**LAB # 01**

**Implementation of basic structure of java programming environment**

**Objective:**

To get a hands on training exposure to the Java development environment and basic components of programming in java.

**Lab Tasks:**

1. Write a program to print your name and section in your choice of editor of java.

**Source Code:**

public class NameSec {

public static void main(String[] args) {

System.out.println("Kainat Jamal");

System.out.println("Section D");

}

}

**Output:**

Kainat Jamal

Section D

1. Write a program that shows output of all data types in java.

**Source Code:**

public class DataTypes {

public static void main(String[] args) {

boolean one = false;

System.out.println("Boolean value: "+ one);

byte a = 10;

System.out.println("Byte value: " + a);

short s = 10000;

System.out.println("Short value: " + s);

int b = 100000;

System.out.println("Int value: " + b);

long c = 100000L;

System.out.println("Long value: " + c);

float f1 = 234.5f;

System.out.println("Float value: " + f1);

double d1 = 12.3;

System.out.println("Double value: " + d1);

char letterA = 'A';

System.out.println("Char value: " + letterA);

}

}

**Output:**

Boolean value: false

Byte value: 10

Short value: 10000

Int value: 100000

Long value: 100000

Float value: 234.5

Double value: 12.3

Char value: A

1. Write a Java program that reads a number in inches, converts it to meters. Note: One inch is 0.0254 meter

**Source Code:**

import java.util.Scanner;

public class MeterConvert {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter length in inches: ");

double inches = sc.nextDouble();

double meters = inches\*0.0254;

System.out.printf(inches + " inches is equal to " + meters + " meters.");

}

}

**Output:**

Enter length in inches: 8

8.0 inches is equal to 0.2032 meters.

1. Write a Java program to convert days into number of months and days. Example: Test Data Input the number of days: 69. Expected Output: 69 days are 2 months and 9 days.

**Source Code:**

import java.util.Scanner;

public class ConvertDays {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Input the number of days: ");

int totalDays = sc.nextInt();

sc.close();

int numberOfMonths = totalDays/ 30;

int remainingDays = totalDays%30;

System.out.println(totalDays + " days are " + numberOfMonths + " months and " + remainingDays + " days.");

}

}

**Output:**

Input the number of days: 69

69 days are 2 months and 9 days.

1. Write a Java program to compute body mass index (BMI). Note: weigh in kilogram = weight \* 0.45359237. Hight in feet= inches \* 0.0254. BMI= weight in kilogram/(hight in fee)^2

**Source Code:**

import java.util.Scanner;

public class BmiWeight {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter weight in pounds: ");

double weightInPounds = sc.nextDouble();

System.out.print("Enter height in feet: ");

double heightInFeet = sc.nextDouble();

System.out.print("Enter height in inches: ");

double heightInInches = sc.nextDouble();

sc.close();

double weightInKilograms = weightInPounds \* 0.45359237;

double heightInMeters = (heightInFeet \* 12 + heightInInches) \* 0.0254;

double bmi = weightInKilograms / (heightInMeters \* heightInMeters);

System.out.printf("BMI is: %.2f%n", bmi);

}

}

**Output:**

Enter weight in pounds: 67

Enter height in feet: 5

Enter height in inches: 67

BMI is: 2.92