**DESH BHAGAT UNIVERSITY**

**MANDI GOBINDGHAR, AMLOH**



**DEPARTMENT OF**

**COMPUTER SCIENCE AND ENGINEERING**

**PRACTICAL FILE OF**

**JAVA PROGRAMMING LAB**

|  |
| --- |
| * **Submitted by – Amin Ansari** * **Class- B.tech (CSE) 5th semester** * **Roll no. 21320147022** |

|  |
| --- |
| * **Submitted to – Dr. Navneet Kaur Sandhu** |

**Variables and Output**

public class VariableExample {

public static void main(String[] args) {

int age = 25;

String name = "John";

System.out.println("Name: " + name + ", Age: " + age);

}

}

Output:

Name: John, Age: 25

**If-Else Statement:**

public class IfElseExample {

public static void main(String[] args) {

int x = 10;

if (x > 5) {

System.out.println("x is greater than 5");

} else {

System.out.println("x is not greater than 5");

}

}

}

Output:

x is greater than 5

**Switch Statement**

public class SwitchExample {

public static void main(String[] args) {

int day = 2;

switch (day) {

case 1:

System.out.println("Monday");

break;

case 2:

System.out.println("Tuesday");

break;

default:

System.out.println("Other day");

}

}

}

Output:

Tuesday

public class ForLoopExample {

public static void main(String[] args) {

for (int i = 1; i <= 5; i++) {

System.out.print(i + " ");

}

}

}

Output:

1 2 3 4 5

public class WhileLoopExample {

public static void main(String[] args) {

int i = 1;

while (i <= 5) {

System.out.print(i + " ");

i++;

}

}

}

Output

1 2 3 4 5

public class DoWhileLoopExample {

public static void main(String[] args) {

int i = 1;

do {

System.out.print(i + " ");

i++;

} while (i <= 5);

}

}

**Output:**

1 2 3 4 5

public class ArithmeticOperatorsExample {

public static void main(String[] args) {

int a = 10, b = 5;

System.out.println("Sum: " + (a + b));

System.out.println("Difference: " + (a - b));

System.out.println("Product: " + (a \* b));

System.out.println("Quotient: " + (a / b));

System.out.println("Remainder: " + (a % b));

}

}

Output:

Sum: 15

Difference: 5

Product: 50

Quotient: 2

Remainder: 0

public class RelationalOperatorsExample {

public static void main(String[] args) {

int x = 5, y = 10;

System.out.println("Is x equal to y? " + (x == y));

System.out.println("Is x not equal to y? " + (x != y));

System.out.println("Is x greater than y? " + (x > y));

System.out.println("Is x less than or equal to y? " + (x <= y));

}

}

Output:

Is x equal to y? false

Is x not equal to y? true

Is x greater than y? false

Is x less than or equal to y? True

public class LogicalOperatorsExample {

public static void main(String[] args) {

boolean a = true, b = false;

System.out.println("Logical AND: " + (a && b));

System.out.println("Logical OR: " + (a || b));

System.out.println("Logical NOT: " + (!a));

}

}

Output:

Logical AND: false

Logical OR: true

Logical NOT: false

public class ArrayExample {

public static void main(String[] args) {

int[] numbers = {1, 2, 3, 4, 5};

for (int num : numbers) {

System.out.print(num + " ");

}

}

}

Output:

1 2 3 4 5

public class EnhancedForLoopExample {

public static void main(String[] args) {

String[] fruits = {"Apple", "Banana", "Orange"};

for (String fruit : fruits) {

System.out.println(fruit);

}

}

}

Output:

Apple

Banana

Orange

public class NestedLoopExample {

public static void main(String[] args) {

for (int i = 1; i <= 3; i++) {

for (int j = 1; j <= 3; j++) {

System.out.print(i \* j + " ");

}

System.out.println();

}

}

}

Output:

1 2 3

2 4 6

3 6 9

public class MethodsExample {

public static void main(String[] args) {

int result = addNumbers(5, 7);

System.out.println("Sum: " + result);

}

static int addNumbers(int a, int b) {

return a + b;

}

}

Output:

Sum: 12

public class StringManipulationExample {

public static void main(String[] args) {

String greeting = "Hello, ";

String name = "John";

System.out.println(greeting + name);

}

}

Output

Hello, John

public class TwoDArrayExample {

public static void main(String[] args) {

int[][] matrix = {{1, 2, 3}, {4, 5, 6}, {7, 8, 9}};

for (int[] row : matrix) {

for (int num : row) {

System.out.print(num + " ");

}

System.out.println();

}

}

}

Output:

1 2 3

4 5 6

7 8 9

public class BreakContinueExample {

public static void main(String[] args) {

for (int i = 1; i <= 5; i++) {

if (i == 3) {

break; // Exit the loop when i is 3

}

System.out.print(i + " ");

}

}

}

Output:

1 2

import java.util.Scanner;

public class DoWhileUserInputExample {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int number;

do {

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

number = scanner.nextInt();

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

} while (number != 0);

}

}

OUTPUT

Enter a number (0 to exit): 7

You entered: 7

Enter a number (0 to exit): 0

You entered: 0

public class StaticExample {

static int count = 0;

public static void main(String[] args) {

incrementCount();

System.out.println("Count: " + count);

}

static void incrementCount() {

count++;

}

}

OUTPUT

Count: 1

public class ExceptionHandlingExample {

public static void main(String[] args) {

try {

int result = 10 / 0; // Attempting to divide by zero

System.out.println("Result: " + result);

} catch (ArithmeticException e) {

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

}

}

}

Error: / by zero

public class EnumExample {

enum Day {SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY}

public static void main(String[] args) {

Day today = Day.WEDNESDAY;

System.out.println("Today is: " + today);

}

}

OUTPUT

Today is: WEDNESDAY