androidx.recyclerview.widget.RecyclerView
    android:id="@+id/recentMovies"
    android:layout_width="388dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="8dp"
    android:layout_marginTop="16dp"
    android:layout_marginEnd="8dp"
    android:clipToPadding="false"
    android:paddingStart="20dp"
    android:paddingTop="10dp"
    android:paddingEnd="20dp"
    android:paddingBottom="10dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textView3" />
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="16dp"
    android:layout_marginTop="8dp"
    android:layout_marginBottom="8dp"
    android:text="@string/recentTexts"
    app:layout_constraintBottom_toTopOf="@+id/recentMovies"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView1" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

RecentMoviesFragment.kt :

```

class RecentMoviesFragment : Fragment() {
    override fun onCreateView(inflater: LayoutInflater, container: ViewGroup?,
        savedInstanceState: Bundle?): View? =
        inflater.inflate(R.layout.recents_fragment, container, false)
    companion object {
        fun newInstance(): RecentMoviesFragment = RecentMoviesFragment()
    }
}

```

- Pretraga fragment: search_fragment.xml :

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"

```

```

        android:layout_width="match_parent"
        android:layout_height="match_parent"
    >
    <EditText
        android:id="@+id/searchText"
        android:layout_width="341dp"
        android:layout_height="60dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="16dp"
        android:layout_marginEnd="4dp"
        android:hint="@string/search"
        app:layout_constraintEnd_toStartOf="@+id/searchButton"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <ImageButton
        android:id="@+id/searchButton"
        android:layout_width="34dp"
        android:layout_height="34dp"
        android:layout_marginTop="36dp"
        android:layout_marginEnd="8dp"
        android:background="?android:attr/actionModeWebSearchDrawable"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toEndOf="@+id/searchText"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

SearchFragment.kt :

```

class SearchFragment : Fragment() {
    override fun onCreateView(inflater: LayoutInflater, container: ViewGroup?,
        savedInstanceState: Bundle?): View? =
        inflater.inflate(R.layout.search_fragment, container, false)
    companion object {
        fun newInstance(): SearchFragment = SearchFragment()
    }
}

```

Inicijalizirajmo `BottomNavigationView` u glavnoj aktivnosti. Definišimo listener za click, defaultni fragment i funkciju za izmjenu fragmenata.

```

class MainActivity : AppCompatActivity() {
    private lateinit var bottomNavigation: BottomNavigationView
    private val br: BroadcastReceiver = ConnectivityBroadcastReceiver()
    private val filter = IntentFilter("android.net.conn.CONNECTIVITY_CHANGE")
    //Listener za click
    private val mOnNavigationItemSelectedListener =
        BottomNavigationView.OnNavigationItemSelectedListener { item ->
        when (item.itemId) {
            R.id.navigation_favorites -> {
                val favoritesFragment = FavoriteMoviesFragment.newInstance()
                openFragment(favoritesFragment)
                return@OnNavigationItemSelectedListener true
            }
        }
    }
}

```

```

        R.id.navigation_recent -> {
            val recentFragments = RecentMoviesFragment.newInstance()
            openFragment(recentFragments)
            return@OnNavigationItemSelectedListener true
        }
        R.id.navigation_search -> {
            val searchFragment = SearchFragment.newInstance()
            openFragment(searchFragment)
            return@OnNavigationItemSelectedListener true
        }
    }
    false
}

override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContentView(R.layout.activity_main)
    AppCompatDelegate.setDefaultNightMode(AppCompatDelegate.MODE_NIGHT_YES)
    bottomNavigation= findViewById(R.id.navigationView)

    bottomNavigation.setOnNavigationItemSelectedListener(mOnNavigationItemSelectedListener)

    //Defaultni fragment
    bottomNavigation.selectedItemId= R.id.navigation_favorites
    val favoritesFragment = FavoriteMoviesFragment.newInstance()
    openFragment(favoritesFragment)
}

//Funkcija za izmjenu fragmenta
private fun openFragment(fragment: Fragment) {
    val transaction = supportFragmentManager.beginTransaction()
    transaction.replace(R.id.container, fragment)
    transaction.addToBackStack(null)
    transaction.commit()
}

override fun onResume() {
    super.onResume()
    registerReceiver(br, filter)
}

override fun onPause() {
    unregisterReceiver(br)
    super.onPause()
}
}
}

```

Izmjenimo sada naše odgovarajuće klase za fragmente, da rade predviđeno. **Napomena:** Za context se sada koristi activity. LayoutManager naših RecyclerView neka sada bude GridLayoutManager.

FavoriteMoviesFragment.kt :

```

class FavoriteMoviesFragment : Fragment() {
    private lateinit var favoriteMovies: RecyclerView
    private lateinit var favoriteMoviesAdapter: MovieListAdapter
    private var movieListViewModel = MovieListViewModel()
}

```

```

        override fun onCreateView(inflater: LayoutInflater, container: ViewGroup?,
savedInstanceState: Bundle?): View? {
            var view = inflater.inflate(R.layout.favorites_fragment, container, false)
            favoriteMovies = view.findViewById(R.id.favoriteMovies)
            favoriteMovies.layoutManager = GridLayoutManager(activity, 2)
            favoriteMoviesAdapter = MovieListAdapter(arrayListOf()) { movie ->
showMovieDetails(movie) }
            favoriteMovies.adapter=favoriteMoviesAdapter
            favoriteMoviesAdapter.updateMovies(movieListViewModel.getFavoriteMovies())
            return view;
        }
        companion object {
            fun newInstance(): FavoriteMoviesFragment = FavoriteMoviesFragment()
        }
        private fun showMovieDetails(movie: Movie) {
            val intent = Intent(activity, MovieDetailActivity::class.java).apply {
                putExtra("movie_title", movie.title)
            }
            startActivity(intent)
        }
    }
}

```

Analogno ćemo uraditi i za `RecentMoviesFragment` .

Na ovaj način će biti prikazane odgovarajuće liste filmova. Preostaje nam još da implementiramo odgovor na akciju za search. Search fragment ćemo izmijeniti na sljedeći način:

```

class SearchFragment : Fragment() {
    private lateinit var searchText: EditText
    override fun onCreateView(
        inflater: LayoutInflater,
        container: ViewGroup?,
        savedInstanceState: Bundle?
    ): View? {
        var view = inflater.inflate(R.layout.search_fragment, container, false)
        searchText = view.findViewById(R.id.searchText)
        arguments?.getString("search")?.let {
            searchText.setText(it)
        }
        return view;
    }
    companion object {
        fun newInstance(search:String): SearchFragment = SearchFragment().apply {
            arguments = Bundle().apply {
                putString("search", search)
            }
        }
    }
}

```

U sklopu inicijalizacije fragmenta se sada traži string. String se postavlja u sklopu Bundle -a. Kada inicijaliziramo fragment u glavnoj aktivnosti prosljeđit ćemo

odgovarajući string pretrage ili prazan string.

U `onCreate` ćemo dodati sljedeće:

```
if(intent?.action == Intent.ACTION_SEND && intent?.type == "text/plain")
    handleSendText(intent)
```

Metoda `handleSendText` će sada izgledati ovako:

```
private fun handleSendText(intent: Intent) {
    intent.getStringExtra(Intent.EXTRA_TEXT)?.let {
        bottomNavigation.selectedItemId= R.id.navigation_search
        val searchFragment = SearchFragment.newInstance(it)
        openFragment(searchFragment)
    }
}
```

Sada naša aplikacija radi jednako kao i ranije, ali sa fragmentima.

Napomena: Da li smo omiljene i nove filmove mogli implementirati kroz jednu klasu? Koje su prednosti, a koji nedostaci ovog vida implementacije?

ZSR

- Za svaki film dodati listu glumaca i sličnih filmova (možete koristiti obične String nizove)
- Omogućiti da se klikom na dugme prikazuje lista glumaca ili lista sličnih filmova na detaljima o filmu.
- Omogućiti da `onBackPressed()` radi ispravno.