## Exercise2-Factory Pattern Example

**Document.java:**

package com.factorymethod.example;  
  
public interface Document {  
 void open();  
}

**WordDocument.java:**

package com.factorymethod.example;  
  
public class WordDocument implements Document {  
 public void open() {  
 System.out.println("Opening Word Document.");  
 }  
}

**PdfDocument.java:**

package com.factorymethod.example;  
  
public class PdfDocument implements Document {  
 public void open() {  
 System.out.println("Opening PDF Document.");  
 }  
}

**ExcelDocument.java:**

package com.factorymethod.example;  
  
public class ExcelDocument implements Document {  
 public void open() {  
 System.out.println("Opening Excel Document.");  
 }  
}

**DocumentFactory.java:**

package com.factorymethod.example;  
  
public abstract class DocumentFactory {  
 public abstract Document createDocument();  
}

**WordDocumentFactory.java:**

package com.factorymethod.example;  
  
public class WordDocumentFactory extends DocumentFactory {  
 public Document createDocument() {  
 return new WordDocument();  
 }  
}

**PdfDocumentFactory.java:**

package com.factorymethod.example;  
  
public class PdfDocumentFactory extends DocumentFactory {  
 public Document createDocument() {  
 return new PdfDocument();  
 }  
}

**ExcelDocumentFactory.java:**

package com.factorymethod.example;  
  
public class ExcelDocumentFactory extends DocumentFactory {  
 public Document createDocument() {  
 return new ExcelDocument();  
 }  
}

**TestFactoryPattern.java:**

package com.factorymethod.example;  
  
public class TestFactoryPattern {  
 public static void main(String[] args) {  
 DocumentFactory wordFactory = new WordDocumentFactory();  
 Document word = wordFactory.createDocument();  
 word.open();  
  
 DocumentFactory pdfFactory = new PdfDocumentFactory();  
 Document pdf = pdfFactory.createDocument();  
 pdf.open();  
  
 DocumentFactory excelFactory = new ExcelDocumentFactory();  
 Document excel = excelFactory.createDocument();  
 excel.open();  
 }  
}

**Output:**

Opening Word Document.

Opening PDF Document.

Opening Excel Document.