

```
class Color {
    int red, green, blue;

    Color() {
        Color(10, 10, 10);
    }

    Color(int r, int g, int b) {
        red = r;
        green = g;
        blue = b;
    }

    void printColor() {
        System.out.println("red: " + red + " green: " + green + " blue: " +
blue);
    }

    public static void main(String [] args) {
        Color color = new Color();
        color.printColor();
    }
}
```

- A. Compiler error: cannot find symbol.
- B. Compiles without errors, and when run, it prints the following: red: 0 green: 0 blue: 0.
- C. Compiles without errors, and when run, it prints the following: red: 10 green: 10 blue: 10.
- D. Compiles without errors, and when run, crashes by throwing NullPointerException.

In the FunPaint application, you need to code classes to draw rectangles. A rectangle can have plain or rounded edges. You also need to color a (plain or rounded) rectangle. How will you define classes for creating these plain, colored, and rounded rectangles? You can use is-a relationships as needed.

Look at the following option to implement the required functionality:

```
class Rectangle { /* */ }
class ColoredRectangle extends Rectangle { /* */ }
class RoundedRectangle extends Rectangle { /* */ }
class ColoredRoundedRectangle extends ColoredRectangle, RoundedRectangle { /* */ }
```

- A. Compiler error: '{' expected cannot extend two classes.
- B. Compiles without errors, and when run, crashes with the exception `MultipleClassInheritanceException`.
- C. Compiles without errors, and when run, crashes with the exception `NullPointerException`.
- D. Compiles without errors, and when run, crashes with the exception `MultipleInheritanceError`.

In the FunPaint application, you can fill colors to various shape objects. To implement it, you need to implement a `Color` class. The `Color` class has three members, `m_red`, `m_green`, and `m_blue`. Focus on the `toString()` method and check if it works fine.

Choose the best option based on the following program:

```
class Color {
    int red, green, blue;

    Color() {
        this(10, 10, 10);
    }

    Color(int r, int g, int b) {
        red = r;
        green = g;
        blue = b;
    }

    public String toString() {
        return "The color is: " + red + green + blue;
    }

    public static void main(String [] args) {
        // implicitly invoke toString method
        System.out.println(new Color());
    }
}
```

- A. Compiler error: incompatible types.
- B. Compiles without errors, and when run, it prints the following: The color is: 30.
- C. Compiles without errors, and when run, it prints the following: The color is: 101010.
- D. Compiles without errors, and when run, it prints the following: The color is: red green blue.

Choose the best option based on the following program:

```
class Color {
    int red, green, blue;

    Color() {
        this(10, 10, 10);
    }

    Color(int r, int g, int b) {
        red = r;
        green = g;
        blue = b;
    }

    String toString() {
        return "The color is: " + " red = " + red + " green = " + green +
" blue = " + blue;
    }

    public static void main(String [] args) {
        // implicitly invoke toString method
        System.out.println(new Color());
    }
}
```

- A. Compiler error: attempting to assign weaker access privileges; toString was public in Object.
- B. Compiles without errors, and when run, it prints the following: The color is: red = 10 green = 10 blue = 10.
- C. Compiles without errors, and when run, it prints the following: The color is: red = 0 green = 0 blue = 0.
- D. Compiles without errors, and when run, it throws ClassCastException.