Day2_Java_Assignment-1

1. Primitive Data Types

Task: Create a program that accepts age, height, and weight of a person and prints them with appropriate data types.

```java
package Assignment_one;

import java.util.Scanner;

public class datatypes {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);

        System.out.println("Age: ");
        int age = scan.nextInt();
        System.out.println("Height: ");
        float height = scan.nextFloat();
        System.out.println("Weight: ");
        float weight = scan.nextFloat();

        System.out.println("Age: "+age);
        System.out.println("Height: "+height);
        System.out.println("Weight: "+weight);

scan.close();
    }
}
```

```
<terminated> datatypes [Java A
Age: 24
Height: 169
Weight: 67
---------------
Age: 24
Height: 169.0
Weight: 67.0
```

2. Variables

Task: Declare and initialize different types of variables to store a student's information: ID, name, marks, and grade. Print them.

```java
package Assignment_one;

public class variables {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        int id = 101;
        String Name = "Arun";
        double Marks = 89.5;
        char Grade = 'A';

        System.out.println("Student id: "+id);
        System.out.println("name: "+Name);
        System.out.println("marks: "+Marks);
        System.out.println("grade: "+Grade);
    }
}
```

```
<terminated> variables [J
Student id: 101
name: Arun
marks: 89.5
grade: A
```

3. Operators

Task: Accept two numbers and perform arithmetic, relational, and logical operations on them.

```java
package Assignment_one;

import java.util.Scanner;

public class operators {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the 1st Number: ");
        int num1 = scan.nextInt();
        System.out.println("Enter the 2nd Number: ");
        int num2 = scan.nextInt();
        System.out.println("Addition: "+(num1+num2));
        int greater = (num1 > num2) ? num1 : num2;
        System.out.println("Greater number: "+greater);
        boolean positive = (num1>0)&&(num2>0);
        System.out.println("Are both positive? "+positive);
    scan.close();
    }

}
```

```
<terminated> operators [Java Applic
Enter the 1st Number:
10
Enter the 2nd Number:
-2
Addition: 8
Greater number: 10
Are both positive? false
```

4. String Concatenation

```java
package Assignment_one;

import java.util.Scanner;

class Concatenation {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);

        System.out.println("enter the first name");
        String one = scan.nextLine();
        System.out.println("enter the last name");
        String two = scan.nextLine();
        System.out.println("hello, "+ one.concat(two)+"! Welcome to the system.");
scan.close();
    }

}
```

```
<terminated> Concatenation [Java Application] C:\Users\RPK
enter the first name
raju
enter the last name
sharma
hello, rajusharma! Welcome to the system.
```

5. StringBuilder

Task: Accept a sentence and reverse it using StringBuilder.

```java
package Assignment_one;

import java.util.Scanner;

public class stringbuilder {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);
        System.out.println("enter a string: ");
            String input = scan.nextLine();
        StringBuilder sb = new StringBuilder(input);
        System.out.println("original string: "+ sb);
        sb.reverse();
        System.out.println("reversed string: "+ sb);
    scan.close();
    }

}
```

```
<terminated> stringbuilder [Java Application] C:\Us
enter a string:
moral of the story
original string: moral of the story
reversed string: yrots eht fo larom
```

6. String API

Task: Count how many times a specific character appears in a string.

```java
package Assignment_one;

import java.util.Scanner;

public class stringapi {

    public static void main(String[] args) {
        // TODO Auto-generated method stub

        Scanner scan = new Scanner(System.in);
        System.out.println("enter a string: ");
        String input = scan.nextLine();
        System.out.println("enter a char: ");
        char target = scan.next().charAt(0);
        //System.out.println("character "+"'"+input. +"'");
        int count = 0;
        for(int i=0;i<input.length();i++) {
            if (input.charAt(i) == target) {
                count++;
            }
        }
    System.out.println("Character '" + target + "' appears " + count + " times.");
    scan.close();
    }

}
```

```
<terminated> stringapi [Java Application]
enter a string:
malayalam
enter a char:
a
Character 'a' appears 4 times.
```

7. Date, Time, and Numeric Objects

Task: Display the current date and format it as DD-MM-YYYY. Also, show a formatted currency value.

```java
package Assignment_one;
import java.text.NumberFormat;
import java.time.LocalDate;
import java.time.format.DateTimeFormatter;
import java.util.Locale;
import java.util.Scanner;

public class dtno {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        LocalDate date = LocalDate.now();
        DateTimeFormatter formatter = DateTimeFormatter.ofPattern("dd-MM-yyyy");
        String formattedDate = date.format(formatter);
        System.out.println("Current Date: "+formattedDate);
        Scanner scan = new Scanner(System.in);
        System.out.println("enter the amount");
        Locale india = new Locale("en", "IN"); //getCurrencyInstance(("en-IN"));
        double amount = scan.nextDouble();
        NumberFormat currencyFormatter = NumberFormat.getCurrencyInstance(india);
        String formattedAmount = currencyFormatter.format(amount);

        System.out.println(formattedAmount);
            scan.close();
    }
}
```

```
<terminated> dtno [Java Applicati
Current Date: 25-07-2025
enter the amount
127622
₹127,622.00
```

8. Flow Control

Task: Based on a number entered, print whether it's positive, negative, or zero.

```java
package Assignment_one;

import java.util.Scanner;
public class flowcontrol {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner s = new Scanner(System.in);
        System.out.println("enter a number ");
        int num = s.nextInt();
        if(num>0) {
            System.out.println("number is positive");
        }
        else if (num<0)
            System.out.println("number is negative");
        else
            System.out.println("zero");
        s.close();
    }
}
```

```
<terminated> flowcontrol
enter a number
56
number is positive
```

9. Conditions

Task: Accept marks and display the grade using if-else.

```java
package Assignment_one;

import java.util.Scanner;
public class conditionsgrade {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter your marks: ");
        int marks = scan.nextInt();
        char grade;
        if (marks >= 90){
            grade = 'A';
        } else if (marks >= 75){
            grade = 'B';
        } else if (marks >= 60){
            grade = 'C';
        } else if (marks >= 45){
            grade = 'D';
        } else {
            grade = 'F';
        }
        System.out.println("grade: "+grade);
        scan.close();
    }
}
```

```
<terminated> conditions
Enter your marks:
55
grade: D
```

10. Switch

Task: Build a simple calculator using switch to perform operations (+, -, *, /).

```java
package Assignment_one;

import java.util.Scanner;
public class switchcalc {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);
        System.out.print("Enter first number: ");
        double num1 = scan.nextDouble();
        System.out.print("Enter second number: ");
        double num2 = scan.nextDouble();
        System.out.print("Enter operation (+, -, *, /): ");
        char opers = scan.next().charAt(0);

        double result = 0;
        boolean valid = true;
        switch (opers) {
        case '+':
            result = num1+num2;
            break;
        case '-':
            result = num1-num2;
            break;
        case '*':
            result = num1*num2;
            break;
        case '/':
            result = num1/num2;
            break;
        default:
            System.out.println("invalid operation entered");
            valid = false;
        }if (valid) {
            System.out.println("result: "+result);
        }
        scan.close();
    }
```

```
<terminated> switchcalc [Java Application]
Enter first number: 23
Enter second number: 45
Enter operation (+, -, *, /): +
result: 68.0
```

11. Loops and Branching

Task: Print the first N even numbers using a loop.

```java
package Assignment_one;
import java.util.Scanner;

public class loopsandbranching {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the value: ");
        int N = scan.nextInt();
        System.out.println("First "+ N+ " even numbers");
        for(int i=0;i<N; i++) {
            System.out.println(i*2);
        }
        scan.close();
    }
}
```

```
Enter the value:
5
First 5 even numbers
0
2
4
6
8
```

12. Arrays

Task: Accept 5 numbers, store them in an array, and display their average.

```java
package Assignment_one;

import java.util.Scanner;
public class Array_average {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);
        int[] numbers = new int[5];
        int sum = 0;

        System.out.println("Enter only 5 numbers: ");
        for(int i=0;i<numbers.length;i++) {
            numbers[i] = scan.nextInt();
            sum+=numbers[i];
        }
        double avg = (double)sum/numbers.length;
        System.out.println(avg + " is the average!");
        scan.close();
    }
}
```

```
<terminated> Array_average [Ja
Enter only 5 numbers:
2 4 5 6 7
4.8 is the average!
```

13. Enum

Task: Create an enum for days of the week. Print a message depending on the day.

```java
package Assignment_one;
import java.time.DayOfWeek;
import java.time.LocalDate;
public class Enumday {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        DayOfWeek currentDay = LocalDate.now().getDayOfWeek();
        enum_day today = enum_day.valueOf(currentDay.name());

    switch(today) {
        case SUNDAY:
            System.out.println("Finally, it's Sunday Funday!");
            break;
        case MONDAY:
            System.out.println("Start of the work week!");
            break;
        case TUESDAY:
            System.out.println("This day is too long!");
            break;
        case WEDNESDAY:
            System.out.println("We are at the middle of week!");
            break;
        case THURSDAY:
            System.out.println("ITS THURRRSSSDAYYYYYY!");
            break;
        case FRIDAY:
            System.out.println("Almost there for the weekend!");
            break;
        case SATURDAY:
            System.out.println("Weekend is here!!! ");
            break;
        }
    }
}
```

```
<terminated> Enumday [Java Application] C:\Users\
Friday! Almost there for the weekend!
```

14. OOPs Concepts

Task: Create a Student class with fields for name and marks. Create an object and display its data.

```java
package Assignment_one;

public class Student {

    private String name;
    private float mark;

    public Student(String name, float mark) {
        this.name = name;
        this.mark = mark;
    }
    public void displayInfo() {
        System.out.println("Student name: "+ name);
        System.out.println("Student mark: "+mark);
    }
}
```

```java
package Assignment_one;

public class StudentAccess {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Student stud = new Student("riya",97);
        stud.displayInfo();
    }

}
```

```
<terminated> StudentAcce
Student name: riya
Student mark: 97.0
```

15. Inheritance

Task: Create a class Employee and a subclass Manager that extends Employee and adds department information.

```java
package Assignment_one;

public class Manager extends Employee{
String dept;

    public Manager(String name, double salary,String dept) {
        super(name, salary);
        this.dept = dept;
    }

    @Override
    public void displayInfo() {
        // TODO Auto-generated method stub
        System.out.println("Department: " + dept);
        super.displayInfo();
    }
}
```

```java
package Assignment_one;

public class Inheritance_Main {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Manager mgr = new Manager("Raj", 50000, "Sales");
        mgr.displayInfo();
    }

}
```

```
Department: Sales
Name: Raj
Salary: 50000.0
```