Java Programming [CSE201] Enrolment No.:23DCS012

CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY

**DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY & RESEARCH**

Department of Computer Science & Engineering

Subject Name: Java Programming

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Part - 1

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| **No.** | **Data Types, Variables, String, Control Statements, Operators, Arrays** |
| 2. | Imagine you are developing a simple banking application where you need to display the current balance of a user account. For simplicity, let's say the current balance is $20. Write a java program to store this balance in a variable and then display it to the user.  **PROGRAM CODE:**  public class prec2 {      public static void main(String[] args) {          int a = 20;          System.out.println("Balance = "+a+"$");      }  }  **OUTPUT:**    **CONCLUSION:** Learnt about the basics of java and basic syntax. |

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| 3. | Write a program to take the user for a distance (in meters) and the time taken (as three numbers: hours, minutes, seconds), and display the speed, in meters per second, kilometers per hour and miles per hour (hint:1 mile = 1609 meters).  **PROGRAM CODE:**  import java.util.\*;  public class prec3 {      public static void main(String[] args) {          float time[] = new float[3];          Scanner s = new Scanner(System.in);          int choice;          float dis, tmin, tsec, thour;          float calculate;          System.out.print("Enter Distance : ");          dis = s.nextFloat();          System.out.print("Enter Time In Hours : ");          time[0] = s.nextFloat();          System.out.print("Enter Time In Min : ");          time[1] = s.nextFloat();          System.out.print("Enter Time In Sec : ");          time[2] = s.nextFloat();          tmin = (time[0] \* 60);          tsec = ((tmin + time[1]) \* 60) + time[2];          thour = time[0] + (time[1] / 60) + (time[2] / 3600);          System.out.println("Choose Unit To Display Velocity");          System.out.println("1.m/s");          System.out.println("2.km/h");          System.out.println("3.miles/h");          choice = s.nextInt();          switch (choice) {              case 1:                  calculate = dis / tsec;                  System.out.println("Velocity = " + calculate + " m/s");                  break;              case 2:                  dis = dis / 1000;                  calculate = dis / thour;                  System.out.println("Velocity = " + calculate + " km/h");                  break;              case 3:                  dis = dis / 1609;                  calculate = dis / thour;                  System.out.println("Velocity = " + calculate + " miles/h");                  break;          }      }  }  **OUTPUT:**      **CONCLUSION:** In this practical we learnt about scanner class by using it we can take input from the user. |
| 4. | Imagine you are developing a budget tracking application. You need to calculate the total expenses for the month. Users will input their daily expenses, and the program should compute the sum of these expenses. Write a Java program to calculate the sum of elements in an array representing daily expenses.  **PROGRAM CODE:**  import java.util.Scanner;  public class prec4 {      public static void main(String[] args) {            int i;          float sum=0;          float arr[]=new float[5];          Scanner s = new Scanner(System.in);          System.out.println("Enter Your Expenses : ");          for(i=0;i<5;i++)          {              arr[i]=s.nextFloat();              sum+=arr[i];          }          System.out.println("Total Expense = " + sum);      }  }  **OUTPUT:**    **CONCLUSION:** Learnt about array, how array works in java, ways to initialize array. |
| 5. | An electric appliance shop assigns code 1 to motor,2 to fan,3 to tube and 4 for wires. All other items have code 5 or more. While selling the goods, a sales tax of 8% to motor,12% to fan,5% to tube light,7.5% to wires and 3% for all other items is charged. A list containing the product code and price in two different arrays. Write a java program using switch statement to prepare the bill.  **PROGRAM CODE:**  import java.util.Scanner;  public class prec5 {      public static void main(String[] args) {          float sum = 0;          float price[] = {100, 100, 100, 100, 100};          int choice, qun;          Scanner s = new Scanner(System.in);          System.out.println("1.Motor");          System.out.println("2.Fan");          System.out.println("3.Tube");          System.out.println("4.Wires");          System.out.println("5.Other");          System.out.println("Enter Item You Want to Add : ");          choice = s.nextInt();          System.out.println("Total Quntity : ");          qun = s.nextInt();          switch (choice) {              case 1:                  sum += (price[0]+(price[0] \* 0.08)) \* qun;                  break;              case 2:                  sum += (price[1]+(price[1] \* 0.12)) \* qun;                  break;              case 3:                  sum += (price[2]+(price[2] \* 0.05))\* qun;                  break;              case 4:                  sum += (price[3]+(price[3] \* 0.075)) \* qun;                  break;              case 5:                  sum += (price[4]+(price[4] \* 0.03)) \* qun;                  break;          }          System.out.println("Total = " + sum);      }  }  **OUTPUT:**    **CONCLUSION:** Learnt about the switch case. |
| 6. | Create a Java program that prompts the user to enter the number of days (n) for which they want to generate their exercise routine. The program should then calculate and display the first n terms of the Fibonacci series, representing the exercise duration for each day.  **PROGRAM CODE:**  import java.util.\*;  public class prec6{      public static void main(String[] args) {          int i,n;          long sum=0,ref1=0,ref2=1,temp;          System.out.println("Enter Total No Of Fibbonaci Value");          Scanner s = new Scanner(System.in);          n=s.nextInt();          System.out.println(ref1 + "\n" + ref2);          for(i=1;i<=n;i++)          {              temp=ref1+ref2;              ref1=ref2;              ref2=temp;              System.out.println(temp);              sum+=temp;          }          System.out.println("Sum = " + sum );      }  }  OUTPUT:    CONCLUSION: In this practical we learnt about the implementation of Fibonacci Series. |