

## **Design Patterns Exercise**

1. When would you use the Decorator design pattern?
2. When would you use the Visitor design pattern?
3. When would you use the Marker interface pattern?
4. Define a state diagram (similar to the one we discussed in class) that represents how a basic calculator will operate. A basic calculator performs integer operations (+, -, /, \*). Once you have finished the state diagram, implement the calculator using the State Design Pattern.