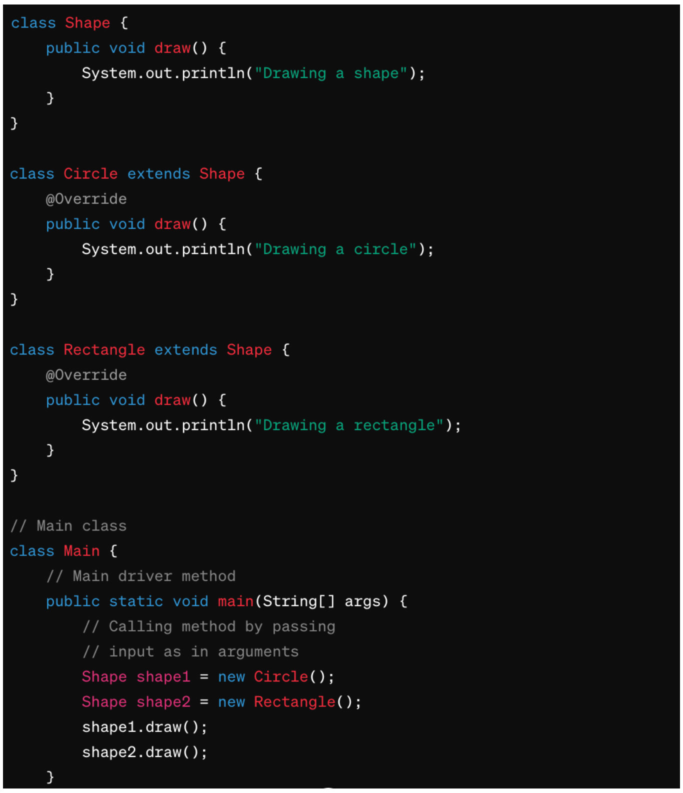
HW4 : Chapter 4



```java
class Shape {
    public void draw() {
        System.out.println("Drawing a shape");
    }
}

class Circle extends Shape {
    @Override
    public void draw() {
        System.out.println("Drawing a circle");
    }
}

class Rectangle extends Shape {
    @Override
    public void draw() {
        System.out.println("Drawing a rectangle");
    }
}

// Main class
class Main {
    // Main driver method
    public static void main(String[] args) {
        // Calling method by passing
        // input as in arguments
        Shape shape1 = new Circle();
        Shape shape2 = new Rectangle();
        shape1.draw();
        shape2.draw();
    }
```

According to the above code : Answer the following questions Q1 – Q5

Q1: What will be the output of the following Java code?

A) Drawing a shape, Drawing a shape
B) Drawing a circle, Drawing a rectangle
C) Drawing a circle, Drawing a shape
D) Drawing a rectangle, Drawing a circle

Q2: What type of polymorphism is demonstrated in the above Java code?

A) Compile-time polymorphism
B) Run-time polymorphism.

Q3: The method that have been overridden is ?

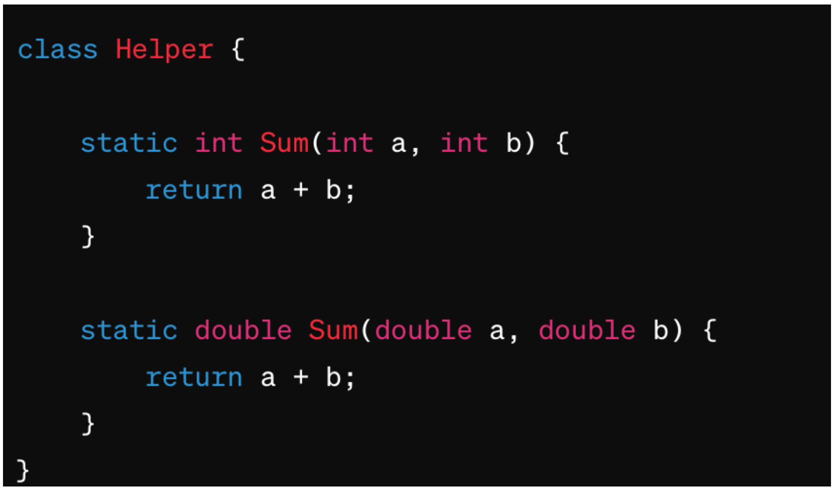
A) Shape
B) draw
C) shape1
D) shape2

Q4: The Parent (base) class is :

A. Shape
B. Circle
C. Rectangle
D. draw

Q5: The Child (derived)class is :

E. Shape
F. Circle
G. Rectangle
H. Both Circle and Rectangle



```
class Helper {

    static int Sum(int a, int b) {
        return a + b;
    }

    static double Sum(double a, double b) {
        return a + b;
    }
}
```

According to the above code: Answer the following questions Q3

Q6: The above code represents which type of polymorphism?

A) Method overloading
B) Method overriding