

Factory Method Pattern Output

```
Week-1 > designpatterns > Factory Method Pattern > FactoryPatternTest.java > FactoryPatternTest > main(String[] args) {  
1 public class FactoryPatternTest {  
2     public static void main(String[] args) {  
3         DocumentFactory wordFactory = new WordDocumentFactory();  
4         DocumentFactory pdfFactory = new PdfDocumentFactory();  
5         DocumentFactory excelFactory = new ExcelDocumentFactory();  
6         wordFactory.openDocument();  
7         pdfFactory.openDocument();  
8         excelFactory.openDocument();  
9     }  
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```

Output:

```
[0.025s][warning][cds] This file is not the one used while building the shared archive file: C:\Users\harshith\AppData\Roaming\Code\Use  
er\globalStorage\pleiades.java-extension-pack-jdk\java\latest\lib\modules  
[0.025s][warning][cds] C:\Users\harshith\AppData\Roaming\Code\User\globalStorage\pleiades.java-extension-pack-jdk\java\latest\lib\modu  
les size has changed.  
harshith@DESKTOP-CP7C7N MINGW64 /f/DeepSkill/Week-1/designpatterns/Factory Method Pattern (main)  
$ java FactoryPatternTest  
[0.023s][warning][cds] This file is not the one used while building the shared archive file: C:\Users\harshith\AppData\Roaming\Code\Us  
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[0.024s][warning][cds] This file is not the one used while building the shared archive file: C:\Users\harshith\AppData\Roaming\Code\Us  
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[0.024s][warning][cds] C:\Users\harshith\AppData\Roaming\Code\User\globalStorage\pleiades.java-extension-pack-jdk\java\latest\lib\modu  
les size has changed.  
Opening Word document...  
Opening PDF document...  
Opening Excel document...  
harshith@DESKTOP-CP7C7N MINGW64 /f/DeepSkill/Week-1/designpatterns/Factory Method Pattern (main)  
$
```

Singleton Pattern

```
Week-1 > designpatterns > singleton > code > Logger.java > ...  
1 /**  
2  * Logger.java  
3  *  
4  * This class implements the Singleton Design Pattern.  
5  * Ensures only one instance of Logger is used throughout the application  
6  * lifecycle.  
7  */  
8 public class Logger {  
9     // Step 1: Private static instance with volatile for thread safety  
10    private static volatile Logger instance;  
11  
12    // Step 2: Private constructor to prevent external instantiation  
13    private Logger() {  
14        System.out.println(x:"Logger instance created");  
15    }  
16 }
```

Output:

```
$ java TestLogger  
[0.030s][warning][cds] This file is not the one used while building the shared archive file: C:\Users\harshith\AppData\Roaming\Code\Us  
er\globalStorage\pleiades.java-extension-pack-jdk\java\latest\lib\modules  
[0.031s][warning][cds] This file is not the one used while building the shared archive file: C:\Users\harshith\AppData\Roaming\Code\Us  
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[0.032s][warning][cds] C:\Users\harshith\AppData\Roaming\Code\User\globalStorage\pleiades.java-extension-pack-jdk\java\latest\lib\modu  
les size has changed.  
Logger instance created  
Are both instances the same? true  
[LOG] First log message  
[LOG] Second log message  
harshith@DESKTOP-CP7C7N MINGW64 /f/DeepSkill/Week-1/designpatterns/singleton/code  
$
```