Chapters 1-3 Challenging Questions

1. (a) What is the default size of the window when you run a Processing app?

(b) How would you change the window size to 400 by 400 pixels (write the code)

Answer:

(a) 100 by 100 pixels

(b) size(400, 400);

2. (a) Does the mouseReleased() function run if your finger taps the screen and lifts up, without changing position?

(b) How would you make the mouseReleased() function run?

Answer:

(a) No, it doesn’t not run

(b) You have to move your finger from the position where you touched the screen initially in order to make the mouseReleased() function run

3. (a) How many parameters can the fill() and stroke() methods take?

(b) What is the difference between the fill() and background() methods, in terms in parameters?

Answer:

(a)The two methods can take 1 to 4 parameters

(b) The fill() method can take an alpha value, whereas the background() method can’t.

4. (a) Why is HSB a good color mode to use?

(b) How do you change the color mode to HSB (in code)?

Answer:

(a) HSB is better to use when working algorithmically with color, because you change only one of the values of hue, saturation, or brightness, and the color changes seamlessly, which is difficult to implement in RGB color mode.

(b) colorMode(HSB);

5. (a) What does it mean to overload a method?

(b) Which methods in processing are overloaded?

Answer:

(a) It means to create a method with the same name but different number of parameters and types

(b) Processing’s color methods are overloaded.

6. (a) What is the use of the ketai library?

(b) What does “Ketai” describe in Japan?

Answers:

(a) The Ketai library focuses particularly on making it easy to work with the mobile hardware features built into Android phones and tablets.

(b) It describes Japan’s cell phone culture

7. (a) What are the 3 types of sensors a device can have?

(b) What are the units for the value returns by the magnetometer?

Answers:

(a) Position, Environment, and Motion sensors

(b) Microteslas

8. (a) Why do we use the onAccelerometerEvent() method and not the draw() method?

(b) Does every device use the same accelerometer?

Answers:

(a) We use the onAccelerometerEvent because sensor value change at a different rate than the draw() method does, and also the function is called when we receive a new value from the accelerometer.

(b) No, different device use different accelerometers

9. (a) What are the range of values for the accelerometer?

(b) What are the units for the values returned from the accelerometer?

Answers:

(a) roughly -10 to 10

(b) meters per second squared (m/s^2)

10. (a) How do you draw a rectangle from the center, as opposed to the normal way from the top left corner?

(b) What’s the default orientation for processing when you run an android application?

Answers:

(a) rectMode(CENTER);

(b) It depends on the orientation of the accelerometer.