

## Decorator

```
public interface DataSource {
    public void writeData(DataSource data);
    public DataSource readData();
}

public class FileDataSource implements DataSource {
    String name;
    public FileDataSource(String name) {
        this.name = name;
    }
    @Override
    public void writeData(DataSource data) {
        System.out.println("writing FileDataSource");
    }
    @Override
    public DataSource readData() {
        return null;
    }
}

public class DataSourceDecorator implements DataSource {
    protected DataSource dataSource;
    public DataSourceDecorator(DataSource dataSource) {
        this.dataSource = dataSource;
    }
    @Override
    public void writeData(DataSource data) {
        dataSource.writeData(data);
    }
    @Override
    public DataSource readData() {
        return dataSource.readData();
    }
}

public class CompressionDecorator extends DataSourceDecorator {
    public CompressionDecorator(DataSource dataSource) {
        super(dataSource);
    }
}

public class EncryptionDecorator extends DataSourceDecorator {
    public EncryptionDecorator(DataSource dataSource) {
        super(dataSource);
    }
}
```