**CMP2004- Advanced Java Programming Project**

**Spring 2024**

**Dr Günet Eroğlu**

**Project 1:**

Your duty is to create an Android Application that will be used by kids between 7-10 years old in the World.

***Functional requirements:***

1. The user will register and log in to the system.
2. The user will be taught to read the analog clock (such as 5 past 10) and the digital clock ( ten-fifteen).
3. The user will be taught to learn the seasons (autumn, fall, summer, spring) with multimedia animations.
4. The user will be taught to count the days of the week sequentially.
5. The user will be taught to count the months of the year sequentially.
6. The user will remember the digits shown on the screen from the beginning to the end.
7. The user will remember the digits shown on the screen in a backward manner.
8. The application will ask the user how to correctly spell/write a word.
9. The application will teach the user the directions (left, right, in front of, at the back etc).
10. The user will be taught how to do multiplication (6 \* 7 = 42 ).
11. The user will be asked to find similar pictures on the screen.
12. The user will be shown a ball on the screen. This ball moves on the screen (to the corners, to the next line like in reading) and the user needs to follow this ball on the screen with his eyes.
13. The application needs to have a learning part and a playing part.
14. Each time the user earns a point, positive feedback is given.

***Non-functional requirements:***

1. Reaching the activities from the main screen should at most take 3 clicks.
2. The response time of the program should be below 1 second.
3. The colors and design on the screen should be suitable for dyslexic kids.
4. The application should both support Turkish and English.

**Project 2:**

You will use Open AI -Chat GPT API in order to create an interactive chat bot application in Android Java. We will provide credentials to Access this Chat GPT API for free.

**Project 3:**

You may implement your own project which has at least 10 activities and a database access.

There will be a contest to present the results of this application. You will both prepare the application and the presentation and you will present it to your classmates. The projects will be voted by your classmates and the instructor. The first three projects will be rewarded with some special prizes.

You will work in groups of 3. You may have a group member from a different section. You will present your project on the 14th week of the course. The presentation will take 5 minutes as a group.