**Day-2\_Java\_Assignment1**

**1.Primitive Data Types Task:**

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

Sample Input:

Age: 25

Height: 5.9

Weight: 68.5

#CODE

package Day2Assignment;

import java.util.Scanner;

public class PersonInfo {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

// Accepting inputs

System.***out***.print("Enter Age: ");

int age = sc.nextInt(); // Integer for age

System.***out***.print("Enter Height: ");

float height = sc.nextFloat(); // Float for height

System.***out***.print("Enter Weight: ");

double weight = sc.nextDouble(); // Double for weight

// Printing the values

System.***out***.println("\n--- Person Information ---");

System.***out***.println("Age: " + age);

System.***out***.println("Height: " + height);

System.***out***.println("Weight: " + weight);

}

}

Sample Output:

Age: 25

Height: 5.9

Weight: 68.5 2.

**2.Variables Task:**

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

Sample Input:

ID: 101

Name: Arun

Marks: 89.5

Grade: A

**#CODE**

package Day2Assignment;

public class StudentInfo {

public static void main(String[] args) {

// Variable declaration and initialization

int id = 101; // Integer for ID

String name = "Arun"; // String for name

double marks = 89.5; // Double for marks

char grade = 'A'; // Char for grade

// Output

System.***out***.println("Student ID: " + id);

System.***out***.println("Name: " + name);

System.***out***.println("Marks: " + marks);

System.***out***.println("Grade: " + grade);

}

}

Sample Output:

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.

Sample Input:

Number1: 10

Number2: 20

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class OperationsExample {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

// Accept input from user

System.***out***.print("Number1: ");

int number1 = sc.nextInt();

System.***out***.print("Number2: ");

int number2 = sc.nextInt();

// Arithmetic operation

int addition = number1 + number2;

// Relational operation to find greater number

int greater = (number1 > number2) ? number1 : number2;

// Logical operation to check if both are positive

boolean bothPositive = (number1 > 0) && (number2 > 0);

// Output

System.***out***.println("\n--- Results ---");

System.***out***.println("Addition: " + addition);

System.***out***.println("Greater number: " + greater);

System.***out***.println("Are both positive? " + bothPositive);

}

}

Sample Output:

Addition: 30

Greater number: 20

Are both positive? True

**4. String Concatenation Task:**

Create a greeting message using first name and last name entered by the user.

Sample Input:

First Name: Ravi

Last Name: Kumar

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class GreetingMessage {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

// Input from user

System.***out***.print("Enter First Name: ");

String firstName = sc.nextLine();

System.***out***.print("Enter Last Name: ");

String lastName = sc.nextLine();

// Output greeting message

System.***out***.println("Hello, " + firstName + " " + lastName + "! Welcome to the system.");

}

}

Sample Output:

Hello, Ravi Kumar! Welcome to the system.

**5. StringBuilder Task:**

Accept a sentence and reverse it using StringBuilder. Sample Input: Input: Hello Java Learners Sample Output:

Original: Hello Java Learners

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class ReverseString {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

System.***out***.print("Input: ");

String sentence = sc.nextLine();

StringBuilder sb = new StringBuilder(sentence);

sb.reverse();

System.***out***.println("Original: " + sentence);

System.***out***.println("Reversed: " + sb);

sc.close();

}

}

Sample Output:

Reversed: srenraeL avaJ olleH

**6. String API Task:**

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

Sample Input:

String: banana

Character: a

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class CountCharacter {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

System.***out***.print("String: ");

String str = sc.nextLine();

System.***out***.print("Character: ");

char ch = sc.next().charAt(0);

int count = 0;

for (int i = 0; i < str.length(); i++) {

if (str.charAt(i) == ch) {

count++;

}

}

System.***out***.println("Character '" + ch + "' appears " + count + " times.");

sc.close();

}

}

Sample Output:

Character 'a' appears 3 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. Sample Input:

Date: [current system date]

Amount: 12345.678

**#CODE**

package Day2Assignment;

import java.text.NumberFormat;

import java.time.LocalDate;

import java.time.format.DateTimeFormatter;

import java.util.Locale;

public class DateAndCurrency {

public static void main(String[] args) {

LocalDate date = LocalDate.*now*();

DateTimeFormatter formatter = DateTimeFormatter.*ofPattern*("dd-MM-yyyy");

String formattedDate = date.format(formatter);

double amount = 12345.678;

NumberFormat currency = NumberFormat.*getCurrencyInstance*(new Locale("en", "IN"));

String formattedAmount = currency.format(amount);

System.***out***.println("Current Date: " + formattedDate);

System.***out***.println("Formatted Amount: " + formattedAmount);

}

}

Sample Output:

Current Date: 20-07-2025

Formatted Amount: ₹12,345.68 8.

**8.Flow Control Task:**

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

Sample Input:

Number: -5

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class NumberCheck {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

System.***out***.print("Number: ");

int num = sc.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.");

sc.close();

}

}

Sample Output:

The number is negative.

**9. Conditions Task:**

Accept marks and display the grade using if-else.

Sample Input:

Marks: 76

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class GradeCheck {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

System.***out***.print("Marks: ");

int marks = sc.nextInt();

if (marks >= 90)

System.***out***.println("Grade: A");

else if (marks >= 75)

System.***out***.println("Grade: B");

else if (marks >= 60)

System.***out***.println("Grade: C");

else if (marks >= 40)

System.***out***.println("Grade: D");

else

System.***out***.println("Grade: F");

sc.close();

}

}

Sample Output:

Grade: B

**10. Switch Task:**

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

Sample Input:

Number1: 10

Number2: 5

Operation: \*

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class Calculator {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

System.***out***.print("Number1: ");

int a = sc.nextInt();

System.***out***.print("Number2: ");

int b = sc.nextInt();

System.***out***.print("Operation (+, -, \*, /): ");

char op = sc.next().charAt(0);

switch (op) {

case '+': System.***out***.println("Result: " + (a + b)); break;

case '-': System.***out***.println("Result: " + (a - b)); break;

case '\*': System.***out***.println("Result: " + (a \* b)); break;

case '/': System.***out***.println("Result: " + (a / b)); break;

default: System.***out***.println("Invalid operation.");

}

sc.close();

}

}

Sample Output:

Result: 50

**11. Loops and Branching Task:**

Print the first N even numbers using a loop.

Sample Input:

N = 5

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class EvenNumbers {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

System.***out***.print("N = ");

int n = sc.nextInt();

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

System.***out***.print((2 \* i) + " ");

}

sc.close();

}

}

Sample Output: 0 2 4 6 8 12.

**12.Arrays Task:**

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

Sample Input:

Numbers: 10, 20, 30, 40, 50

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class AverageArray {

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

int[] nums = new int[5];

int sum = 0;

System.***out***.println("Enter 5 numbers:");

for (int i = 0; i < 5; i++) {

nums[i] = sc.nextInt();

sum += nums[i];

}

double average = sum / 5.0;

System.***out***.println("Average: " + average);

sc.close();

}

}

Sample Output:

Average: 30.0

**13. Enum Task:**

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

Sample Input:

Day: MONDAY

**#CODE**

package Day2Assignment;

import java.util.Scanner;

public class DayMessage {

enum *Day* {

***MONDAY***, ***TUESDAY***, ***WEDNESDAY***, ***THURSDAY***, ***FRIDAY***, ***SATURDAY***, ***SUNDAY***

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.***in***);

System.***out***.print("Day: ");

String input = sc.next().toUpperCase();

*Day* day = *Day*.*valueOf*(input);

switch (day) {

case ***MONDAY***:

System.***out***.println("Start of the work week!");

break;

case ***FRIDAY***:

System.***out***.println("Weekend is coming!");

break;

case ***SUNDAY***:

System.***out***.println("Relax, it's Sunday!");

break;

default:

System.***out***.println("Just another working day.");

}

sc.close();

}

}

Sample Output:

Start of the work week!

**14. OOPs Concepts Task:**

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

Sample Input:

Name: Riya

Marks: 87

**#code**

package Day2Assignment;

import java.util.Scanner;

class Student {

String name;

int marks;

void display() {

System.out.println("Student Name: " + name);

System.out.println("Marks: " + marks);

}

}

public class StudentDemo {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

Student s = new Student();

System.out.print("Name: ");

s.name = sc.nextLine();

System.out.print("Marks: ");

s.marks = sc.nextInt();

s.display();

sc.close();

}

}

Sample Output:

Student Name:

Riya Marks: 87

**15. Inheritance Task:**

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

Sample Input:

Name: Raj

Salary: 50000

Department: Sales

**#code**

package Day2Assignment;

import java.util.Scanner;

class Employee {

String name;

int salary;

}

class Manager extends Employee {

String department;

void display() {

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

System.out.println("Salary: " + salary);

System.out.println("Department: " + department);

}

}

public class InheritanceDemo {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

Manager m = new Manager();

System.out.print("Name: ");

m.name = sc.nextLine();

System.out.print("Salary: ");

m.salary = sc.nextInt();

sc.nextLine(); // consume newline

System.out.print("Department: ");

m.department = sc.nextLine();

m.display();

sc.close();

}

}

Sample Output:

Name: Raj

Salary: 50000

Department: Sales