

Design Principles and Patterns

1) Implementing the Singleton Pattern

```
File Edit Selection View Go Run ... Week_1
EXPLORER
WEEK_1
  Design
    FactoryMethodPatternExa...
    SingletonPattern
      .vscode
      bin
      lib
      src
        Logger.class
        Logger.java
        Main.class
        Main.java
      DSA
  OUTLINE
  TIMELINE
  JAVA PROJECTS

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
PS D:\College\Projects\personal\Cognizant_DN_4.0\Week_1\Design\SingletonPattern\src> javac Logger.java
PS D:\College\Projects\personal\Cognizant_DN_4.0\Week_1\Design\SingletonPattern\src> javac Main.java
PS D:\College\Projects\personal\Cognizant_DN_4.0\Week_1\Design\SingletonPattern\src> java Main
Logger instance created.
[LOG]: This is the first log message.
[LOG]: This is the second log message.
Both logger1 and logger2 refer to the same instance.
PS D:\College\Projects\personal\Cognizant_DN_4.0\Week_1\Design\SingletonPattern\src>
```

2) Implementing the Factory Method Pattern

```
File Edit Selection View Go Run ... Week_1
EXPLORER
WEEK_1
  Design
    FactoryMethodPatternExa...
    SingletonPattern
      .vscode
      bin
      lib
      src
        Document.class
        DocumentFactory.class
        DocumentFactory.java
        ExcelDocument.class
        ExcelDocumentFactory...
        Main.class
        Main.java
        PdfDocument.class
        PdfDocumentFactory.d...
        WordDocument.class
        WordDocumentFactory...
      DSA
  OUTLINE
  TIMELINE
  JAVA PROJECTS

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
PS D:\College\Projects\personal\Cognizant_DN_4.0\Week_1\Design\FactoryMethodPatternExample\src> javac DocumentFactory.java
PS D:\College\Projects\personal\Cognizant_DN_4.0\Week_1\Design\FactoryMethodPatternExample\src> javac Main.java
PS D:\College\Projects\personal\Cognizant_DN_4.0\Week_1\Design\FactoryMethodPatternExample\src> java Main
Word document
PDF document
Excel document
PS D:\College\Projects\personal\Cognizant_DN_4.0\Week_1\Design\FactoryMethodPatternExample\src>
```