Universitatea Tehnica a Moldovei

Facultatea Calculatoare Informatica si Microelectronica

Medii Interactive de Dezvolatare a Produselor Soft

Lucrare de laborator#4

Dezvoltarea unei aplicatii mobile

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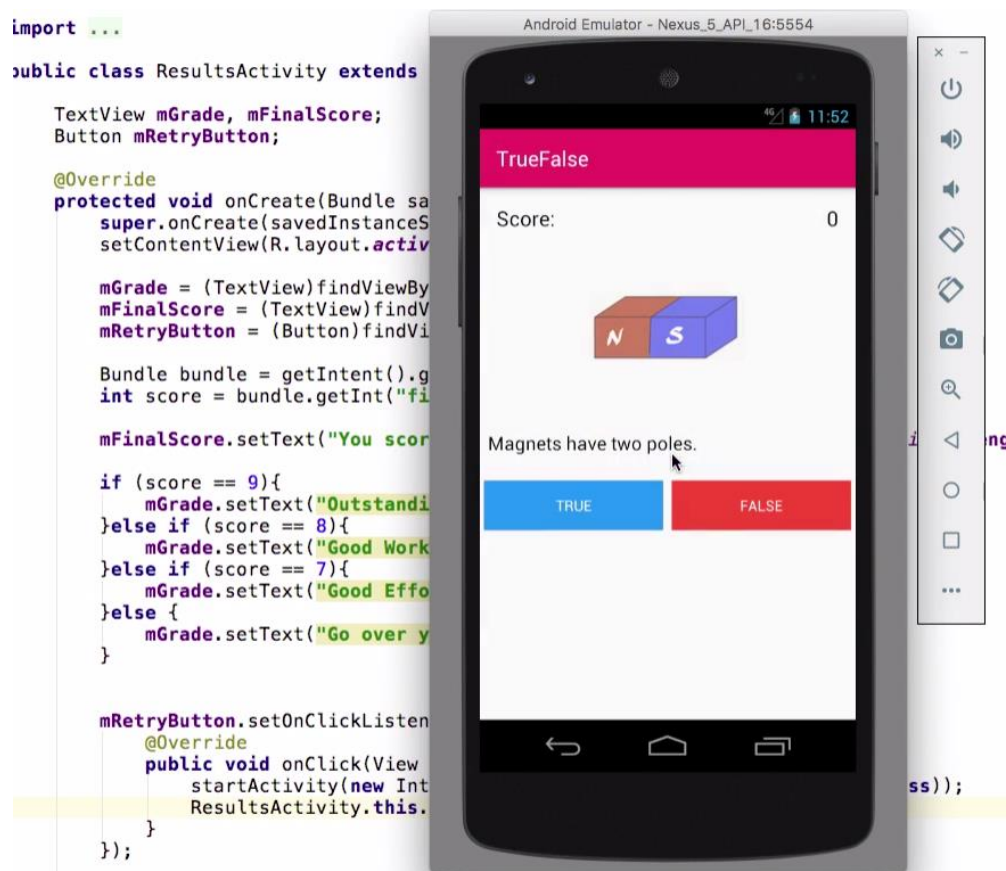

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Lucrarea de laborator#2
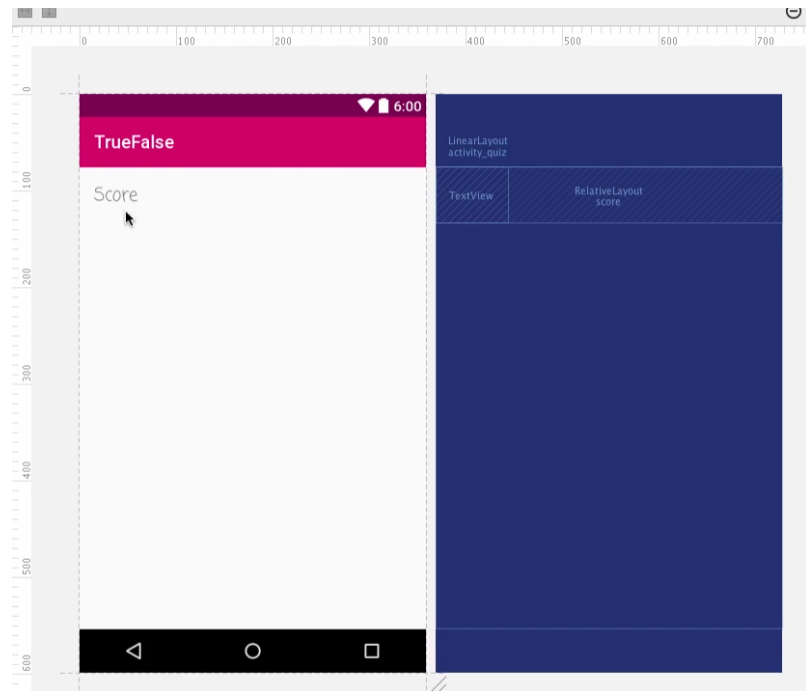
1. Scopul lucrarii:

Realizarea aplicatiei de tip **Quiz** pe platforma **Android.**

2. Mersul lucrarii
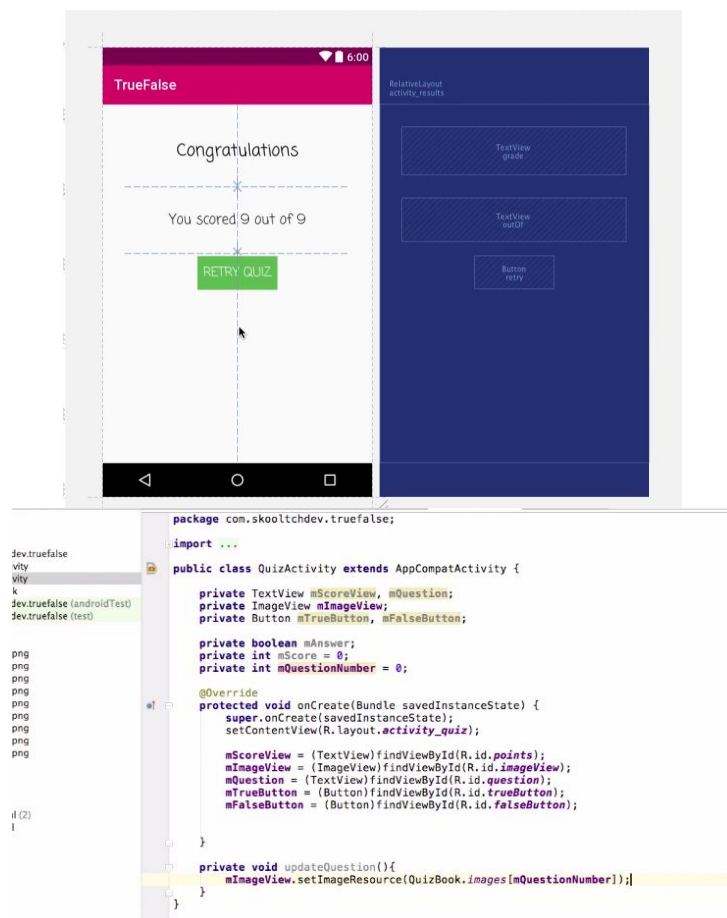
In procesul lucrarii date am facut cunostinta cu limbajul Java si arhitectura acestuia. Ca mediu de dezvoltare am folosit Android Studio, care are o interfata foarte user-friendly si o functionalitate foarte mare. Aplicatie este in exculisivitate pentru platforma Android. Aplicatia este un simplu Quiz cu intrebari de cunostinte generale din fizica.

1. Una din intrebarile aplicatiei

2. Crearea paginii de afisare a scorului.


```
package com.skooltchdev.truefalse;

import ...

public class QuizActivity extends AppCompatActivity {

    private TextView mScoreView, mQuestion;
    private ImageView mImageView;
    private Button mTrueButton, mFalseButton;

    private boolean mAnswer;
    private int mScore = 0;
    private int mQuestionNumber = 0;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_quiz);

        mScoreView = (TextView)findViewById(R.id.points);
        mImageView = (ImageView)findViewById(R.id.imageView);
        mQuestion = (TextView)findViewById(R.id.question);
        mTrueButton = (Button)findViewById(R.id.trueButton);
        mFalseButton = (Button)findViewById(R.id.falseButton);

    }

    private void updateQuestion(){
        mImageView.setImageResource(QuizBook.images[mQuestionNumber]);
    }
}
```

2.1 Codul pentru aceasta pagina

```
            ▼ □java
              ▼ □com.skooltchdev.truefalse
                    © ⓑ MainActivity
                    © ⓑ QuizActivity
                    © ⓑ QuizBook
              ▶ □com.skooltchdev.truefalse (androidTest)
              ▶ □com.skooltchdev.truefalse (test)
            ▼ □res
              ▼ □drawable
                    img_0512.png
                    img_0516.png
                    img_0521.png
                    img_0522.png
                    img_0523.png
                    img_0525.png
                    img_0526.png
                    img_0527.png
                    img_0528.png
              ▶ □layout
              ▶ □mipmap
              ▼ □values
                    colors.xml
              ▶ □dimens.xml (2)
                    strings.xml
                    styles.xml
            ▶ ⓒ Gradle Scripts
```

```xml
                android:textColor="#000"
                android:layout_alignParentLeft="true"
                android:textSize="20sp"
                android:fontFamily="casual"
                android:text="Score:"
                android:padding="16dp"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content" />

            <TextView
                android:textColor="#000"
                android:textSize="20sp"
                android:id="@+id/points"
                android:fontFamily="casual"
                android:text="0"
                android:layout_alignParentRight="true"
                android:padding="16dp"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content" />

        </RelativeLayout>

        <ImageView
            android:scaleType="fitCenter"
            android:src="@drawable/img_0512"
            android:id="@+id/imageView"
            android:layout_marginBottom="16dp"
            android:layout_gravity="center"
            android:layout_width="150dp"
            android:layout_height="150dp" />
```

3. Adaugarea imaginilor pentru fiecare intrebare


```java
public void onClick(View view) {

    if (mAnswer == true){
        mScore++; //This updates the score int variable
        updateScore(mScore); //This converts the int variable to a String and adds it to mScoreView

        //Perform this check before you update the question
        if (mQuestionNumber == QuizBook.questions.length){
            Intent i = new Intent(QuizActivity.this, ResultsActivity.class);
            Bundle bundle = new Bundle();
            bundle.putInt("finalScore", mScore);
            i.putExtras(bundle);
            QuizActivity.this.finish();
            startActivity(i);
        }else {
            updateQuestion();
        }
    }

    //If the user's answer is wrong
    else {
        if (mQuestionNumber == QuizBook.questions.length){
            Intent i = new Intent(QuizActivity.this, ResultsActivity.class);
            Bundle bundle = new Bundle();
            bundle.putInt("finalScore", mScore);
            i.putExtras(bundle);
            QuizActivity.this.finish();
            startActivity(i);
        }else {
            updateQuestion();
        }
    }
}
});
```
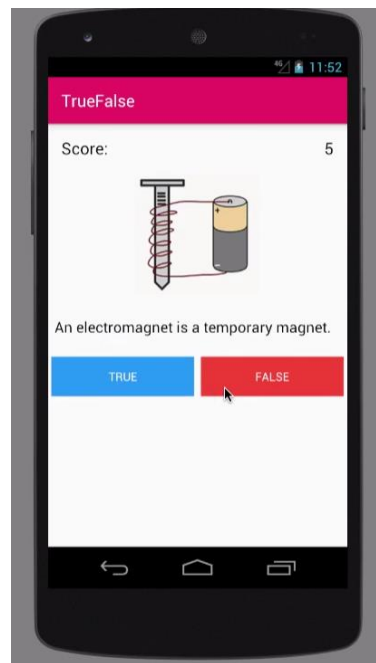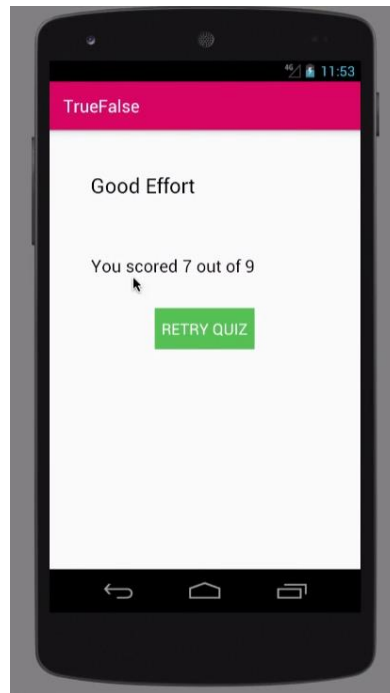
4. Final view

Concluzie:

Lucrare de laborator nr.3 a fost un prim-pas in dezvoltarea aplicatiilor mobile. Aici s-a folosit limbajul Java si Android Studio, dar exista si o alta multitudine de tehnologii cu care pot fi create cele mai complexe aplicatii pentru Android/iOS. In aplicatie exista butonul de incepere a Quiz-ului cit de resetare a scorului.