**Higher Diploma in Information Technology**

**Object Oriented Programming (Java)**

**Year 1 Semester 2 – 2023**

**Lab 2**

**Intended Learning Outcomes:**

At the end of the class the students should be able to:

* To use operators in java
* To Convert Data types

1. Type the following programs and observe the output

class Output

{

public static void main(String[] args)

{

int a, b;

a = 65;

b = 78;

System.out.println(29/4);

System.out.println(3.0/2);

System.out.print("Hello there.\n");

System.out.println(7);

System.out.println(3+5);

System.out.print("3+5");

System.out.println();

System.out.println(2+3\*6);

System.out.println("a");

System.out.println(a);

System.out.println(b);

}

}

class StringExpression

{

public static void main (String[] args)

{

String str;

int num1, num2;

num1 = 12;

num2 = 26;

str = "The sum = " + num1 + num2;

System.out.println(str);

str = "The sum = " + (num1 + num2);

System.out.println(str);

str = num1 + num2 + " is the sum";

System.out.println(str);

str = "The sum of " + num1 + " and " + num2 + " = " + (num1 + num2);

System.out.println(str);

}

}

class ParsingStrings

{

public static void main(String[] args)

{

String str1 = "-12345";

String str2 = "756.83";

int intNum;

float floatNum;

double decimalNum;

intNum = Integer.parseInt(str1);

floatNum = Float.parseFloat(str2);

decimalNum = Double.parseDouble(str2);

System.out.println("str1 = " + str1);

System.out.println("str2 = " + str2);

System.out.println("intNum = " + intNum);

System.out.println("floatNum = " + floatNum);

System.out.println("decimalNum = " + decimalNum);

System.out.println("The numeric value of str1 + str2 = "+ (Integer.parseInt(str1)+ Double.parseDouble(str2)));

System.out.println(Integer.parseInt("6543")

+ Integer.parseInt("50"));

}

}

\

Upload the Following Tasks to your Git Hub Repository

1. Write a distance converter as below.
2. Declare two integer variables, miles and yards, and one double variable for kilometers
3. Initialize the variables to hold the number of miles and yards in a marathon respectively (miles to 26 and yards to 385).
4. Write an expression to calculate kilometers from miles and yards.

Note: One mile is 1.609 kilometers and there are 1760.0 yards in a mile

1. Save the result of the expression in the variable “kilometers”.
2. Run the Distance converter program and take a note of the answer
3. Now show how to improve the above code by using constants for the fixed parameters. What is the Java keyword that introduces a constant?
4. Write a program to read and display 2 command line arguments and the length of the command line argument array.
5. Write a program to input an integer as a command-line argument, which represents a temperature on the Celsius scale and then computes and prints its equaling Fahrenheit value in decimal form.

Use the conversion formula F=1.8 \*C +32

Hint: use **Integer.parseInt()**

Usage: **int k = Integer.parseInt(<string variable>);**

1. Write a program to calculate the volume of a cube when height, width and length are input through command-line arguments as double values.

Hint: use Double.parseDouble**()**

Usage:  **double k = Double. parseDouble(<string>);**