**FACTORY PATTERN**

CODE:

Document.java

Public interface Document{

    void open();

    void close();

}

WordDocument.java

Public class WordDocument implements Document{

    WordDocument(){

        System.out.println("New word document created");

    }

    @Override

    public void open() {

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

    }

    @Override

    public void close() {

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

    }

}

PdfDocument.java

Public class PdfDocument implements Document {

    PdfDocument(){

        System.out.println("New Pdf document created");

    }

    @Override

    public void open() {

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

    }

    @Override

    public void close() {

        System.out.println("Closing PDF document.");

    }

}

ExcelDocument.java

Public class ExcelDocument implements Document {

    ExcelDocument(){

        System.out.println("New Excel document created");

    }

    @Override

    public void open() {

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

    }

    @Override

    public void close() {

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

    }

}

DocumentFactory.java

Public abstract class DocumentFactory{

    public abstract Document createDocument();

}

WordFactory.java

Public class WordFactory extends DocumentFactory{

    @Override

    public Document createDocument() {

        return new WordDocument();

    }

}

ExcelFactory.java

Public class ExcelFactory extends DocumentFactory{

    @Override

    public Document createDocument() {

        return new ExcelDocument();

    }

}

PdfFactory.java

Public class PdfFactory extends DocumentFactory{

    @Override

    public Document createDocument() {

        return new PdfDocument();

    }

}

Test.java

Public class Test{

    public static void main(String[] args) {

        DocumentFactory wordFactory = new WordFactory();

        Document wordDoc = wordFactory.createDocument();

        wordDoc.open();

        wordDoc.close();

        DocumentFactory pdfFactory = new PdfFactory();

        Document pdfDoc = pdfFactory.createDocument();

        pdfDoc.open();

        pdfDoc.close();

        DocumentFactory excelFactory = new ExcelFactory();

        Document excelDoc = excelFactory.createDocument();

        excelDoc.open();

        excelDoc.close();

    }

}

OUTPUT:

