# FACTORY METHOD PATTERN

CODE :

import java.util.Scanner;

interface Document {

void displayType();

}

class WordDoc implements Document {

public void displayType() {

System.out.println("This is a Word document.");

}

}

class PdfDoc implements Document {

public void displayType() {

System.out.println("This is a PDF document.");

}

}

class ExcelDoc implements Document {

public void displayType() {

System.out.println("This is an Excel document.");

}

}

// Factory class

class DocumentFactory {

public static Document getDocument(String type) {

switch (type.toLowerCase()) {

case "word": return new WordDoc();

case "pdf": return new PdfDoc();

case "excel": return new ExcelDoc();

default:

throw new IllegalArgumentException("Unknown type: " + type);

}

}

}

// Main class

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the type of document (word/pdf/excel): ");

String type = sc.nextLine();

try {

Document doc = DocumentFactory.getDocument(type);

doc.displayType();

} catch (IllegalArgumentException e) {

System.out.println("Error: " + e.getMessage());

}

sc.close();

}

}

OUTPUT :

