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

public interface Document {

void open();

}

public class WordDocument implements Document {

public void open() {

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

}

}

public class PdfDocument implements Document {

public void open() {

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

}

}

public class ExcelDocument implements Document {

public void open() {

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

}

}

public abstract class DocumentFactory {

public abstract Document createDocument();

}

public class WordFactory extends DocumentFactory {

public Document createDocument() {

return new WordDocument();

}

}

public class PdfFactory extends DocumentFactory {

public Document createDocument() {

return new PdfDocument();

}

}

public class ExcelFactory extends DocumentFactory {

public Document createDocument() {

return new ExcelDocument();

}

}

public class Main {

public static void main(String[] args) {

DocumentFactory wordFactory = new WordFactory();

DocumentFactory pdfFactory = new PdfFactory();

DocumentFactory excelFactory = new ExcelFactory();

Document doc1 = wordFactory.createDocument();

Document doc2 = pdfFactory.createDocument();

Document doc3 = excelFactory.createDocument();

doc1.open();

doc2.open();

doc3.open();

}

} Output 🡺

