



Android Flight Simulation App

Shiraz Ayashe and Ashira Major

About us..

- Shiraz Ayashe and Ashira Major
- Second year students at Bar-Ilan University in Israel
- We collaborated to create this application in our course 'Advanced Programming 2'
- You can see more projects from us at our github accounts :

<https://github.com/ShirazAyash>

<https://github.com/ashira-major>



Overview of the app

- Written in Kotlin and Java, using MVVM architecture, this Android application allows you to become a real time pilot.
- Using this app you can control the plane in the FlightGear simulator.
- Navigation of the plane is done by a range of controllers:
 - Sliders for the throttle and rudder values of the flight.
 - A JoyStick that controls the planes movements a any given moment
- An Android app that connects to external software named FlightGear simulator

Getting started !

- Make sure you have installed the FlightGear simulator
- In the settings of the FlightGear simulator, the correct command for this app is :

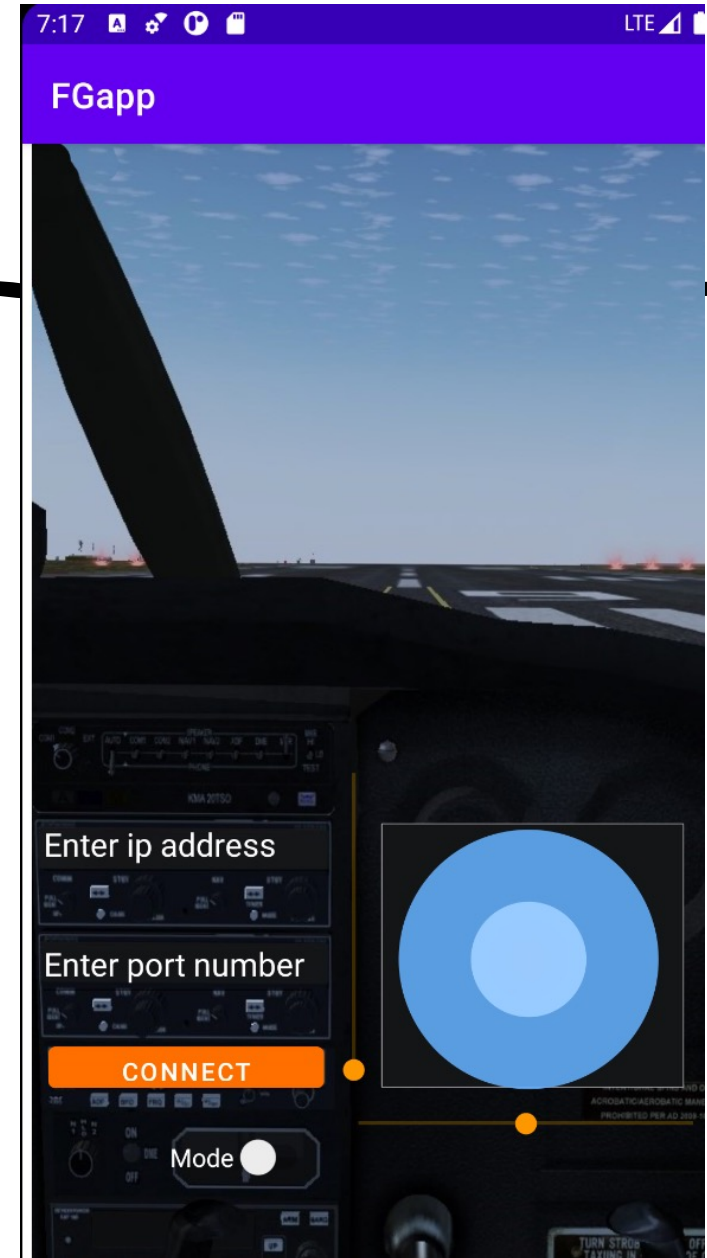
`--telnet=socket,in,10,127.0.0.1,6400,tcp`

- You will need an Android device or emulator



Running the app ...

- Connecting :
 - Enter in IP the IPv4 of the computer that is connected to the simulator
- important : if you are running the FlightGear simulator and Android emulator on the same computer – do not use your localhost IP (127.0.0.1)
- Enter in port number 6400
 - Press 'connect' button
 - You are now connected to the flight simulator !



Flying the plane

- You can now navigate your flight with the Sliders and JoyStick!
- The sliders control the rudder and throttle.
- AutoPilot (in top bar of the simulator) can help you start out.
- Try and press mode button !



Special Features

- JoyStick widget :

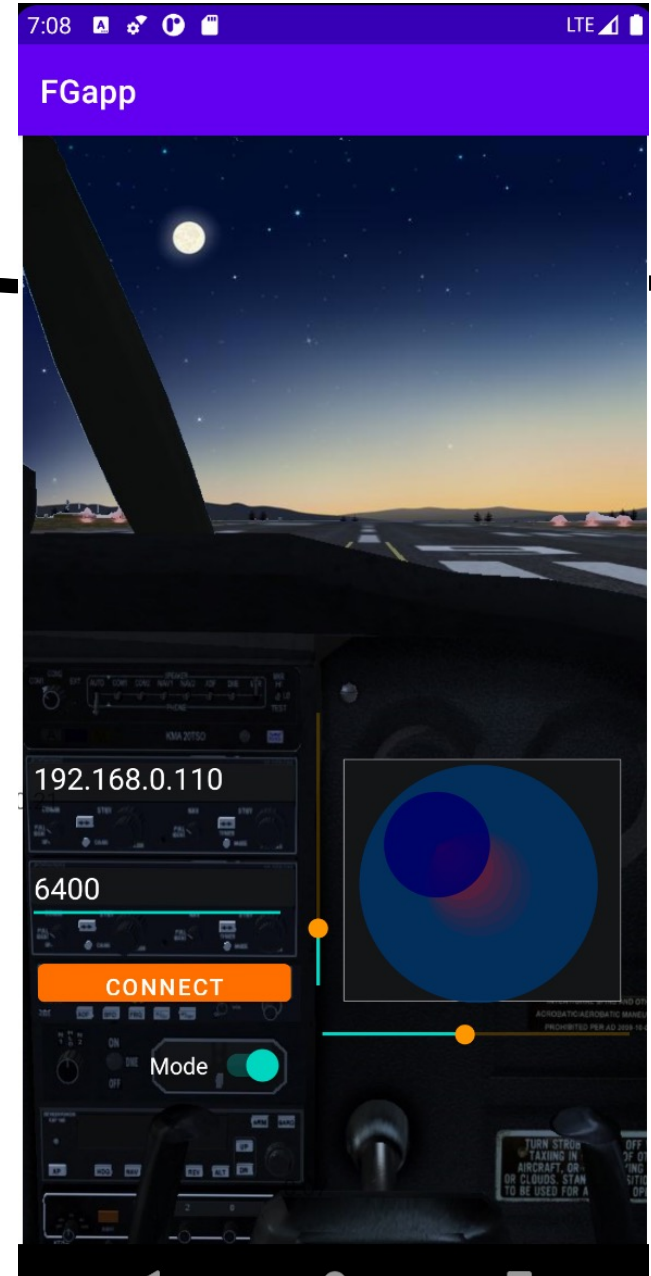
The JoyStick class is independent of the applications code and can be used for other android applications easily. To use the Joystick in a different project all you need is to create an instance of the class and make sure to implement the OnChangeJ method !

- Design Feature :

Our application has a special feature - you can change your flight mode :

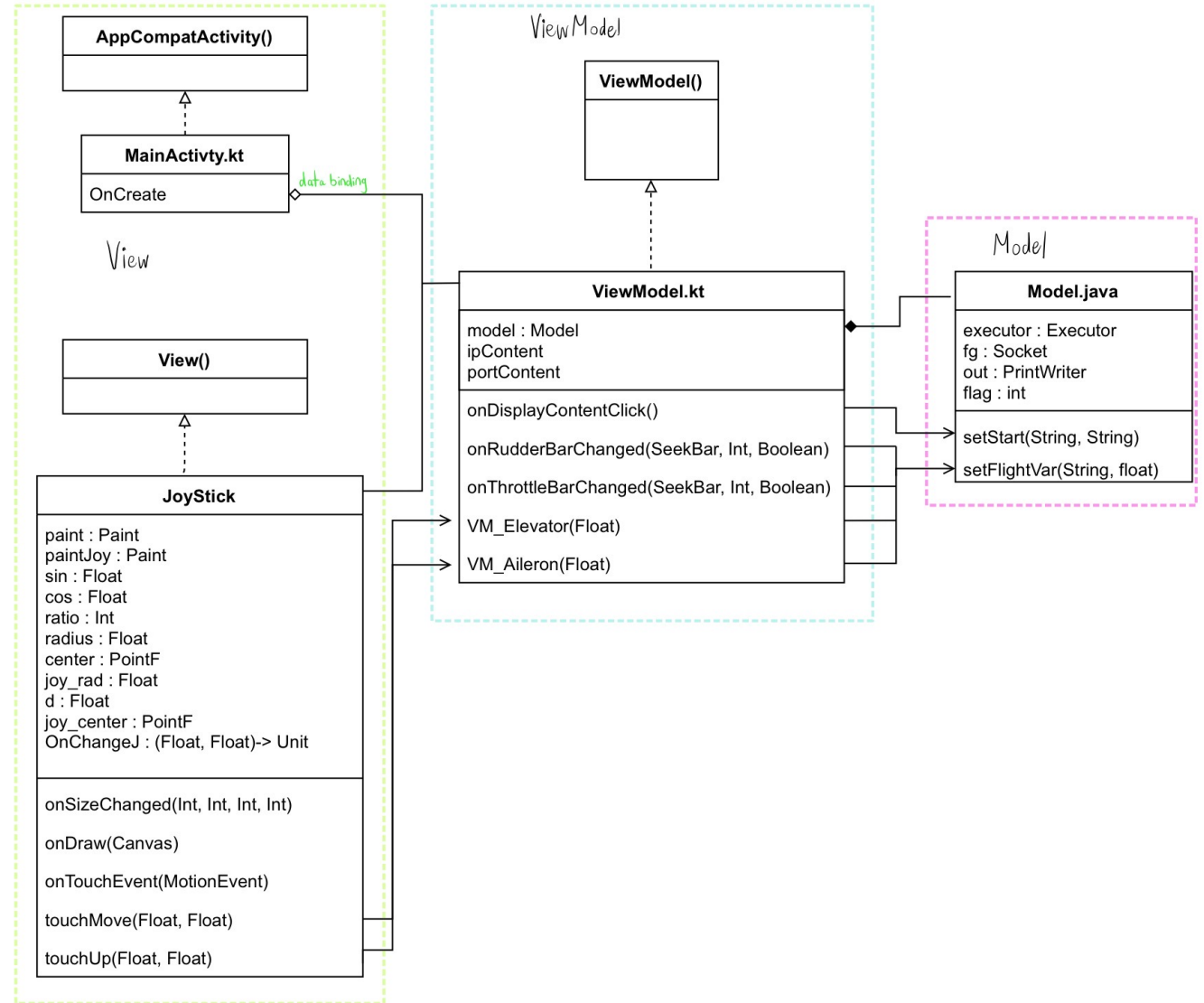
You can fly during the day/night and change mid flight !

The JoyStick also changes depending on the mode !



Design of the app

- UML diagram of the projects structure showing the MVVM architecture used in the project :



We hope you enjoy using our app !
