

# Emulator and Simulator

# Emulators

- An emulator has the goal of taking the place of the real mobile device. It duplicates every aspect of the original device's behavior, both hardware and software. It basically simulates all of the hardware the real device uses.

## **Advantages and disadvantages of mobile device emulator**

- **Advantages:**

- Simulates both software and hardware
- Helps you find unexpected behavior
- Can be connected to an IDE for early testing during development

- **Disadvantages:**

- Mobile device emulators are very slow (because they simulate both hardware and software)
- A mobile device emulator doesn't take into consideration factors like battery overheating/drainage or conflicts with other (default) apps
- Setting up a good emulator takes
- Emulators may support only certain OS versions

# Simulators

- Simulator sets up a similar safe environment to the original real-life device's OS, but it doesn't attempt to simulate the real device's hardware. By using simulators you won't experience all the problems the hardware might cause.

## **Advantages and disadvantages of mobile device Simulator**

- **Advantages:**

- Fast (because they simulate only the software)
- Relatively easy to set up
- Can be used to study the behavior of an app

- **Disadvantages:**

- It doesn't take into consideration the hardware
- Apps may run a little differently
- Simulation results may be difficult to analyse, due to incomplete data

# Android Emulator



# iOS Simulator

