Ministerul Educaţiei al Republicii Moldova

Universitatea Tehnică a Moldovei
Catedra Tehnologii Informaţionale

RAPORT

Lucrarea de laborator : 5
la Medii Interactive de Dezvoltare a Produselor Soft

Tema: Dezvoltarea unei aplicatii mobile

A efectuat: Besliu Doina

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Chişinău 2016

Scopul lucrării:

Dezvoltarea unei aplicatii mobile

- **Visual Studio**
- **Xcode**
- **Android Studio**
- Eclipse
- NetBeans

Prerequisites:

- IDEs: Visual Studio, Xcode, Android Studio, Eclipse, NetBeans
- Limbaje de programare: C#, JavaScript, Objective C, Java, Swift
- Tehnologii si Frameworks: Windows Mobile, iOS, Android

Obiective:

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

Conditii Generale:

Se considera ca ai trecut cu succes laboratorul daca ai urmat toti pasii din:

1. Submission Process
2. Trebuie sa elaborezi un program prototip care il vei arata in timpul laboratorului
3. Ai respectat DL (data limita)

Technical Prerequisites:

- Your application must be developed and tested in SDK included Emulator.
- You probably would like to run your application on real device.
- Your application must support multiple screen resolutions.

Laboratory Requirements:

- *Basic Level* (nota 5 || 6) :
  - Realizeaza o aplicatie simpla "Hello world" care va contine 2 butoane care vor afisa 2 pagini diferite, folosing 2 elemente diferite de interactiune
- *Normal Level* (nota 7 || 8):
  - Implimenteaza un simplu ceas sau stopwatch
- *Advanced Level* (nota 9 || 10):
  - Realizeaza o aplicatie care va implimenta tehnica *Pomodoro* **SAU**
  - O alta aplicatie sofisticata la alegere
    - Game
- *Bonus Point*
  - Foloseste libraria cross platform pentru a realiza o apliacatie cross platform (aplicatia poate fi compilata atit pe Android, cit si pe iOS)
  - Folosirea Facebook/Twitter/Google Maps API

Cod Sursa:

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context="com.example.user.myapplication.MainActivity"
    tools:showIn="@layout/main"
    android:background="@color/colorPrimary">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/time_view"
        android:textSize="70sp"
        android:text="0:00:00"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start"
        android:id="@+id/btnStart"
        android:onClick="onClickStart"
        android:layout_below="@+id/time_view"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="66dp"
        android:textColor="#ffffff"
        android:singleLine="false"
        android:background="@color/colorAccent" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Stop"
        android:id="@+id/btnStop"
        android:onClick="onClickStop"
        android:textColor="#ffffff"
        android:layout_centerVertical="true"
        android:layout_alignLeft="@+id/btnReset"
        android:layout_alignStart="@+id/btnReset"
        android:background="#575052" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Reset"
        android:id="@+id/btnReset"
        android:onClick="onClickReset"
        android:layout_below="@+id/btnStop"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="43dp"
        android:textColor="#ffffff"
        android:background="#575052" />


</RelativeLayout>
```

Main:

```xml
<?xml version="1.0" encoding="utf-8"?>
<android.support.design.widget.CoordinatorLayout
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"
    android:fitsSystemWindows="true"
    tools:context="com.example.user.myapplication.MainActivity">

    <android.support.design.widget.AppBarLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:theme="@style/AppTheme.AppBarOverlay">

        <android.support.v7.widget.Toolbar
            android:id="@+id/toolbar"
            android:layout_width="match_parent"
            android:layout_height="?attr/actionBarSize"
            android:background="#575052"
            app:popupTheme="@style/AppTheme.PopupOverlay" />

    </android.support.design.widget.AppBarLayout>

    <include layout="@layout/content_scrolling" />

    <android.support.design.widget.FloatingActionButton
        android:id="@+id/fab"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="bottom|end"
        android:layout_margin="@dimen/fab_margin"
        android:src="@android:drawable/ic_dialog_email"
        android:background="#ffffff" />

</android.support.design.widget.CoordinatorLayout>
```

Aplicatia:

Link-ul catre repozitoriu online: https://github.com/DoinaBesliu/MIDPS.git

Concluzie:

In urma efectuarii acestei lucrari de laborator am capatat experienta in lucrul cu Android Studio. Am realizat un simplu cronometru format din 3 butoane (Start, Stop, Restore) care poate fi utilizat in orice situatie.Aplicatia a fost testata cu succes pe un telefon cu sistemul de operare Android. Modul de utilizare al aplicaţiei MyApplication este simplu, prin gesturi pe ecran se pot seta butoanele.Scopurile propuse au fost realizate.