**ADA – Practice programs**

1. **If-Else: Check if a Number is Positive, Negative, or Zero**

import java.util.Scanner;

public class IfElseExample {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

if (num > 0) {

System.out.println("The number is positive.");

} else if (num < 0) {

System.out.println("The number is negative.");

} else {

System.out.println("The number is zero.");

}

scanner.close();

}

}

2. **For Loop: Print Multiplication Table**

import java.util.Scanner;

public class ForLoopExample {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number for the multiplication table: ");

int num = scanner.nextInt();

for (int i = 1; i <= 10; i++) {

System.out.println(num + " x " + i + " = " + (num \* i));

}

scanner.close();

}

}

3. **While Loop: Sum of Digits of a Number**

import java.util.Scanner;

public class WhileLoopExample {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int sum = 0;

while (num != 0) {

sum += num % 10;

num /= 10;

}

System.out.println("Sum of digits: " + sum);

scanner.close();

}

}

**4. Do-While Loop: Keep Taking Input Until Zero is Entered**

import java.util.Scanner;

public class DoWhileExample {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int num;

do {

System.out.print("Enter a number (0 to stop): ");

num = scanner.nextInt();

if (num != 0) {

System.out.println("You entered: " + num);

}

} while (num != 0);

System.out.println("Program terminated.");

scanner.close();

}

}

5. **Nested Loops: Print a Pattern**

import java.util.Scanner;

public class NestedLoopExample {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of rows: ");

int rows = scanner.nextInt();

for (int i = 1; i <= rows; i++) {

for (int j = 1; j <= i; j++) {

System.out.print("\* ");

}

System.out.println();

}

scanner.close();

}

}

6. **Break Statement: Find First Even Number in a List**

import java.util.Scanner;

public class BreakExample {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("How many numbers will you enter? ");

int count = scanner.nextInt();

System.out.println("Enter the numbers:");

for (int i = 0; i < count; i++) {

int num = scanner.nextInt();

if (num % 2 == 0) {

System.out.println("First even number found: " + num);

break; // Stop loop as soon as an even number is found

}

}

scanner.close();

}

}