Generate a Java code that implements java selection and iteration statements. Use do while loop to process a menu selection. When a menu is selected, it should display the syntax of the selected statements.

CODE:

import java.util.Scanner;

public class SelectionAndIterationExample {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int choice;

do {

displayMenu();

System.out.print("Enter your choice: ");

choice = scanner.nextInt();

switch (choice) {

case 1:

System.out.println("Syntax of if statement:");

System.out.println("if (condition) {");

System.out.println(" // Statements to execute if condition is true");

System.out.println("}");

break;

case 2:

System.out.println("Syntax of switch statement:");

System.out.println("switch (expression) {");

System.out.println(" case value1:");

System.out.println(" // Statements to execute if expression equals value1");

System.out.println(" break;");

System.out.println(" case value2:");

System.out.println(" // Statements to execute if expression equals value2");

System.out.println(" break;");

System.out.println(" default:");

System.out.println(" // Statements to execute if expression doesn't match any case");

System.out.println("}");

break;

case 3:

System.out.println("Syntax of for loop:");

System.out.println("for (initialization; condition; iteration) {");

System.out.println(" // Statements to execute repeatedly as long as condition is true");

System.out.println("}");

break;

case 4:

System.out.println("Syntax of while loop:");

System.out.println("while (condition) {");

System.out.println(" // Statements to execute repeatedly as long as condition is true");

System.out.println("}");

break;

case 5:

System.out.println("Syntax of do-while loop:");

System.out.println("do {");

System.out.println(" // Statements to execute at least once");

System.out.println("} while (condition);");

break;

case 6:

System.out.println("Exiting the program.");

break;

default:

System.out.println("Invalid choice. Please enter a number between 1 and 6.");

}

System.out.println(); // Blank line for readability

} while (choice != 6);

scanner.close();

}

public static void displayMenu() {

System.out.println("Menu:");

System.out.println("1. if statement");

System.out.println("2. switch statement");

System.out.println("3. for loop");

System.out.println("4. while loop");

System.out.println("5. do-while loop");

System.out.println("6. Exit");

}

}

OUTPUT:

C:\javap>javac SelectionAndIterationExample.java

C:\javap>java SelectionAndIterationExample

Menu:

1. if statement

2. switch statement

3. for loop

4. while loop

5. do-while loop

6. Exit

Enter your choice: 3

Syntax of for loop:

for (initialization; condition; iteration) {

// Statements to execute repeatedly as long as condition is true

}

Menu:

1. if statement

2. switch statement

3. for loop

4. while loop

5. do-while loop

6. Exit

Enter your choice: 6

Exiting the program.

