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

**Document.java:**

package week1.FactoryMethodPatternExample;

public interface Document {

    void open();

}

**WordDocument.java:**

package week1.FactoryMethodPatternExample;

public class WordDocument implements Document {

    @Override

    public void open() {

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

    }

}

**ExcelDocument.java:**

package week1.FactoryMethodPatternExample;

public class ExcelDocument implements Document {

    @Override

    public void open() {

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

    }

}

**PdfDocument.java:**

package week1.FactoryMethodPatternExample;

public class PdfDocument implements Document {

    @Override

    public void open() {

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

    }

}

**DocumentFactory.java:**

package week1.FactoryMethodPatternExample;

public class WordDocumentFactory extends DocumentFactory {

    @Override

    public Document createDocument() {

        return new WordDocument();

    }

}

**ExcelDocumentFactory.java:**

package week1.FactoryMethodPatternExample;

public class ExcelDocumentFactory extends DocumentFactory {

    @Override

    public Document createDocument() {

        return new ExcelDocument();

    }

}

**PdfDocumentFactory.java:**

package week1.FactoryMethodPatternExample;

public class PdfDocumentFactory extends DocumentFactory {

    @Override

    public Document createDocument() {

        return new PdfDocument();

    }

}

**WordDocumentFactory.java:**

package week1.FactoryMethodPatternExample;

public class WordDocumentFactory extends DocumentFactory {

    @Override

    public Document createDocument() {

        return new WordDocument();

    }

}

**DocumentTest.java**

package week1.FactoryMethodPatternExample;

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();

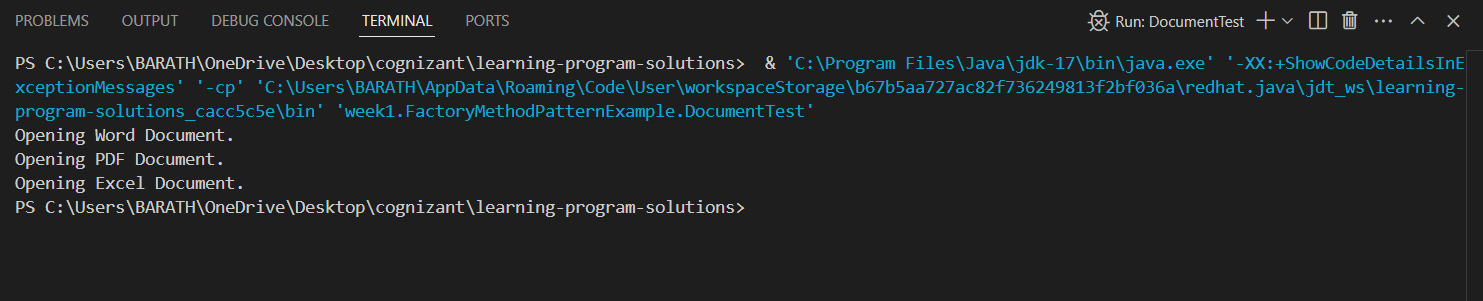
        Document excel=excelFactory.createDocument();

        excel.open();

    }

}

**Output:**

****