



# FINAL PROJECT - Quizzer

**ITEC 399**

**Date:**

**Name and Surname:**

**Student Number:**

# Table of Contents

<a href="#">Objectives</a>	1
<a href="#">Introduction</a>	1
<a href="#">Logic of the app</a>	2
<a href="#">Preparation</a>	3
<a href="#">Idea</a>	3
<a href="#">Prototyping</a>	3
<a href="#">Creating and finding image assets</a>	3
<a href="#">Creating the app</a>	4
<a href="#">Setting up the project and manifest/styles</a>	4
<a href="#">Activities</a>	5
<a href="#">Main Activity</a>	5
<a href="#">Choose quiz Activity</a>	6
<a href="#">Quiz question activity for flags</a>	7
<a href="#">Quiz question activity 2 for maths</a>	8
<a href="#">Result activity</a>	9
<a href="#">Tools &amp; Techniques used</a>	10
<a href="#">File structure</a>	10
<a href="#">Conclusion</a>	11

# Objectives

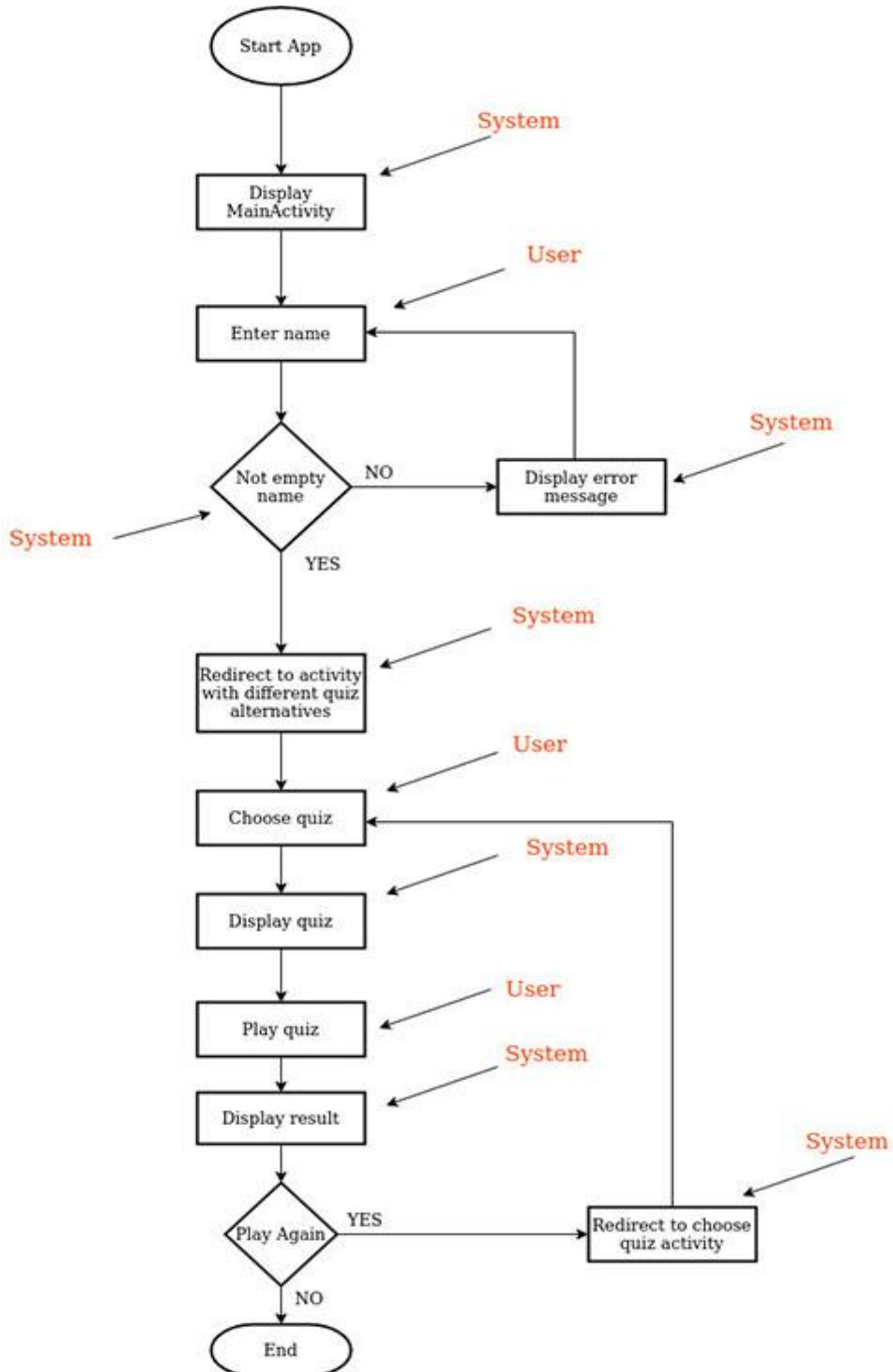
- **Introduce the application quizzer**
- **Give technical details about the app**
- **Demonstrate the general process of developing the app**
- **Personal view on the project**

# Introduction

In this report I will be presenting an android application developed in Android studio using the programming language Kotlin. The application itself is an app which enables users of it to complete quizzes based on different topics that they can choose between. In terms of goal and purpose of the application, it is meant to be a mean for educational purpose but also for general purpose such as enjoyment and etc. So, it's not simulating an exam that is taken in university (involving grades and etc), but rather for enjoyment and learning purposes.

# Logic of the App

The flowchart below is demonstrating the general logic and flow of the app. It also has some arrows and text in order to clarify which activity is done by whom(system or user):



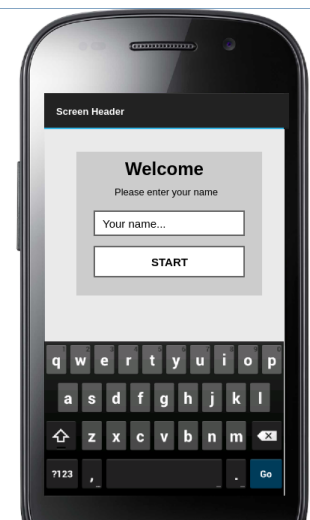
# Preparation

## Idea

The first thing I did was to come up with an idea of what I want to build. So, I visualized some activities using a basic prototyping tool called “Pencil project” and after doing so I soon decided that I should build a quiz application where users of the app can choose between different categories of applications and answer multiple choice questions about the topic that they’ve chosen. At this stage I also decided to call the application *Quizzer*.

## Prototyping

Later after getting the idea of what I should build I basically created the prototypes of the activities that I decided to include in my project. I used the same software to create the prototypes(Pencil project). For the purpose of demonstration I have attached an image of one of the prototypes that I created next to this paragraph.



## Creating and Finding Image Assets

- After having established the prototypes of the activities I decided to create a logo for the application and for that I used an Image editing tool called GIMP which is pretty known for being a free alternative to Adobe Photoshop.
- Later I browsed the Internet looking for suitable images that I possibly can use in my project and did some editing such as adding descriptive text on to them using GIMP and lastly stored these images within the *drawable* folder under the *res* folder.



# Creating the App

## Setting up the Project and Manifest / Styles

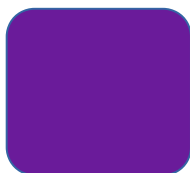
After finalizing the preparation phase of the project , I could finally start building the app. I started by creating a project which uses minimum SDK *JellyBean* which enables the application to run on approximately 99.8% of all android based devices. Then I moved on to configuring my application to only use portrait mode in terms of orientation, because I really believe that this app is only suitable for using in this mode. Of course, there are benefits of using landscape mode in terms of accessibility, but I really don't think that using landscape mode makes sense in this particular app where questions are being displayed sequentially and scrolling in landscape mode would just make the UX so cumbersome. In this step I also added my colors that I will be using.

These are briefly steps that I did in this part:

- Create a project
- Set orientation to portrait
- Define style for NoActionBar
- Add dependency to gradle file for google material design
- Import images to Android Studio
- Add colors to colors.xml file



**Name:** colorPrimary  
**HEX:** #9013FE



**Name:** colorPrimaryDark  
**HEX:** #6A1B9A



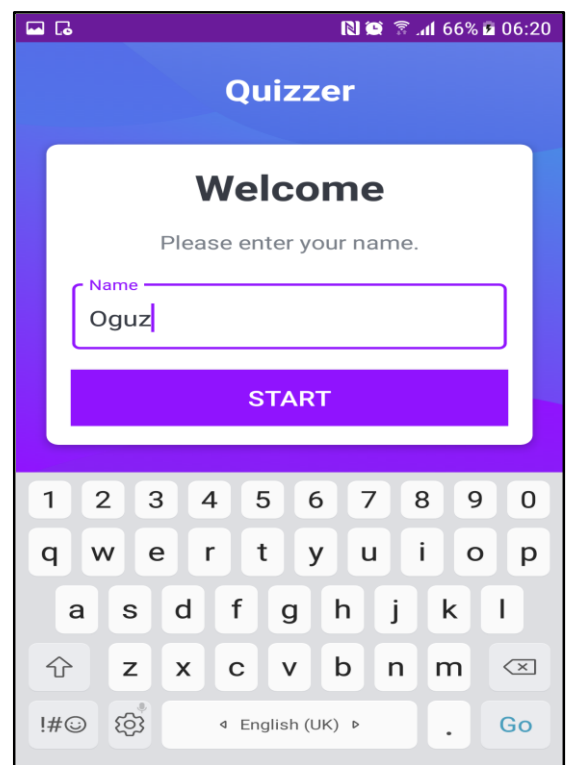
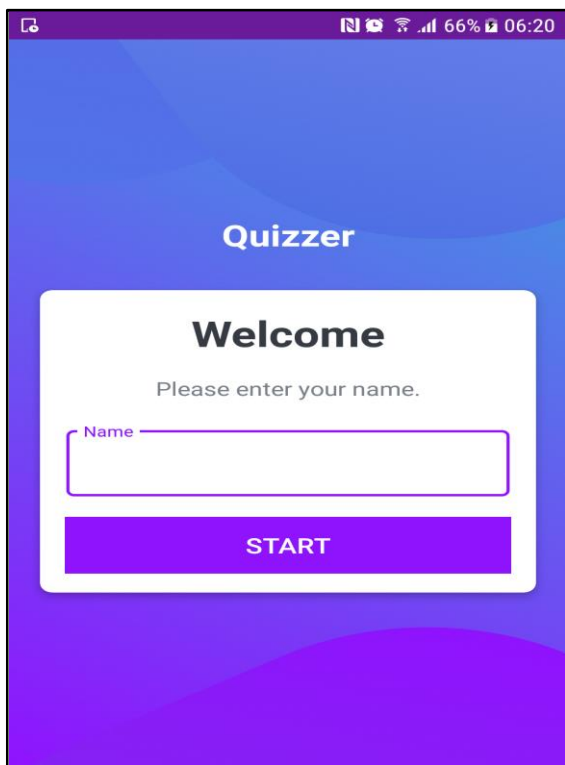
**Name:** colorAccent  
**HEX:** #9013FE

## Activites

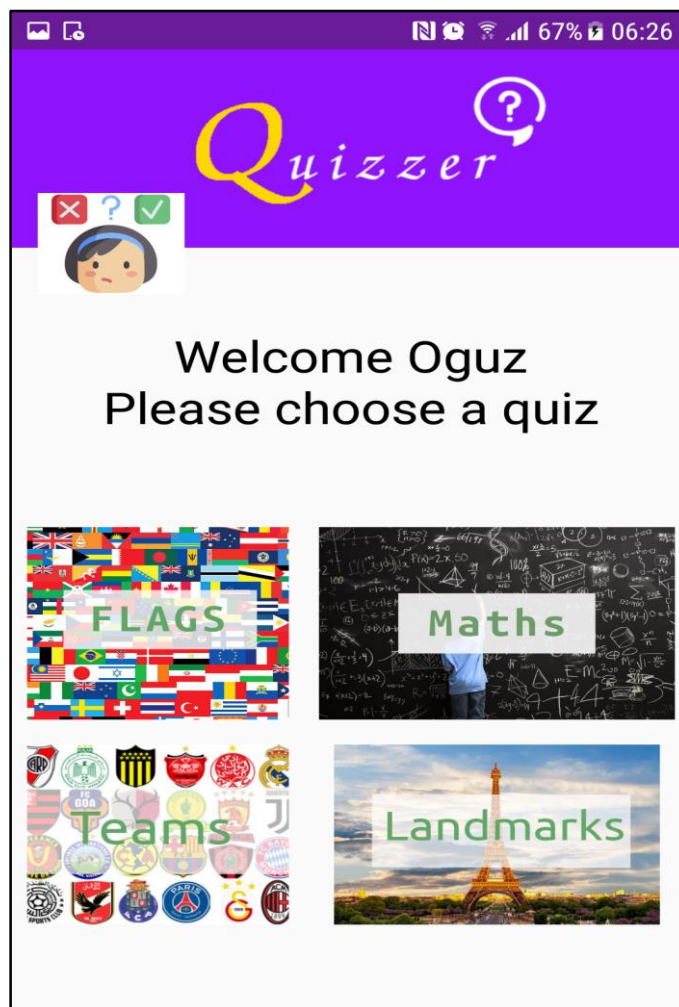
The application has in total 5 activities, which I created in order to follow the given instructions for the project. With that said, of course the amount of activities could easily be increased by creating quizzes within other topics.

Below I have attached images of each activity with explanatory text about them:

- **Main Activity (step 1):** This is the first activity that gets served to the user ones he starts the app. In this activity the user is asked to enter his/her name and then he/she will be redirected to the activity where he/she can choose the quiz that he/she want to complete.

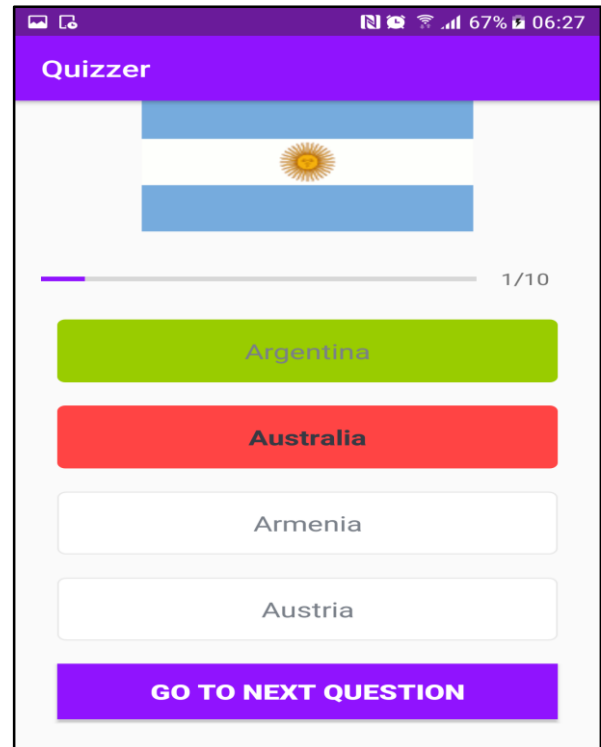
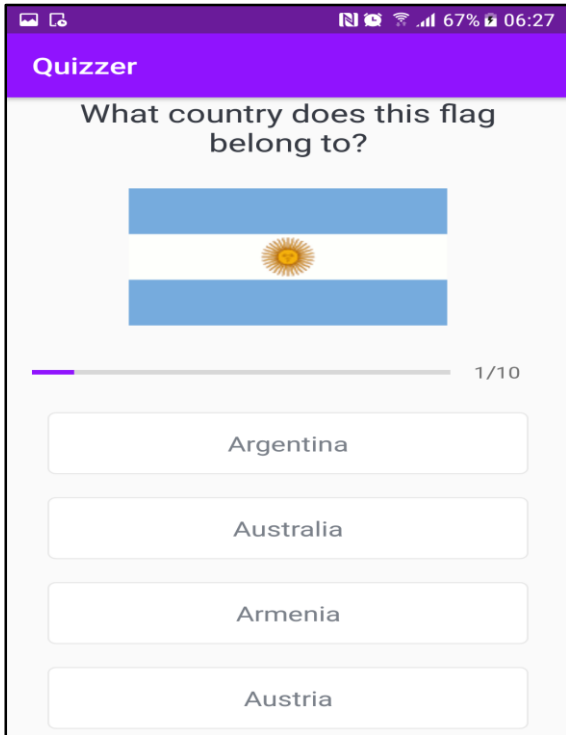


- **Choose quiz Activity (step 2):** In this activity I used one of the layouts that we created in the lessons as blueprint, because I thought that it's a very suitable layout for this type of application. The images for flags and maths are imagebuttons, so they are actually redirecting to a quiz. The other two(landmarks and teams) are normal images, their purpose is to simulate that more quizzes could easily be added(the scalability of the app). I didn't create quizzes for those images because I didn't want to exceed the amount of activities we were supposed to do(5).

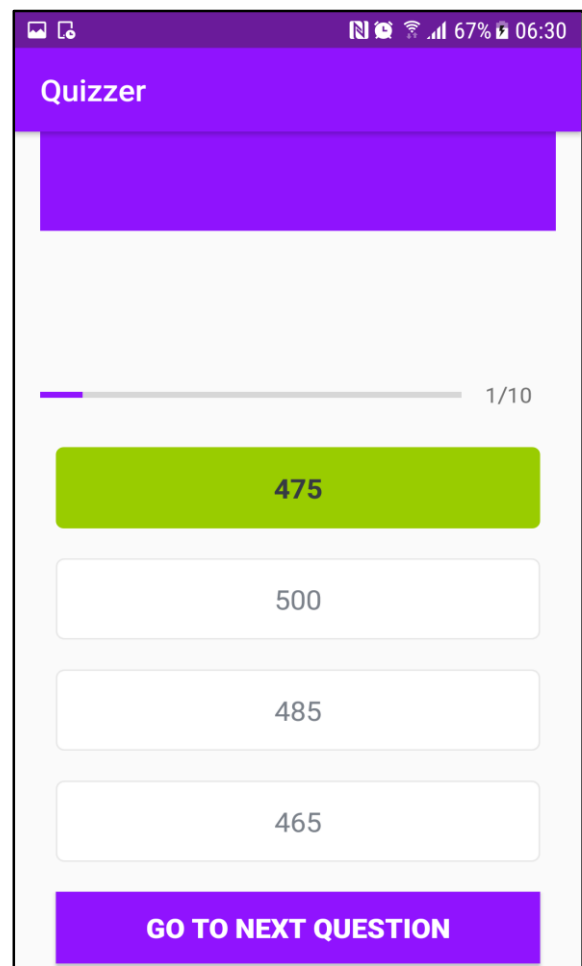




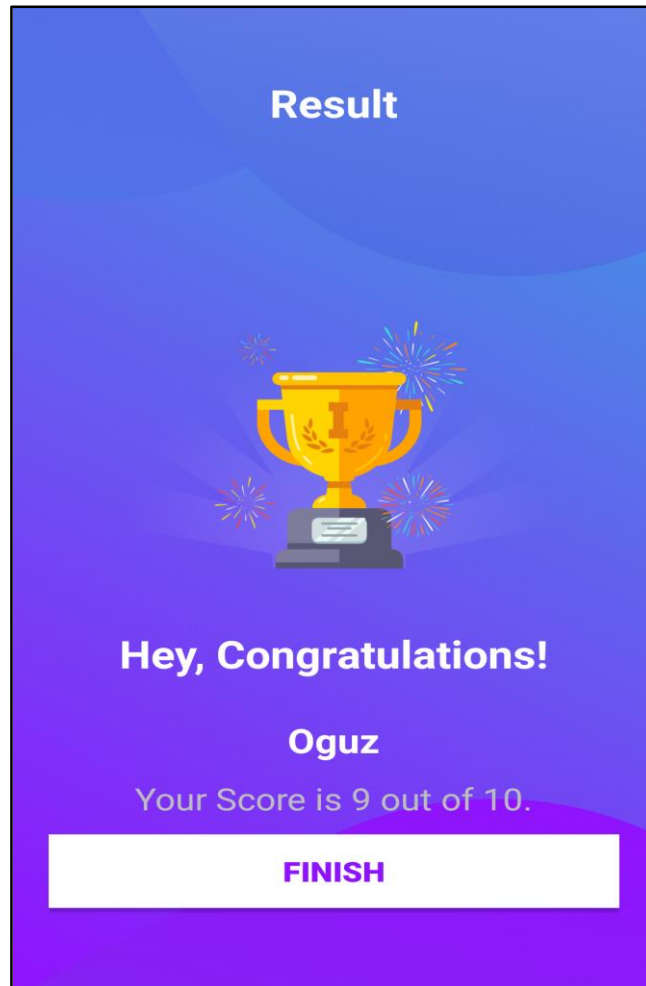
- **Quiz Questions Activity for flags (step 3):** In this activity I have multiple predefined questions and they get displayed according to their id number. It is an interactive activity which displays for the user whether he/she answered a question right or wrong. It also enables the user to pass to the next question.



- **Quiz Questions Activity 2 for maths (step 3):** In this activity I have multiple predefined questions and they get displayed according to their id number. It is an interactive activity which displays for the user whether he/she answered a question right or wrong. It also enables the user to pass to the next question.



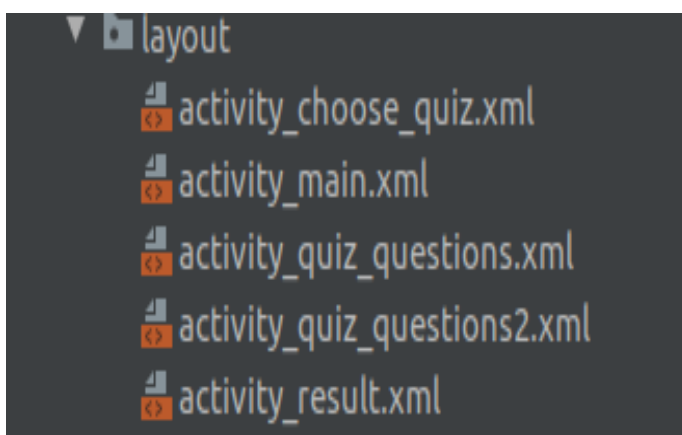
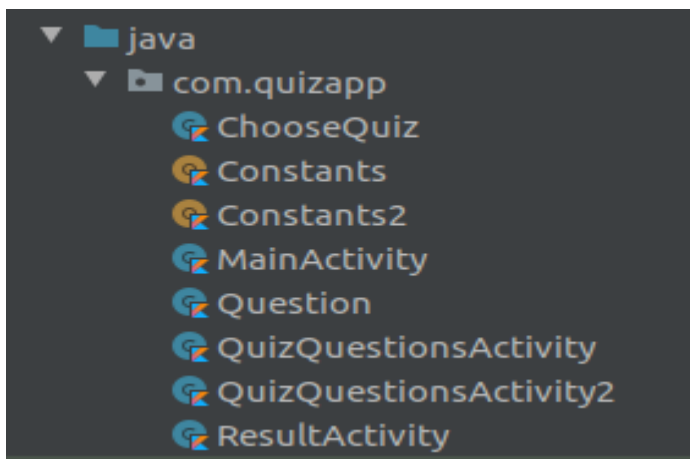
- **Result Activity (step 4):** In this activity the user can see his/her result from the quiz that was completed and possibly restart a quiz.



## Tools & Techniques used

- ✓ LinearLayout
- ✓ ConstraintLayout
- ✓ Google's material theme for cards and etc.
- ✓ Object oriented approach
- ✓ Kotlin
- ✓ Intent for redirection
- ✓ Take input and send it to another activity(putExtra)
- ✓ Check dynamically if user's answers are correct and display background images according to their answer(green or red)

## File Structure



## **Conclusion**

In conclusion, this was the presentation of my project that I did for the course ITEC 399. I really liked the fact that we got the chance to build a project with all of the things we learned during the semester. Personally, I think that this is the best way to make coding and designing skills solid and this project certainly helped me a lot in improving my skills in the aspect of building mobile applications.