

## Factory Method Pattern:

### Code:

```
interface Shape {  
    void draw();  
}
```

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

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

```
class ShapeFactory {  
    public Shape createShape(String shapeType) {  
        if (shapeType == null) {  
            return null;  
        }  
  
        if (shapeType.equalsIgnoreCase("CIRCLE")) {  
            return new Circle();  
        } else if (shapeType.equalsIgnoreCase("RECTANGLE")) {  
            return new Rectangle();  
        }  
    }  
}
```

```
        return null;
    }
}

public class Main {
    public static void main(String[] args) {
        ShapeFactory factory = new ShapeFactory();

        Shape shape1 = factory.createShape("CIRCLE");
        shape1.draw();

        Shape shape2 = factory.createShape("RECTANGLE");
        shape2.draw();
    }
}
```

### Output:

```
C:\Users\amuly\OneDrive\Desktop\Factory Method>javac *.java
C:\Users\amuly\OneDrive\Desktop\Factory Method>java Main
Drawing a Circle
Drawing a Rectangle
C:\Users\amuly\OneDrive\Desktop\Factory Method>
```