Day2 Assignment:22-07-25

1.Primitive Data Types :

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

```
package Day2assign;

import java.util.Scanner;


public class datatype {


    public static void main(String[] args) {

            Scanner s=new Scanner(System.in);

            System.out.println("Enter the age:");

            int age=s.nextInt();

            System.out.println("Enter  the height:");

            Float  height=s.nextFloat();

            System.out.println("Enter the weight");

            Float weight=s.nextFloat();


            System.out.println("Details");

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

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

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


            s.close();

    }


}
```

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

```
package Day2assign;

public class Variablecheck {
```

```
        public static void main(String[] args) {
                // TODO Auto-generated method stub
                int studentId = 101;
    String name = "Srujana";
    double marks = 89.5;
    char grade = 'A';

    // Display output
    System.out.println("Student ID: " + studentId);
    System.out.println("Name: " + name);
    System.out.println("Marks: " + marks);
    System.out.println("Grade: " + grade);

        }

}
```

2. Operators

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

```
 package Day2assign;


public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num1 = scanner.nextInt();

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

Int num2 = scanner.nextInt();

// Arithmetic Operations

System.out.println("\nArithmetic Operations: ");

System.out.println("Addition: " + (num1 + num2));

System.out.println("Subtraction:"+(num1 num2));

System.out.println("Multiplication:" + (num1 num2));

System.out.println("Division:" (num1/(double) num2));

System.out.println("Modulus: " + (num1% num2));
```

```
        // Relational Operations
        System.out.println("\nRelational Operations:"),
        System.out.println("Equal: "+(num1 == num2));
        System.out.println("Not Equal: " + (num1 != num2));
        System.out.println("Greater Than:" (num1 > num2));
        System.out.println("Less Than: " + (num1 <num2));
        System.out.println("Greater Than or Equal: (num1 >= num2));
        System.out.println("Less Than or Equal: " + (num1 <=num2));
        //Logical Operations
        System.out.println("\nLogical Operations:");
        System.out.println("AND: "+(num1 > 0 && num2 > 0));
        System.out.println("OR:"+ (num1>0 || num2 > 0));
        System.out.println("NOT:"+!(num1 > num2));
        scanner.close();
        }
}
```

3. String Concatenation

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

```
package Day2assign;
import java.util.Scanner;

public class StringConcat {

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

```
            System.out.print("Enter First Name: ");
        String firstName = s.nextLine();



        System.out.print("Enter Last Name: ");
        String lastName = s.nextLine();


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


    }


}
```

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

```
package Day2assign;
import java.util.Scanner;

public class StringRev {

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


      System.out.print("Msg: ");
      String Msg = s.nextLine();

      // Reverse using StringBuilder
      StringBuilder  sb = new StringBuilder(Msg);
      String rev = sb.reverse().toString();

      // Display output
      System.out.println("Original: " + Msg);
      System.out.println("Reversed: " + rev);

      s.close();

          }

}
```

5. String API

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

```
package Day2assign;
import java.util.Scanner;
public class STringApi {

        public static void main(String[] args) {
                // TODO Auto-generated method stub
                Scanner s=new Scanner(System.in);
                System.out.print("Enter a string: ");
    String input = s.nextLine();

    System.out.print("Enter a character to count: ");
    char ch = s.next().charAt(0);

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

         }
}
```

6. Date, Time, and Numeric Objects

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

```
package Day2assign;
import java.time.LocalDate;
import java.time.format.DateTimeFormatter;
import java.text. DecimalFormat;

public class DateTimeAndCurrency {

public static void main(String[] args) {

//Get current date

LocalDate currentDate = LocalDate.now();

// Format cate as DD-MM-YYYY

Date Time Formatter formatter DateTimeFormatter.ofPattern("dd-MM-yyyy"):

String formattedDate = currentDate.format(formatter);
```

```
// Display formatted date
System.out.println("Current Date:"formatted Date);
}

// Format currency value

double amount 12345.678;
DecimalFormat decimalFormat = new DecimalFormat("##,##0.00");
String formattedAmount decimalFormat.format(amount);

//Display formatted amount
System.out.println("Formatted Amount: " + formattedAmount);
```

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

```
package Day2assign;
import java.util.Scanner;

public class NumberCheck {

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

    System.out.print("Enter a number: ");
    int number = s.nextInt();

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

        }

}
```

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

```
package Day2assign;
import java.util.Scanner;
public class Conditions {

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

```
                Scanner s=new Scanner(System.in);

                System.out.print("Enter Marks: ");
        int marks = s.nextInt();
        String grade;
                if (marks >= 90) {
           grade = "A+";
        } else if (marks >= 80) {
           grade = "A";
        } else if (marks >= 70) {
           grade = "B";
        } else if (marks >= 60) {
           grade = "C";
        } else if (marks >= 50) {
           grade = "D";
        } else {
           grade = "F";
        }
                System.out.println("Grade: " + grade);
                s.close();

            }

    }
```

9. Switch

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

```
package Day2assign;
import java.util.Scanner;
public class Switch {

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

        // Accept input
        System.out.print("Enter Number1: ");
        double num1 = s.nextDouble();

        System.out.print("Enter Number2: ");
        double num2 = s.nextDouble();

        System.out.print("Enter Operation (+, -, *, /): ");
        char operation = s.next().charAt(0);

        double result;

        // Perform operation using switch
        switch (operation) {
```

```
            case '+':
                result = num1 + num2;
                System.out.println("Result: " + result);
                break;
            case '-':
                result = num1 - num2;
                System.out.println("Result: " + result);
                break;
            case '*':
                result = num1 * num2;
                System.out.println("Result: " + result);
                break;
            case '/':
                if (num2 != 0) {
                    result = num1 / num2;
                    System.out.println("Result: " + result);
                } else {
                    System.out.println("Error: Division by zero not allowed.");
                }
                break;
            default:
                System.out.println("Invalid operation!");
        }

        s.close();

            }

    }
```

10. Loops and Branching

    Task: Print the first N even numbers using a loop

```
    package Day2assign;
    import java.util.Scanner;

    public class Loops {

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


        // Accept input
        System.out.print("Enter N: ");
        int num = sc.nextInt();

        // Print first N even numbers
        System.out.println("First " + num + " even numbers:");
        for (int i = 0; i < num; i++) {
```

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

        sc.close();

            }

    }
```

11. Arrays

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

```
    package Day2assign;
    import java.util.Scanner;

    public class Average {

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

        int[] numbers = new int[5];
        int sum = 0;

        // Accept 5 numbers
        System.out.println("Enter 5 numbers:");
        for (int i = 0; i < numbers.length; i++) {
           System.out.print("Number " + (i + 1) + ": ");
           numbers[i] = s.nextInt();
           sum += numbers[i];
        }

        // Calculate average
        double average = (double) sum / numbers.length;

        // Display output
        System.out.println("Average: " + average);
        s.close();

            }

    }
```

12. Enum

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

```
    package Day2assign;
    import java.util.Scanner;

    public class weekdays {
```

```
enum Day {
   MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY
}

public static void main(String[] args) {
   Scanner s = new Scanner(System.in);

   // Accept day as input
   System.out.print("Enter a day : ");
   String input = s.nextLine().toUpperCase();

   try {
      Day day = Day.valueOf(input);

      switch (day) {
         case MONDAY:
            System.out.println("Start of the work week!");
            break;
         case FRIDAY:
            System.out.println("Last working day of the week!");
            break;
         case SATURDAY:
         case SUNDAY:
            System.out.println("It's the weekend! Time to relax.");
            break;
         default:
            System.out.println("Keep going! You're doing great.");
      }

   } catch (IllegalArgumentException e) {
      System.out.println("Invalid day entered!");
   }

   s.close();
}
}
```

13. OOPs Concepts

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

```
package Day2assign;
import java.util.Scanner;

public class Student {

                        String name;

                        int marks;
```

```
                Student(String name, int marks) {

                this.name = name;
                this.marks =marks;
                }

                void displayData() {

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

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

                }


                public class Main {

                public static void main(String[] args) {

                Scanner scanner = new Scanner(System.in);

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

                String name = scanner.next();
                System.out.print("Marks: ");
                int marks = scanner.nextInt();

                Student student = new Student(name, marks);

                student.displayData();

                scanner.close();
        }
    }
}
```

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

```
import java.util.Scanner;

class Employee {

String name;

int salary;
```

```
        }

        Employee(String name, int salary) {

        this.name = name;

        this.salary = salary;

        }

        void display() {

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

        class Manager extends Employee {

        String department;

        }

        Manager(String name, int salary, String department) {

        super(name,salary);
        this.department=department;

        }
        void display() {

        super.display();

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


        public class Mainn {

        public static void main(String[] args) {

        Manager manager = new Manager("Raj", 50000, "Sales");

        manager.display();

        }
}
```