**Exercise 2: Implementing the Factory Method Pattern**

Code:

Document.java

**package** factory;

**public** **interface** Document {

**void** open();

}

WordDocument.java

**package** factory;

**public** **class** WordDocument **implements** Document {

**public** **void** open() {

System.***out***.println("Opening Word Document.");

}

}

pdfDocument.java

**package** factory;

**public** **class** PdfDocument **implements** Document {

**public** **void** open() {

System.***out***.println("Opening PDF Document.");

}

}

ExcelDocument.java

**package** factory;

**public** **class** ExcelDocument **implements** Document {

**public** **void** open() {

System.***out***.println("Opening Excel Document.");

}

}

DocumentFactory.java

**package** factory;

**public** **abstract** **class** DocumentFactory {

**public** **abstract** Document createDocument();

}

WordDocumentFactory.java

**package** factory;

**public** **class** WordDocumentFactory **extends** DocumentFactory {

**public** Document createDocument() {

**return** **new** WordDocument();

}

}

PdfDocumentFactory.java

**package** factory;

**public** **class** PdfDocumentFactory **extends** DocumentFactory {

**public** Document createDocument() {

**return** **new** PdfDocument();

}

}

ExcelDocumentFactory.java

**package** factory;

**public** **class** ExcelDocumentFactory **extends** DocumentFactory {

**public** Document createDocument() {

**return** **new** ExcelDocument();

}

}

DocumentTest.java

**package** factory;

**public** **class** DocumentTest {

**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:

