

## Day2\_Java\_Assignment1

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class PrimitiveDataTypes {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Enter your age: ");
        int age = input.nextInt();
        System.out.print("Enter your height: ");
        float height = input.nextFloat();
        System.out.print("Enter your weight: ");
        float weight = input.nextFloat();

        System.out.println("Age: "+age);
        System.out.println("\nHeight: "+height);
        System.out.println("Weight: "+weight);
        input.close();
    }
}
```

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class Variables {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("ID: ");
        int id = input.nextInt();
        System.out.print("Name: ");
        String name = input.next();
        System.out.print("Marks: ");
        float marks = input.nextFloat();
        System.out.print("Grade: ");
        char grade = input.next().charAt(0);

        System.out.println("Student ID: "+id);
        System.out.println("\nName: "+name);
        System.out.println("Marks: "+marks);
        System.out.println("Grade: "+grade);

        input.close();
    }
}
```

```

    }
}

```

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

```

package Day2_Java_Assignment1;
import java.util.Scanner;
public class Operators {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Number1: ");
        int n1 = input.nextInt();
        System.out.print("Number2: ");
        int n2 = input.nextInt();

        System.out.println("Addition: "+(n1+n2));
        System.out.println("Greater number: "+((n1>n2)?n1:n2));
        System.out.println("Are both positive? "+((n1>0 && n2>0)?true:false));

        input.close();
    }
}

```

**String Concatenation Task:** Create a greeting message using first name and last name entered by the user.

```

package Day2_Java_Assignment1;
import java.util.Scanner;
public class StringConcatenation {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("First Name: ");
        String first = input.next();
        System.out.print("Last Name: ");
        String last = input.next();

        System.out.println("Hello, "+first+" "+last+"! Welcome to the system.");
        input.close();
    }
}

```

**StringBuilder Task:** Accept a sentence and reverse it using StringBuilder.

```

package Day2_Java_Assignment1;
import java.util.Scanner;
public class StringBuilderReverse {
    public static void main(String[] args) {

```

```

        Scanner input = new Scanner(System.in);
        System.out.print("Input: ");
        String sentence = input.nextLine();
        StringBuilder sb = new StringBuilder(sentence);

        System.out.println("Original: "+sentence);
        System.out.println("\nReversed: "+sb.reverse());
        input.close();
    }
}

```

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

```

package Day2_Java_Assignment1;
import java.util.Scanner;
public class StringAPI {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("String: ");
        String st = input.next();
        System.out.print("Character: ");
        char ch = input.next().charAt(0);

        int count = 0;
        for (int i=0; i<st.length(); i++) {
            if(st.charAt(i)==ch)
                count++;
        }
        System.out.println("Character '"+ch+"' appears "+count+" times.");
        input.close();
    }
}

```

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

```

package Day2_Java_Assignment1;
import java.text.NumberFormat;
import java.time.LocalDate;
import java.time.format.DateTimeFormatter;
import java.util.Locale;
import java.util.Scanner;
public class DateTimeNumeric {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Amount: ");
        float amount = input.nextFloat();
    }
}

```

```

        LocalDate date = LocalDate.now();
        DateTimeFormatter formatter = DateTimeFormatter.ofPattern("dd-MM-yyyy");
        String formattedDate = formatter.format(date);

        NumberFormat nf = NumberFormat.getCurrencyInstance(new Locale("en", "IN"));
        String currency = nf.format(amount);

        System.out.println("Current Date: "+formattedDate);
        System.out.println("Formatted Amount: "+currency);
        input.close();
    }
}

```

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

```

package Day2_Java_Assignment1;
import java.util.Scanner;
public class FlowChart {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Number: ");
        float n = input.nextFloat();

        if(n>0)
            System.out.println("The number is positive.");
        else if(n<0)
            System.out.println("The number is negative.");
        else
            System.out.println("The number is zero.");
        input.close();
    }
}

```

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

```

package Day2_Java_Assignment1;
import java.util.Scanner;
public class Conditions {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Marks: ");
        int marks = input.nextInt();
        if(marks>=90)
            System.out.println("Grade: A+");
        else if(marks>=80 && marks<90)

```

```

        System.out.println("Grade: A");
    if(marks>=70 && marks<80)
        System.out.println("Grade: B");
    if(marks>=60 && marks<70)
        System.out.println("Grade: C");
    if(marks<60)
        System.out.println("Grade: Fail");
    input.close();
}
}

```

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

```

package Day2_Java_Assignment1;
import java.util.Scanner;
public class SwitchCases {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Number1: ");
        int a = input.nextInt();
        System.out.print("Number2: ");
        int b = input.nextInt();
        System.out.print("Operation (+, -, *, /): ");
        char op = input.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.");
        }
        input.close();
    }
}

```

**Loops and Branching Task:** Print the first N even numbers using a loop.

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class LoopsAndBranching {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("N = ");
        int n = input.nextInt();

        for(int i=0; i<n; i++) {
            System.out.print(i*2);
            if(i<n-1)
                System.out.print(" ");
        }
        input.close();
    }
}
```

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class Arrays {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int total = 0;
        int[] nums = new int[5];
        for(int i=0; i<5; i++) {
            System.out.print("Enter a number: ");
            nums[i] = input.nextInt();
        }
        for(int num : nums) {
            total+=num;
        }
        float average = total/5;
        System.out.println("Average: "+average);
        input.close();
    }
}
```

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class EnumTask {
    public static void main(String[] args) {
```

```

Scanner input = new Scanner(System.in);
System.out.print("Day: ");
String day = input.next();
day = day.toUpperCase();

switch(day) {
case "MONDAY":
    System.out.println("Start of the work week!");
    return;
case "TUESDAY":
    System.out.println("Second day of the week!");
    return;
case "WEDNESDAY":
    System.out.println("Third day of the week!");
    return;
case "THURSDAY":
    System.out.println("Fourth day of the week!");
    return;
case "FRIDAY":
    System.out.println("Fifth day of the week!");
    return;
case "SATURDAY":
    System.out.println("Last day of the work week!");
    return;
case "SUNDAY":
    System.out.println("Weekend!");
    return;
default:
    System.out.println("Invalid input");
}
input.close();
}
}

```

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

```

package Day2_Java_Assignment1;
import java.util.Scanner;
class Student{
    String name;
    int marks;

    public Student (String name, int marks) {
        this.marks = marks;
        this.name = name;
    }
}

```

```

        void display() {
            System.out.println("Name: "+name);
            System.out.println("Marks "+marks);
        }
    }
    public class OopsConceptStudent {
        public static void main(String[] args) {
            Scanner input = new Scanner(System.in);
            System.out.print("Name: ");
            String name = input.next();
            System.out.print("Marks: ");
            int marks = input.nextInt();

            Student s1 = new Student(name, marks);
            s1.display();
            input.close();
        }
    }
}

```

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

```

package Day2_Java_Assignment1;
public class Employee {
    String name;
    double salary;

    public Employee(String name, int salary) {
        this.name = name;
        this.salary = salary;
    }

    public void display() {
        System.out.println("Name: "+name);
        System.out.println("Salary: "+salary);
    }
}

package Day2_Java_Assignment1;
public class Manager extends Employee{
    private String department;
    public Manager(String name, int salary, String department) {
        super(name, salary);
        this.department = department;
    }
}

```



```
        public void display() {  
            super.display();  
            System.out.println("Department : "+department);  
        }  
    }  
}
```

```
package Day2_Java_Assignment1;  
import java.util.Scanner;  
public class EMMain {  
    public static void main(String[] args) {  
        Scanner input = new Scanner(System.in);  
  
        System.out.print("Name: ");  
        String name = input.next();  
  
        System.out.print("Salary: ");  
        int salary = input.nextInt();  
  
        System.out.print("Department: ");  
        String department = input.next();  
  
        Manager mg = new Manager(name, salary, department);  
  
        mg.display();  
    }  
}
```