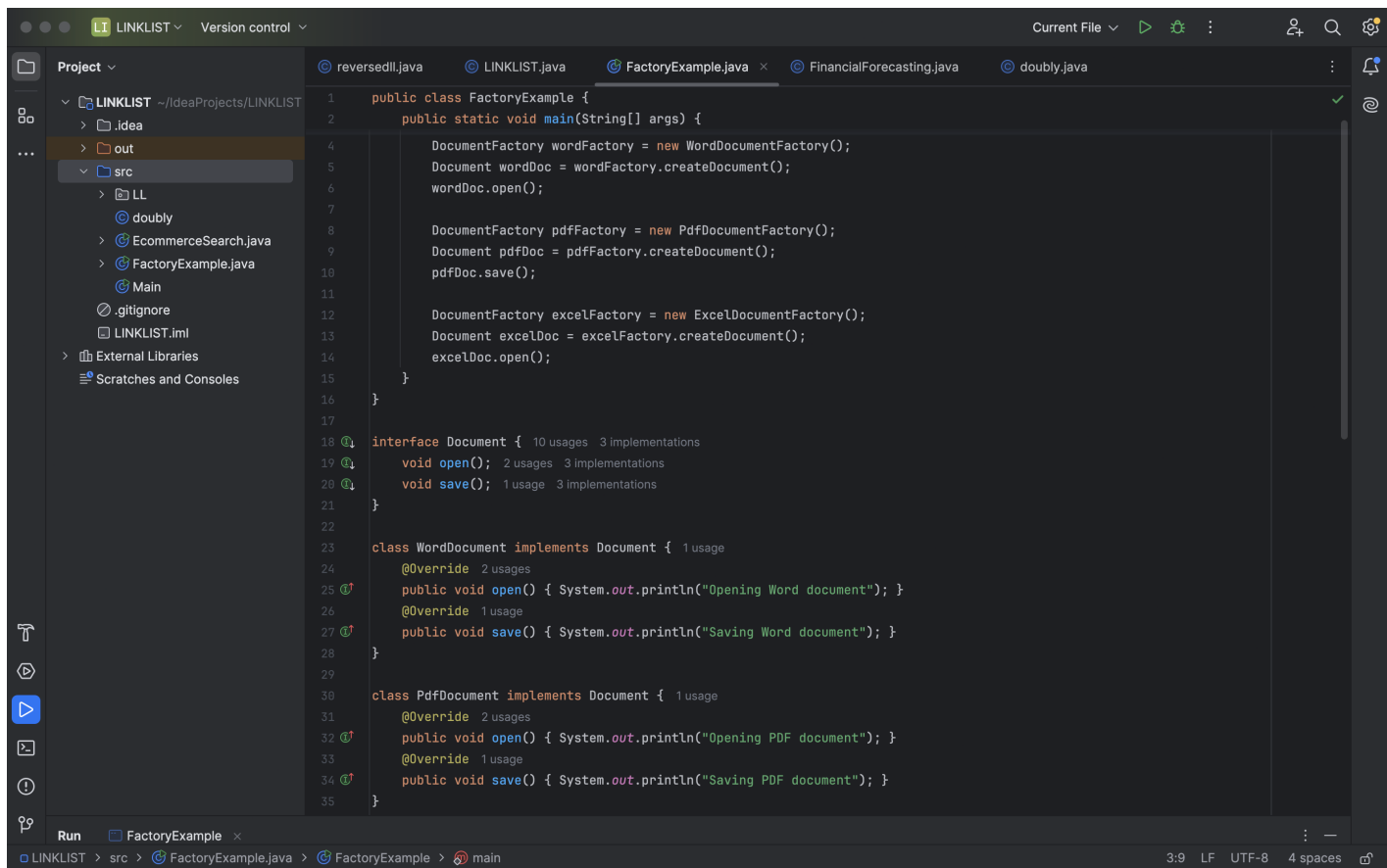
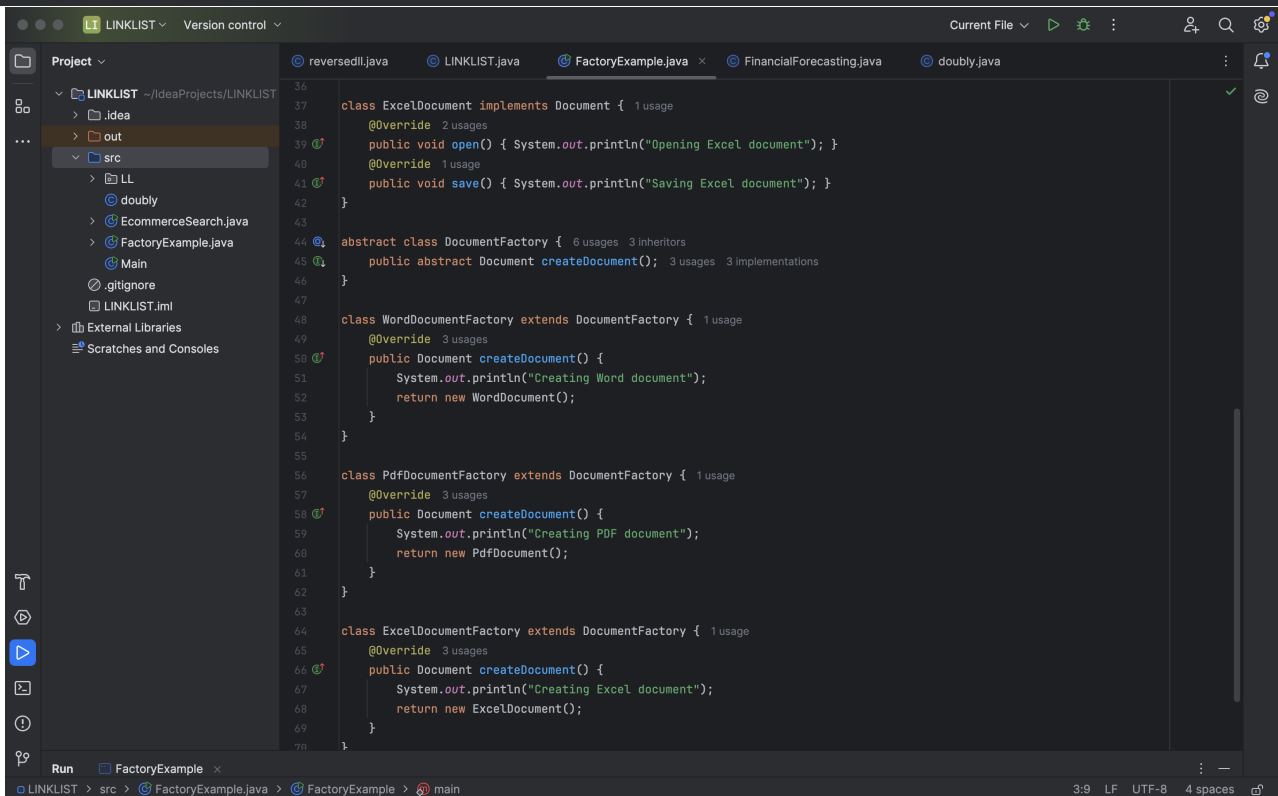


# FACTORY PATTERN




```
1 public class FactoryExample {
2     public static void main(String[] args) {
3
4         DocumentFactory wordFactory = new WordDocumentFactory();
5         Document wordDoc = wordFactory.createDocument();
6         wordDoc.open();
7
8         DocumentFactory pdfFactory = new PdfDocumentFactory();
9         Document pdfDoc = pdfFactory.createDocument();
10        pdfDoc.save();
11
12        DocumentFactory excelFactory = new ExcelDocumentFactory();
13        Document excelDoc = excelFactory.createDocument();
14        excelDoc.open();
15    }
16 }
17
18 interface Document {
19     void open();
20     void save();
21 }
22
23 class WordDocument implements Document {
24     @Override
25     public void open() { System.out.println("Opening Word document"); }
26     @Override
27     public void save() { System.out.println("Saving Word document"); }
28 }
29
30 class PdfDocument implements Document {
31     @Override
32     public void open() { System.out.println("Opening PDF document"); }
33     @Override
34     public void save() { System.out.println("Saving PDF document"); }
35 }
```



```
36
37 class ExcelDocument implements Document {
38     @Override
39     public void open() { System.out.println("Opening Excel document"); }
40     @Override
41     public void save() { System.out.println("Saving Excel document"); }
42 }
43
44 abstract class DocumentFactory {
45     public abstract Document createDocument();
46 }
47
48 class WordDocumentFactory extends DocumentFactory {
49     @Override
50     public Document createDocument() {
51         System.out.println("Creating Word document");
52         return new WordDocument();
53     }
54 }
55
56 class PdfDocumentFactory extends DocumentFactory {
57     @Override
58     public Document createDocument() {
59         System.out.println("Creating PDF document");
60         return new PdfDocument();
61     }
62 }
63
64 class ExcelDocumentFactory extends DocumentFactory {
65     @Override
66     public Document createDocument() {
67         System.out.println("Creating Excel document");
68         return new ExcelDocument();
69     }
70 }
```

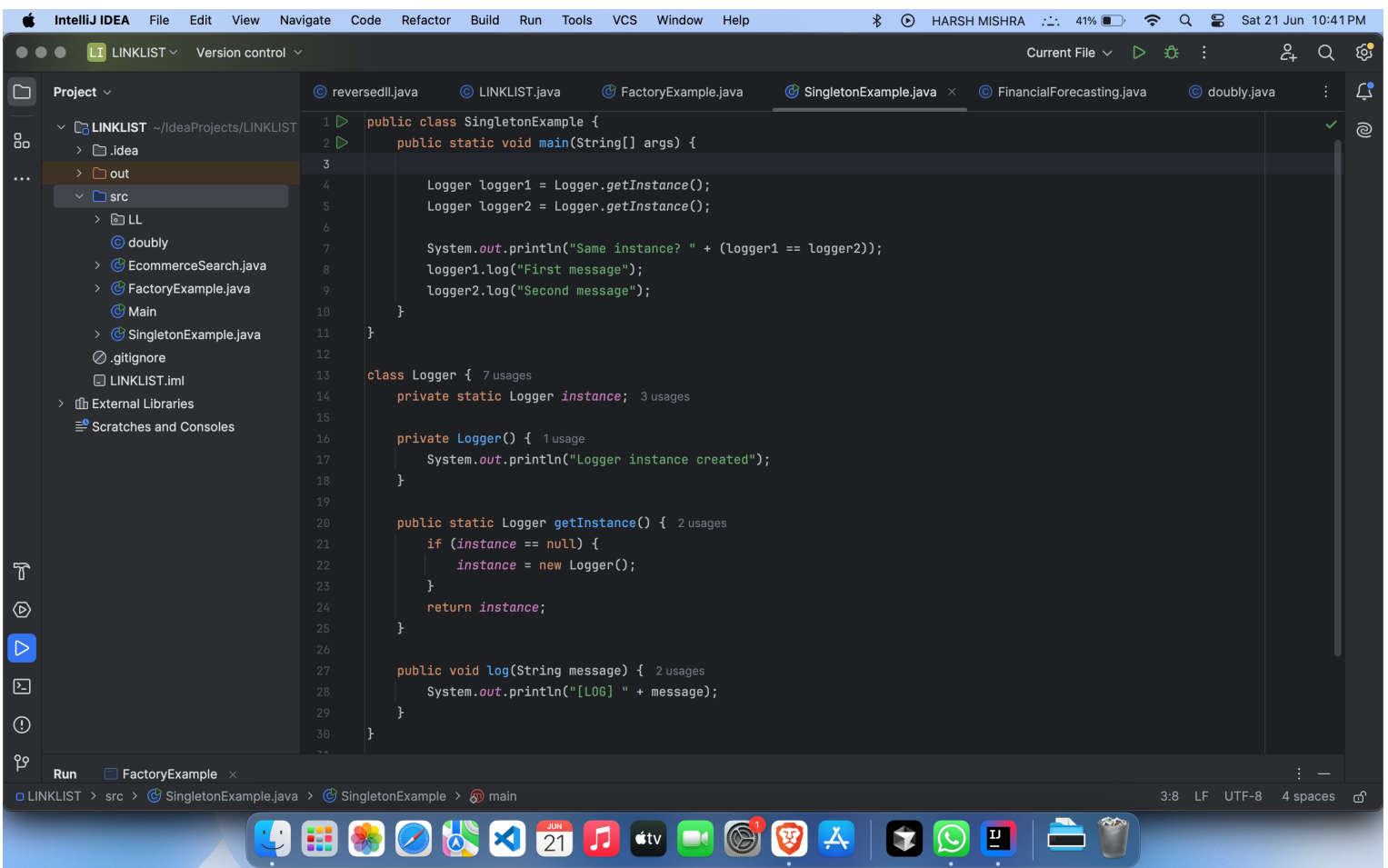
## OUTPUT->



```
/Library/Java/JavaVirtualMachines/jdk-23.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA CE.app/Contents/lib/idea_rt.jar=49543:/Applica
Creating Word document
Opening Word document
Creating PDF document
Saving PDF document
Creating Excel document
Opening Excel document

Process finished with exit code 0
```

# SINGLETON PATTERN CODE ->



## OUTPUT->

