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Chapter 1 and 3 Questions and Answers

1. What benefits does using an emulator give when testing Android apps?

A: The emulator allows the user to check whether your sketch is operational. It also helps the user to quickly learn the basic syntax and functionality without having to use a real device. (1.3 Run a Sketch in the Android Emulator)

1. When does using an emulator fall short of using an actual device to test your application?

A: When testing the responsiveness or the touch screen user experience, an actual device is necessary. The usage of an emulator cannot test these factors. (1.3 Run a Sketch in the Android Emulator)

1. List all the different sensors that Android supports and indicate whether it is hardware or software-based.

A: Accelerometer, Gyroscope: Hardware. Rotation Vector, Linear Acceleration, Gravity: Software. (3.2 Introducing Common Android Sensors)

1. What are the three basic categories of Android sensors? Which one, as of the writing of this book, is not typically found in devices? Why?

A: Android distinguishes sensors into 3 basic categories: Motion Sensors, Position Sensors, and Environment Sensors. Environment Sensors are not typically found in devices because they have only recently been added into the Android SDK. (3.2 Introducing Common Android Sensors)

1. How many frames per second does the draw() function run by default?

A: The draw() function runs at 60fps by default.

1. Does the sensor report at rates faster or slower than that? Which callback method do we use as a result? (3.4 List the Built-in Sensors on an Android Device)

A: The sensor can report at rates much faster than 60 fps. Consequently, we use the onAccelerometerEvent() callback method. (3.4 List the Built-in Sensors on an Android Device)

1. Look at the code in section 3.5. How is the text aligned to the center. Which function do we use to ensure this?

A: The text is aligned to the center by using textAlign(). The line that corresponds to this is textAlign(CENTER, CENTER).

1. Which two methods must be included in any Processing sketch?

A: An instance of the setup() method and an instance of the draw() method. (Chapter 1-Understanding the Structure of a Sketch)

1. What is the resolution that Processing will open a display window by default?

A: 100 by 100 pixels. (Chapter 1)

1. In Section 1.2, which two constants do we use for the height and width parameters?

A: pmouseX and pmouseY.