CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY

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

Department of Computer Science & Engineering

Subject Name: JAVA PROGRAMMING

Semester: 3

Subject Code: CSE201

Academic year: 2024-25

Part - 1

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| **No.** | **Aim of the Practical** |
| 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 :**publicclassp2 {      publicstaticvoidmain(String[] args) { doublecurrentBalance = 20.0;      System.out.println("Current Balance: $" + String.format("%.2f", currentBalance));      }      }  **OUTPUT:**  **C:\Users\sanket\Pictures\Capture1.PNG**  **CONCLUSION:**  From this practical I have learned about writing a basic Java program, including declaring a class, defining the main method, initializing variables, and printing output. |
| 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:** importjava.util.\*;  publicclassp3{            publicstaticvoidmain(Stringargs[])      {              floatdist,min,hrs,sec;          System.out.println("Enter Distance in Meters");          Scanners = newScanner(System.in);          dist = s.nextFloat();          System.out.println("Enter Time in Hours");          hrs = s.nextFloat();          System.out.println("Enter Time in Minutes");          min = s.nextFloat();          System.out.println("Enter Time in Seconds");          sec = s.nextFloat();            floatkilometer = dist/1000;          floatmile = dist/1609;          floattotalmin = min + (hrs\*60) + (sec/60);          floattotalhrs = totalmin/60;          floattotalsec = totalmin\*60;            System.out.println("Your Speed in");          System.out.println("Meters per Second:"+dist/totalsec);          System.out.println("Kilometers per Hour:"+kilometer/totalhrs);          System.out.println("Miles per Hour:"+mile/totalhrs);      }  }  **OUTPUT:**  **C:\Users\sanket\Pictures\Capture2.PNG**  **CONCLUSION:**  This Java program calculates the speed of a vehicle based on user-provided distance and time inputs. It ensures accuracy by validating time inputs and provides speed outputs in meters per second, kilometers per hour, and miles per hour, making it practical for real-world applications requiring precise speed measurements. |
| 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 tocalculate the sum of elements in an array representing daily expenses.  **PROGRAM CODE:** importjava.util.Scanner;  publicclassp4 {      publicstaticvoidmain(String[] args) {          int[] expe = newint[7];          Scanners = newScanner(System.in);          intsum = 0;          for (inti = 0; i<expe.length; i++) {              System.out.print("enter your day " + (i + 1) + " expenses :");              expe[i] = s.nextInt();              sum += expe[i];          }          System.out.println("your total expense is " + sum);        }  }  **OUTPUT:**  **C:\Users\sanket\Pictures\Capture3.PNG**  **Conclusion**:In this Java program , takes array from the user which is expense of the no. of days and give us total expense of the user |
| 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.\**;  *public* *class* p5 {  *public* *static* *void* main(*String*[] *args*) {          System.out.println("electric application shop");  *Scanner* sc = new Scanner(System.in);          System.out.print("enter how many product you want buy :");  *int* product = sc.nextInt();  *int*[] itemcode = new *int*[product];  *float*[] prize = new *float*[product];  *float* sum = 0;          System.err.println("1:motor\n2:fan\n3:tube\n4:wires\n5:all others");          for (*int* i = 0; i<product; i++) {  *int* item;              System.out.print("enter item code :");              item = sc.nextInt();              itemcode[i] = item;              System.out.print("enter product prize :");              prize[i] = sc.nextFloat();              switch (item) {                  case 1 :                      prize[i] += prize[i] \* 0.08f;                      break;                  case 2 :                      prize[i] += prize[i] \* 0.12f;                      break;                  case 3 :                      prize[i] += prize[i] \* 0.05f;                      break;                  case 4 :                      prize[i] += prize[i] \* 0.075f;                      break;                  case 5 :                      prize[i] += prize[i] \* 0.03f;                      break;                  default :                      System.out.println("enter valid product code...");              }              sum += prize[i];          }          System.out.println("\nelectric appliance shop bill");          for (*int* i = 0; i<product; i++) {              System.out.println(itemcode[i] + "                  " + prize[i]);          }          System.out.println("====================================");          System.out.println("your total amount :" + sum);        }  }  **OUTPUT:**  C:\Users\sanket\Pictures\Capture5.PNG  **CONCLUSION:**  In this java program we have used arrays , loops , switch case and arithmetic operations.  And we designed this all things in bill format. |
| 6 | Create a Java program that prompts the user to enter thenumber 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.Scanner*;  *public* *class* p6 {  *static* *int* fibonaci(*int* *n*) {          if (n == 1 || n == 2) {              return 1;          } else {              return fibonaci(n - 1) + fibonaci(n - 2);          }      }  *public* *static* *void* main(*String*[] *args*) {  *Scanner*  s = new Scanner(System.in);          System.out.print("Enter number of days :");  *int* n = s.nextInt();          for (*int* i = 1; i<= n; i++) {              System.out.println("day " + i + " doing exercise for " + fibonaci(i) + " hour");          }      }  }  **OUTPUT:**  **C:\Users\sanket\Pictures\Capture4.PNG**  **CONCLUSION:**  In this Java program , we have implemented Fibonacci series concept using loops and arithmetic operations. |