Facultatea Calculatoare, Informatica si Microelectronica
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Medii Interactive de Dezvoltare a Produselor Soft
Lucrarea de laborator#4

Dezvoltarea unei aplicații mobile

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Obiective:

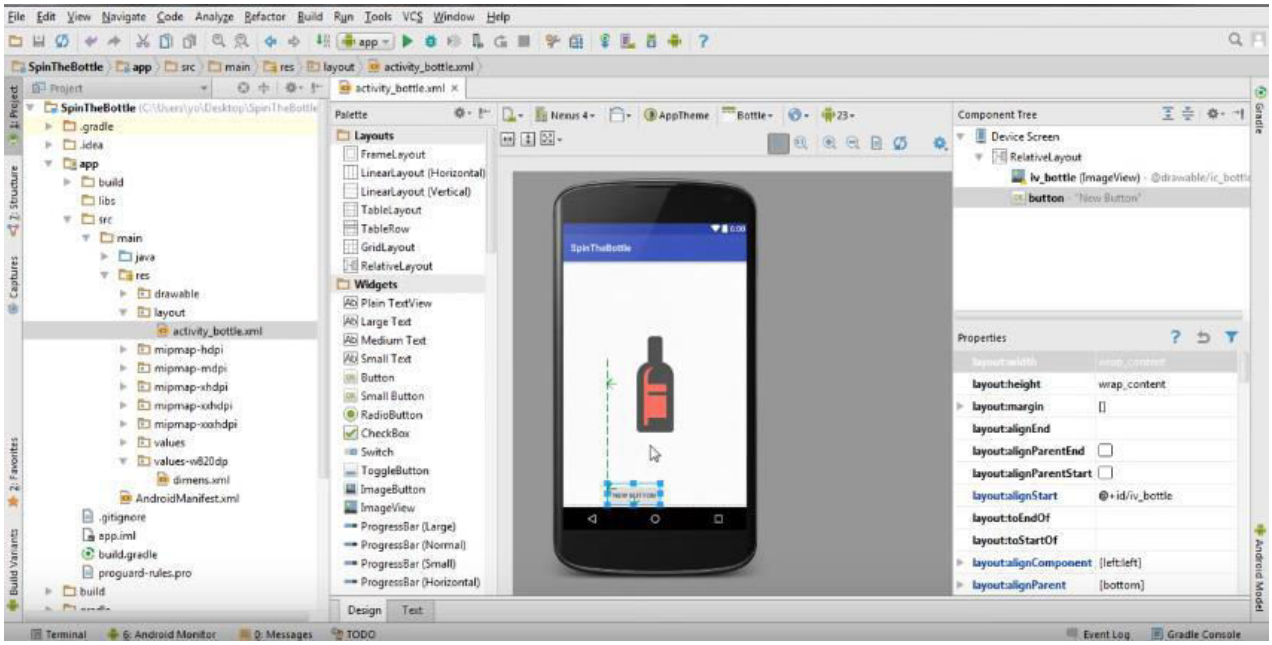
- Cunostinte de baza privind arhitectura unei aplicatii mobile
- Cunostinte de baza ale platformei SDK

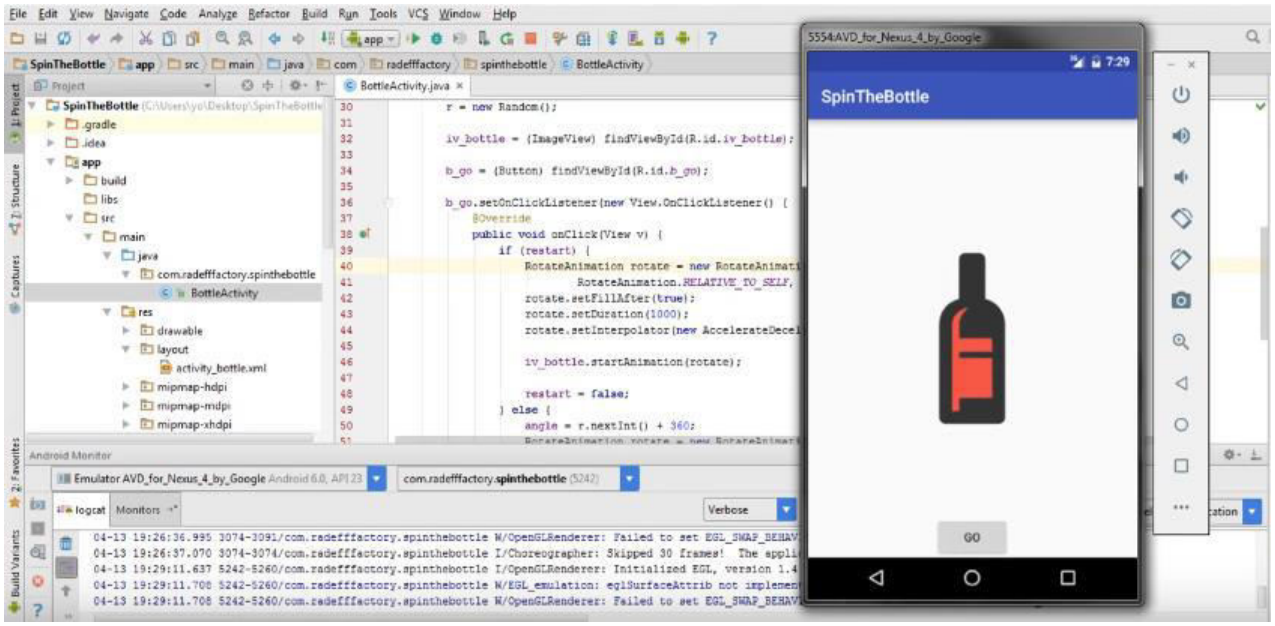
Sarcina:

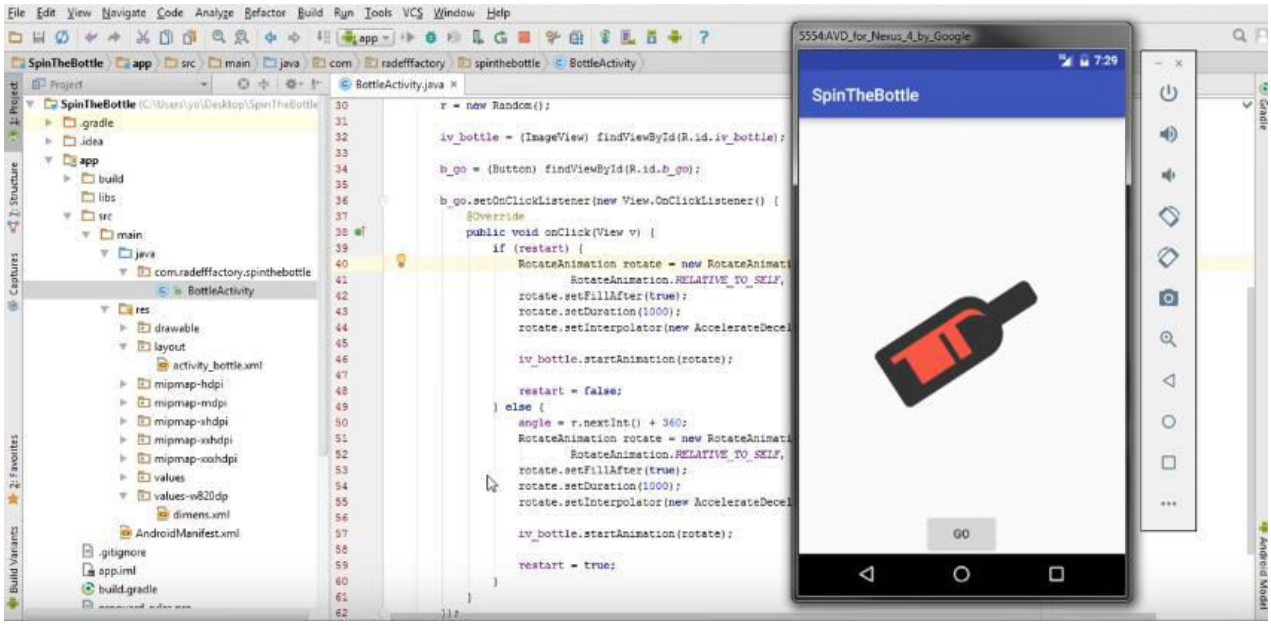
Elaboreaza o aplicatie sofisticata la alegere.

IDE-ul folosit: Android Studio.

Screenshot-urile cu proiectul in Android Studio:




File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
SpinTheBottle
BottleActivity.java
5554:AVD_for_Nexus_4_by_Google
7:29
SpinTheBottle
GO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5554:AVD_for_Nexus_4_by_Google
7:29
SpinTheBottle
GO

Listingul Programului:
activity_bottle.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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"
tools:context="com.example.user.spillthebottle.BottleActivity">
<ImageView
android:scaleType="centerInside"
android:id="@+id/iv_bottle"
android:layout_width="200dp"
android:layout_height="200dp"
android:layout_centerHorizontal="true"
android:layout_centerVertical="true"
app:srcCompat="@drawable/ic_bottle"
tools:layout_editor_absoluteX="92dp"
tools:layout_editor_absoluteY="155dp" />
<Button
android:id="@+id/b_go"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="GO"
android:layout_centerHorizontal="true"
android:layout_alignParentBottom="true"
tools:layout_editor_absoluteY="418dp"
tools:layout_editor_absoluteX="131dp" />
</android.support.constraint.ConstraintLayout>
```

BottleActivity.java

```
package com.example.user.spillthebottle;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.AccelerateDecelerateInterpolator;
import android.view.animation.RotateAnimation;
import android.widget.Button;
import android.widget.ImageView;
import java.util.Random;
public class BottleActivity extends AppCompatActivity {
ImageView iv_bottle;
Button b_go;
Random r;
int angle;
boolean restart = false;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_bottle);
r = new Random();
iv_bottle = (ImageView) findViewById(R.id.iv_bottle);
b_go = (Button) findViewById(R.id.b_go);
b_go.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) {
```

```
if (restart) {
angle = angle % 360;
RotateAnimation rotate = new RotateAnimation(
angle,360,RotateAnimation.RELATIVE_TO_SELF,0.5f,RotateAnimation.RELATIVE_TO_SE
LF,0
.5f);
rotate.setFillAfter(true);
rotate.setDuration(1000);
rotate.setInterpolator(new AccelerateDecelerateInterpolator());
iv_bottle.startAnimation(rotate);
b_go.setText("GO");
restart = false;
}
else
{
angle = r.nextInt(3600) +360;
RotateAnimation rotate = new RotateAnimation(
0,angle,RotateAnimation.RELATIVE_TO_SELF,0.5f,RotateAnimation.RELATIVE_TO_SELF
,0.5
f);
rotate.setFillAfter(true);
rotate.setDuration(3600);
rotate.setInterpolator(new AccelerateDecelerateInterpolator());
iv_bottle.startAnimation(rotate);
restart = true;
b_go.setText("RESET");
}
}
});
}
}
```

Concluzie:

În urma efectuarii lucrării de laborator, am făcut cunoștiință cu un nou IDE: Android Studio.Am creat o
aplicație android-un mic joc, testând-o pe versiunea API 10. Am studiat structura unei aplicații android. Am
explorat elementele de interfață grafică a softului. Am folosit layout de tipul Constraint și mai multe tipuri
de emulator. Am utilizat în aplicație Button,ImageView.