

# UNIT TEST REVIEW: OBJECT-ORIENTED PROGRAMMING

This unit test will include everything we covered in **UNIT 3: Object-Oriented Programming**, including the **Graphics2D** class, creating and diagramming classes, overloading methods and constructors, static methods and variables, the **Timer** class, and the **KeyListener**, **MouseListener** and **MouseMotionListener** interfaces.

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## **PART I: KNOWLEDGE AND UNDERSTANDING (20 MARKS)**

- 🔒 Multiple Choice
- 🔒 True or False

## **PART II: THINKING (20 MARKS)**

- 🔒 Review how to draw shapes using the **Graphics2D** class.
- 🔒 Review how to create a class based on the fields, constructors and methods outlined in a UML diagram.

## **PART III: COMMUNICATION (20 MARKS)**

- 🔒 Review the difference(s) between **accessor** and **mutator** methods.
- 🔒 Review the advantages of creating classes when writing a Java application.
- 🔒 Review the different types of arcs you can create using the **Arc2D.Double** class.
- 🔒 Review the difference(s) between how **static** and **non-static variables** are used in a Java application.
- 🔒 Review some of the rules that must be followed when creating a constructor within a class.
- 🔒 Review the **FontMetrics** class and how it can be useful for centering text horizontally and vertically on a **JFrame**.
- 🔒 Review **method overloading** and some of the rules when creating overloaded methods.
- 🔒 Review the **no-arg** constructor and the purpose of a no-arg constructor.

## **PART IV: APPLICATION (20 MARKS)**

- 🔒 Review how to write a class given the fields, constructors and methods outlined in a UML diagram.