**DESIGN PATTERN AND PRINCIPLES**

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

**1.Document.java**

public interface Document{

void open();

void save();

void close();

}

**2.ExcelDocument.java**

public class ExcelDocument implements Document {

public void open(){

System.out.println("Opening Excel Doc");

}

public void save(){

System.out.println("Saving Excel Doc");

}

public void close(){

System.out.println("Closing Excel Doc");

}

}

**3.PdfDocument.java**

public class PdfDocument implements Document {

public void open(){

System.out.println("Opening Pdf Doc");

}

public void save(){

System.out.println("Saving Pdf Doc");

}

public void close(){

System.out.println("Closing Pdf Doc");

}

}

**4.WordDocument.java**

public class WordDocument implements Document {

public void open(){

System.out.println("Opening Word Doc");

}

public void save(){

System.out.println("Saving Word Doc");

}

public void close(){

System.out.println("Closing Word Doc");

}

}

**5.DocumentFactory.java**

public abstract class DocumentFactory {

public abstract Document createDocument();

}

**6.ExcelDocumentFactory.java**

public class ExcelDocumentFactory extends DocumentFactory {

public Document createDocument() {

return new ExcelDocument();

}

}

**7.PdfDocumentFactory.java**

public class PdfDocumentFactory extends DocumentFactory {

public Document createDocument() {

return new PdfDocument();

}

}

**8.WordDocumentFactory.java**

public class WordDocumentFactory extends DocumentFactory {

public Document createDocument() {

return new WordDocument();

}

}

**9. Test.java**

public class Test {

public static void main(String[] args) {

DocumentFactory wordFactory = new WordDocumentFactory();

Document wordDoc = wordFactory.createDocument();

wordDoc.open();

wordDoc.save();

wordDoc.close();

DocumentFactory pdfFactory = new PdfDocumentFactory();

Document pdfDoc = pdfFactory.createDocument();

pdfDoc.open();

pdfDoc.save();

pdfDoc.close();

DocumentFactory excelFactory = new ExcelDocumentFactory();

Document excelDoc = excelFactory.createDocument();

excelDoc.open();

excelDoc.save();

excelDoc.close();

}

}



