



2. (30 points) **Edit the method** below to create a space standardizing decorator. This decorator should replace multiple spaces (literal space character 0x20 only, not tab, etc.) with a single space. For example, if the user writes

```
This is    fun!  
This  is even more  fun!
```

The decorator should write  
This is fun!  
This is even more fun!

**Add** any instance variables that your code relies on to the class.

```
public class SpaceRemoverWriter extends FilterWriter {
```

```
    @Override  
    public void write(int c) throws IOException {
```

```
    }  
}
```

3. (20 points) Java Swing uses a slightly different form of the decorator pattern.
- Sketch** two UML diagrams → one in the standard arrangement used in the decorator pattern, and another in the arrangement used by Java's swing. **Include pattern role** as the name of each class and the **relationships** between classes.

Standard form

Swing



- Describe** the advantage of Java Swing's arrangement.