TASK GUIDE (B4.08)

A. Objectives.

Student will start to write the code for InvertActivity which contains GridLayout for Invertebrates animal picture. Student also will write the code for SubInvertActivity.

B. Requirements.

Hardware:

- 2 GB RAM minimum, 8 GB RAM recommended
- 2 GB of available disk space minimum, 4 GB Recommended (500 MB for IDE + 1.5 GB for Android SDK and emulator system image)
- 1280 x 800 minimum screen resolution
- Intel processor with support for Intel VT-x, Intel EM64T (Intel 64), and Execute Disable (XD) Bit functionality

Software:

- Microsoft Windows 7/8/10 (32-bit or 64-bit)
- JDK 8
- Android Studio IDE (Minimum 3.2) with AndroidX library.

C. Resources.

Documents:

- Guide

Supplement files:

Test code:

- TestB4MultimediaResources081.java

D. Task Description.

Student start to write the code for InvertActivity and SubInvertActivity.

E. Specification.

1. Open “InvertActivity.java” in java folder.

2. Create onClickListener for ImageView with id ‘insectPic’ in onCreate method. It will to open the SubInvertActivity with scene transition animation between related ImageView. Put this code in the ‘onClick’ method:

```
Intent intent = new Intent(getApplicationContext(),SubInvertActivity.class);
intent.putExtra("TITLE_ANIMAL", "Insects");
ActivityOptionsCompat options =
   ActivityOptionsCompat.makeSceneTransitionAnimation(
      InvertActivity.this, insectPic, ViewCompat.getTransitionName(insectPic));
startActivity(intent, options.toBundle());
```

3. Create onClickListener for ImageView with id ‘arachnidPic’ in onCreate method. It will to open the SubInvertActivity with scene transition animation between related ImageView. Put this code in the ‘onClick’ method:

```
Intent intent = new Intent(getApplicationContext(),SubInvertActivity.class);
intent.putExtra("TITLE_ANIMAL", "Arachnids");
ActivityOptionsCompat options =
   ActivityOptionsCompat.makeSceneTransitionAnimation(
      InvertActivity.this, arachnidPic, ViewCompat.getTransitionName(arachnidPic));
startActivity(intent, options.toBundle());
```

4. Create onClickListener for ImageView with id ‘molluscPic’ in onCreate method. It will to open the SubInvertActivity with scene transition animation between related ImageView. Put this code in the ‘onClick’ method:

```
Intent intent = new Intent(getApplicationContext(),SubInvertActivity.class);
intent.putExtra("TITLE_ANIMAL", "Molluscs");
ActivityOptionsCompat options =
   ActivityOptionsCompat.makeSceneTransitionAnimation(
      InvertActivity.this, molluscPic, ViewCompat.getTransitionName(molluscPic));
startActivity(intent, options.toBundle());
```

5. Create onClickListener for ImageView with id ‘crustaceanPic’ in onCreate method. It will to open the SubInvertActivity with scene transition animation between related ImageView. Put this code in the ‘onClick’ method:

```
Intent intent = new Intent(getApplicationContext(),SubInvertActivity.class);
intent.putExtra("TITLE_ANIMAL", "Crustaceans");
ActivityOptionsCompat options =
   ActivityOptionsCompat.makeSceneTransitionAnimation(
   InvertActivity.this, crustaceanPic, ViewCompat.getTransitionName(crustaceanPic));
startActivity(intent, options.toBundle());
```

6. Create onClickListener for ImageView with id ‘mediaButton’ in onCreate method. It will to open the MediaActivity with transition animation. Put this code in the ‘onClick’ method:

```
startActivity(new Intent(getApplicationContext(),MediaActivity.class));
overridePendingTransition(R.anim.slide_in_right, R.anim.slide_out_right);
```

7. Create onClickListener for ImageView with id ‘finishButton’ in onCreate method. It will to open the MainActivity with transition animation. Put this code in the ‘onClick’ method:

```
startActivity(new Intent(getApplicationContext(),MainActivity.class));
overridePendingTransition(R.anim.slide_in_right, R.anim.slide_out_right);
```

8. Then, open “SubInvertActivity.java” in java folder.

9. Add a code to assign 1 ImageView and 2 TextViews in the layout, like below:

```
ImageView img = findViewById(R.id.mainPic);
TextView name = findViewById(R.id.mainName);
TextView detail = findViewById(R.id.mainDetail);
```

Get the selected animal from extra:

```
String title = getIntent().getStringExtra("TITLE_ANIMAL");
```

Set all contents related to selected animal:

```
if (title != null) {
   if (title.equals("Insects")) {
      img.setImageResource(R.drawable.insects);
      name.setText(title);
      detail.setText(R.string.insect_content);
   } else if (title.equals("Arachnids")) {
      img.setImageResource(R.drawable.arachnids);
      name.setText(title);
      detail.setText(R.string.arachnid_content);
   } else if (title.equals("Molluscs")) {
      img.setImageResource(R.drawable.molluscs);
      name.setText(title);
      detail.setText(R.string.mollusc_content);
   } else if (title.equals("Crustaceans")) {
      img.setImageResource(R.drawable.crustaceans);
      name.setText(title);
      detail.setText(R.string.crustacean_content);
   }
}
```

10. Finally, create onClickListener for LinearLayout with id ‘subLayout’ in onCreate method. It will return to InvertActivity with scene transition animation. Put this code in the ‘onClick’ method:

```
finishAfterTransition();
```

When user click in every points on this layout, the SubInvertActivity will be closed.

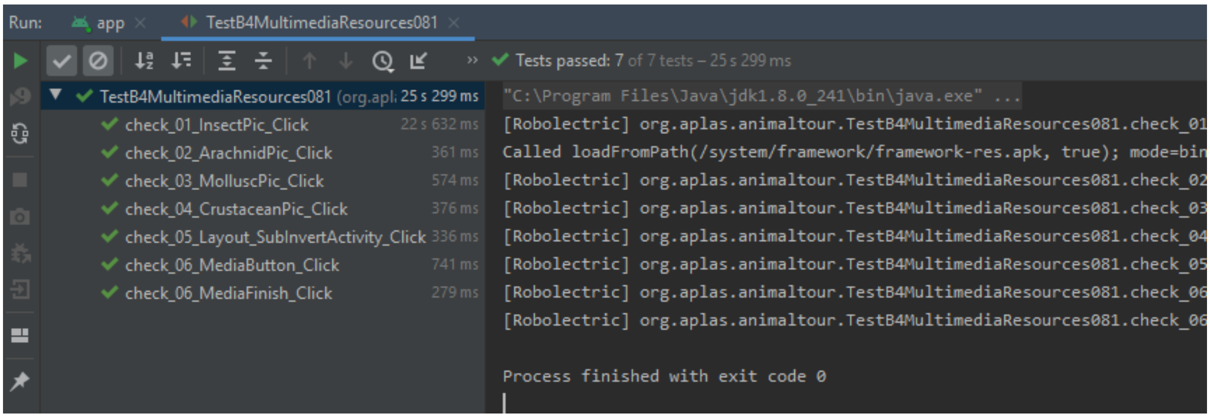
The code was complete, next go to testing stage.

F. Testing.

1. Copy “TestB4MultimediaResources081.java” file to “org.aplas.animaltour (test)” folder.

2. Right click on the “TestB4MultimediaResources081.java” file then choose Run. It may take long time to execute.

3. Get the result of your task. If passed you will get green check like below. If the test failed, you would get orange check get the messages and you must check your work again.

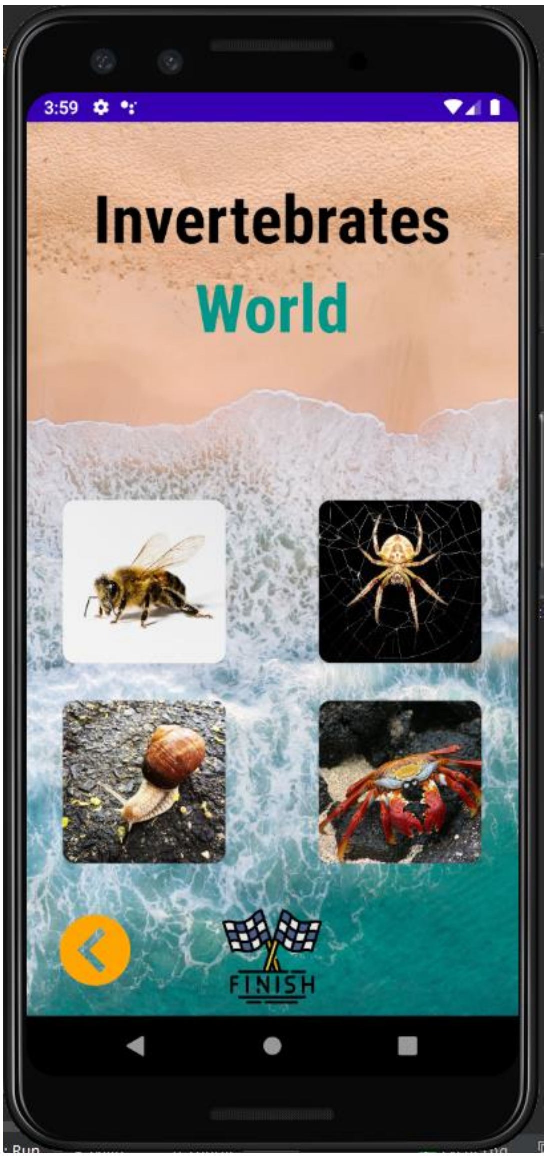


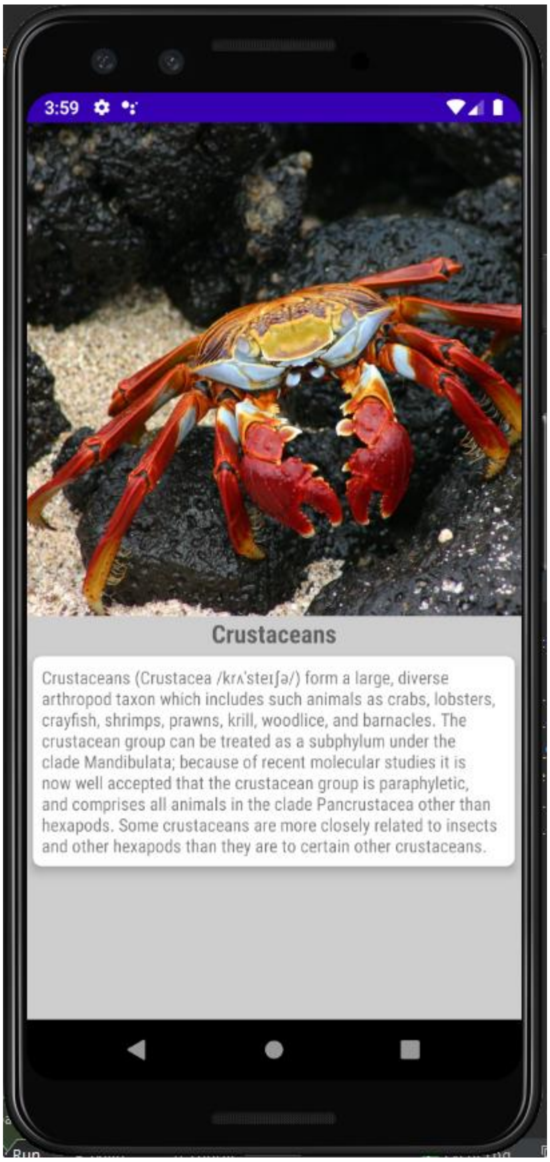
```
✓ Tests passed: 7 of 7 tests – 25 s 299 ms

▼ ✓ TestB4MultimediaResources081 (org.apl; 25 s 299 ms
    ✓ check_01_InsectPic_Click                22 s 632 ms
    ✓ check_02_ArachnidPic_Click                   361 ms
    ✓ check_03_MolluscPic_Click                    574 ms
    ✓ check_04_CrustaceanPic_Click                 376 ms
    ✓ check_05_Layout_SubInvertActivity_Click      336 ms
    ✓ check_06_MediaButton_Click                   741 ms
    ✓ check_06_MediaFinish_Click                   279 ms
```

```
"C:\Program Files\Java\jdk1.8.0_241\bin\java.exe" ...
[Robolectric] org.aplas.animaltour.TestB4MultimediaResources081.check_01
Called loadFromPath(/system/framework/framework-res.apk, true); mode=bin
[Robolectric] org.aplas.animaltour.TestB4MultimediaResources081.check_02
[Robolectric] org.aplas.animaltour.TestB4MultimediaResources081.check_03
[Robolectric] org.aplas.animaltour.TestB4MultimediaResources081.check_04
[Robolectric] org.aplas.animaltour.TestB4MultimediaResources081.check_05
[Robolectric] org.aplas.animaltour.TestB4MultimediaResources081.check_06
[Robolectric] org.aplas.animaltour.TestB4MultimediaResources081.check_06

Process finished with exit code 0
```

You have to try until get all green checkes and continue to the next task.

You can get the screen display like below when running this Activity. The style of layout depends on your layout design. Check the transition between two layouts.





Crustaceans

Crustaceans (Crustacea /krʌˈsteɪʃə/) form a large, diverse arthropod taxon which includes such animals as crabs, lobsters, crayfish, shrimps, prawns, krill, woodlice, and barnacles. The crustacean group can be treated as a subphylum under the clade Mandibulata; because of recent molecular studies it is now well accepted that the crustacean group is paraphyletic, and comprises all animals in the clade Pancrustacea other than hexapods. Some crustaceans are more closely related to insects and other hexapods than they are to certain other crustaceans.