Day2_Class_Assignments

Java Program: Are you above 18 years old?

```
Package ClassAssignments;
import java.util.Scanner;
public class Eligibility {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.print("Please enter your age: ");
      int age = sc.nextInt();
      if (age >= 18) {
         System.out.println("You are eligible to vote");
      } else {
         System.out.println("You are not eligible to vote");
      }
      sc.close();
   }
}
```

O/P:

```
Please enter your age: 21
You are eligible to vote
```

……

1. Java Program: Print Multiplication Table Using for Loop

```
Package ClassAssignments;
import java.util.Scanner;
public class MultipTable {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.print("Enter a number :");
      int number = sc.nextInt();
```

```
        System.out.println("Multiplication table for " + number + ":");
        for (int i = 1; i <= 10; i++) {
            System.out.println(number + " x " + i + " = " + (number * i));
        }
        sc.close();
    }
}
```

O/P:

Enter a number to print its multiplication table: 7

Multiplication table for 7:

7 x 1 = 7

7 x 2 = 14

7 x 3 = 21

7 x 4 = 28

7 x 5 = 35

7 x 6 = 42

7 x 7 = 49

7 x 8 = 56

7 x 9 = 63

7 x 10 = 70

……

3. Java Program: Character, String, and Boolean Input Example

```
Package ClassAssignments;
import java.util.Scanner;
public class UserInputSummary {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a single character: ");
        char character = sc.next().charAt(0);
        System.out.print("Enter your name: ");
```

```
        String name = sc.next();
        System.out.print("Do you like programming? (true/false): ");
        boolean likesProgramming = sc.nextBoolean();
        System.out.println("\n--- User Input Summary ---");
        System.out.println("Character entered: " + character);
        System.out.println("Name entered: " + name);
        System.out.println("Likes programming: " + likesProgramming);
        if (likesProgramming) {
            System.out.println("Great! Keep coding, " + name + "!");
        } else {
            System.out.println("No worries, " + name + ". Keep Trying!");
        }
        sc.close();
    }
}
```

O/P:

```
Enter a single character: A
Enter your name: Alice
Do you like programming? (true/false): true
--- User Input Summary ---
Character entered: A
Name entered: Alice
Likes programming: true
Great! Keep coding, Alice!
```

……

4. Create a Java program that simulates simple banking operations like checking balance, depositing money, and withdrawing money using a switch case statement.

```
Package ClassAssignments;
import java.util.Scanner;
public class Banking {
    public static void main(String[] args) {
```

```
Scanner sc = new Scanner(System.in);
double balance = 0.0;
int choice;
System.out.println("Welcome to ABC Bank");
while (true) {
   System.out.println("\n1. Check Balance");
   System.out.println("2. Deposit Money");
   System.out.println("3. Withdraw Money");
   System.out.println("4. Exit");
   System.out.print("Enter your choice: ");
   choice = sc.nextInt();
   switch (choice) {
      case 1:
         System.out.println("Your current balance is: ₹" + balance);
         break;
      case 2:
         System.out.print("Enter amount to deposit: ");
         double deposit = sc.nextDouble();
         if (deposit > 0) {
            balance += deposit;
            System.out.println("Deposit successful!");
         } else {
            System.out.println("Invalid deposit amount.");
         }
         break;
      case 3:
         System.out.print("Enter amount to withdraw: ");
         double withdraw = sc.nextDouble();
         if (withdraw > 0 && withdraw <= balance) {
            balance -= withdraw;
            System.out.println("Withdrawal successful!");
```

```
                } else {
                    System.out.println("Invalid or insufficient balance.");
                }
                break;
            case 4:
                System.out.println("Thank you for using ABC Bank!");
                sc.close();
                return;
            default:
                System.out.println("Invalid choice. Please try again.");
        }
    }
  }
}
```

O/P:

Welcome to ABC Bank

1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Exit

Enter your choice: 2

Enter amount to deposit: 5000

Deposit successful!

1. Check Balance
2. Deposit Money
3. Withdraw Money
4. Exit

Enter your choice: 1

Your current balance is: ₹5000.0

1. Check Balance

2. Deposit Money

3. Withdraw Money

4. Exit

Enter your choice: 3

Enter amount to withdraw: 2000

Withdrawal successful!

1. Check Balance

2. Deposit Money

3. Withdraw Money

4. Exit

Enter your choice: 1

Your current balance is: ₹3000.0

1. Check Balance

2. Deposit Money

3. Withdraw Money

4. Exit

Enter your choice: 4

Thank you for using ABC Bank!

……..

Day2_Java_Assignment1

1. 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 PrimitiveData {

    public static void main(String[] args) {

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

```
        System.out.print("Age: ");
        int age = sc.nextInt();
        System.out.print("Height: ");
        float height = sc.nextFloat();
        System.out.print("Weight: ");
        double weight = sc.nextDouble();
        System.out.println("\nAge: " + age);
        System.out.println("Height: " + height);
        System.out.println("Weight: " + weight);
        sc.close();
    }
}
```

O/P:

Age: 25

Height: 5.9

Weight: 68.5

……..

2. **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;
public class StudentInfo {
    public static void main(String[] args) {
        int studentId = 565;
        String name = "Lalli";
        double marks = 99.9;
        char grade = 'A';
        System.out.println("Student ID: " + studentId);
        System.out.println("Name: " + name);
        System.out.println("Marks: " + marks);
        System.out.println("Grade: " + grade);
```

```
        }
    }
```

O/P:

Student ID: 565

Name: Lalli

Marks: 99.9

Grade: A

……

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class OperatorsDemo {
   public static void main(String[] args) {
       Scanner sc = new Scanner(System.in);
       System.out.print("Number1: ");
       int number1 = sc.nextInt();
       System.out.print("Number2: ");
       int number2 = sc.nextInt();
       int sum = number1 + number2;
       int greater = (number1 > number2) ? number1 : number2;
       boolean areBothPositive = (number1 > 0) && (number2 > 0);
       System.out.println("\nAddition: " + sum);
       System.out.println("Greater number: " + greater);
       System.out.println("Are both positive? " + areBothPositive);
       sc.close();
   }
}
```

O/P:

Number1: 50

Number2: 40

Addition: 90

Greater number: 90

Are both positive? True

……..

4. 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 GreetingMessage {
	   public static void main(String[] args) {
	      Scanner sc = new Scanner(System.in);
	      System.out.print("First Name: ");
	      String firstName = sc.nextLine();
	      System.out.print("Last Name: ");
	      String lastName = sc.nextLine();
	      String message = "Hello, " + firstName + " " + lastName + "! Welcome to the system.";
	      System.out.println("\n" + message);
	      sc.close();
	   }
	}
```

O/P:

First Name: Lalitha

Last Name: BIrlangi

Hello, Lalitha Birlangi! Welcome to the system.

……

5. Accept a sentence and reverse it using StringBuilder.

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class StringReversal {
```

```
    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);
        String reversed = sb.reverse().toString();
        System.out.println("\nOriginal: " + sentence);
        System.out.println("Reversed: " + reversed);
        sc.close();
    }
}
```

O/P:

```
Input: Hello Java Learners
Original: Hello Java Learners
Reversed: srenraeL avaJ olleH
```

……

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class CharacterCount {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("String: ");
        String input = sc.nextLine();
        System.out.print("Character: ");
        char ch = sc.next().charAt(0);
        int count = 0;
        for (int i = 0; i < input.length(); i++) {
            if (input.charAt(i) == ch) {
                count++;
            }
```

```
        }
        System.out.println("\nCharacter '" + ch + "' appears " + count + " times.");
        sc.close();
    }
}
```

O/P:

String: Lalitha

Character: l

Character 'l' appears 2 times.

……

7. 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;
public class DateAndCurrencyFormat {
    public static void main(String[] args) {
        LocalDate today = LocalDate.now();
        DateTimeFormatter formatter = DateTimeFormatter.ofPattern("dd-MM-yyyy");
        String formattedDate = today.format(formatter);
        double amount = 12345.678;
        NumberFormat currencyFormatter = NumberFormat.getCurrencyInstance(new Locale("en",
"IN"));
        String formattedAmount = currencyFormatter.format(amount);
        System.out.println("Current Date: " + formattedDate);
        System.out.println("Formatted Amount: " + formattedAmount);
    }
}
```

O/P:

Current Date: 24-07-2025

Formatted Amount: ₹12,345.68

……..

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class NumberCheck {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.print("Number: ");
      int number = sc.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.");
      }
      sc.close();
   }
}
```

O/P:

Number: -5

The number is negative.

……

9. Accept marks and display the grade using if-else.

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class GradeCalculator {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.print("Marks: ");
```

```
        int marks = sc.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);
        sc.close();
    }
}
```

O/P:

Marks: 76

Grade: B

……

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
public class SimpleCalculator {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Number1: ");
        double num1 = sc.nextDouble();
```

```
System.out.print("Number2: ");
double num2 = sc.nextDouble();
System.out.print("Operation (+, -, *, /): ");
char operator = sc.next().charAt(0);
double result;
switch (operator) {
   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: Cannot divide by zero.");
      }
      break;

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

```
        sc.close();
    }
}
```

O/P:

Number1: 10

Number2: 5

Operation: *

Result: 50.0

……

11. Print the first N even numbers using a loop.

```
package Day2_Java_Assignment1;
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();
        System.out.println("\nFirst " + n + " even numbers:");
        for (int i = 0; i < n; i++) {
            System.out.print((i * 2) + " ");
        }
        sc.close();
    }
}
```

O/P:

N = 5

First 5 even numbers:

0 2 4 6 8

……..

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

```
package Day2_Java_Assignment1;
```

```
import java.util.Scanner;
public class ArrayAverage {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      int[] numbers = new int[5];
      int sum = 0;
      System.out.println("Enter 5 numbers:");
      for (int i = 0; i < numbers.length; i++) {
         System.out.print("Number " + (i + 1) + ": ");
         numbers[i] = sc.nextInt();
         sum += numbers[i];
      }
      double average = (double) sum / numbers.length;
      System.out.println("\nAverage: " + average);
      sc.close();
   }
}
```

O/P:

```
Enter 5 numbers:
Number 1: 10
Number 2: 20
Number 3: 30
Number 4: 40
Number 5: 50
Average: 30.0
```

……

13. 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 WeekdayMessage {
   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();
    try {
      Day day = Day.valueOf(input);
      switch (day) {
        case MONDAY:
          System.out.println("Start of the work week!");
          break;
        case FRIDAY:
          System.out.println("Almost weekend!");
          break;
        case SATURDAY:
        case SUNDAY:
          System.out.println("It's the weekend! Relax!");
          break;
        default:
          System.out.println("Just another weekday.");
      }
    } catch (IllegalArgumentException e) {
      System.out.println("Invalid day entered.");
    }
    sc.close();
  }
}
```

O/P:

```
Day: MONDAY
Start of the work week!
```

14. 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 class StudentData {
   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();
      System.out.println("Student Name: " + s.name);
      System.out.println("Marks: " + s.marks);
      sc.close();
   }
}
```

I/P:

Name: Riya

Marks: 87

O/P:

Student Name: Riya

Marks: 87

……..

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

```
package Day2_Java_Assignment1;
import java.util.Scanner;
```

```
class Employee {
   String name;
   double salary;
}
class Manager extends Employee {
   String department;
}
public class ManagerDetails {
   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.nextDouble();
      sc.nextLine();
      System.out.print("Department: ");
      m.department = sc.nextLine();
      System.out.println("\nName: " + m.name);
      System.out.println("Salary: " + m.salary);
      System.out.println("Department: " + m.department);
      sc.close();
   }
}
```

I/P:

Name: Raj

Salary: 50000

Department: Sales

O/P:

Name: Raj

Salary: 50000.0

Department: Sales