Practical Assignment

PS02CMCA31 – OBJECT ORIENTED PROGRAMMING USING JAVA

Date of submission: Before Internal Exam

Note: New practicals may be added time to time.

1. To find the entered no. is ever or odd.
2. To accept two numbers from the user and display its addition, subtraction, multiplication and division.
3. To find minimum & maximum from given three numbers.
4. To accept the day no. & display corresponding day name. **Use Switch Stat.**
   E.g. (1 – Monday , 2 – Tuesday, …… 7 – Sunday)
5. To accept the month no. & display corresponding month name. **Use Switch Stat.**
   E.g. (1 – January, 2 – February …….. 12 –Dec)
6. Program to Perform Celsius to Fahrenheit Conversion. Formula: F = (C * 9) / 5 + 32.
7. Program to Perform Fahrenheit to Celsius Conversion. Formula: C = (F - 32) * 5 / 9.
8. To find the sum of first N numbers.
9. Display the multiplication table of a given integer number.
10. Display first N numbers of Fibonacci series.
11. To find the factorial of a given number.
12. To display the sum of first N numbers of series 1 , 3 , 5 , 7 , 9 ……..
13. To display the SUM = 1 + 4 + 9 + 16 + 25 + ……..
14. To find sum of Even numbers and Odd numbers between entered two numbers.
15. Write a program to find the sum of all digits of entered number.
16. Write a program to check the entered number is palindrome or not.
17. Write a program to find a prime numbers between a given two numbers.
18. Write a program to find the matrix addition, subtraction & multiplication.
19. To find out the total number of an odd digits within the given number and print the sum of all odd digits.
20. To display the following patterns.

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*          1          1          1 *
* *        1 2        22         1 * 2 * *
* * *      1 2 3      333        1 * 2 * * 3 * * *
* * * *    1 2 3 4    4444       1 * 2 * * 3 * * * 4 ****
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21. Perform the following operation on string ”**Sardar Patel University”**.
    a. Find the length of string
    b. Find the capacity of string.
    c. Convert all character in uppercase
    d. Reverse a string
    e. Convert all character in lowercase
    f. Extract and print “Sardar” from the string.
    g. Count occurrences of character **‘a’** in a string.

22. Write a java program to count the number of occurrences of a word in a given string.

23. Accepts N integer numbers from user and display in sorted order. Also display the sum, average, count of positive numbers, count of negative numbers, maximum value, & minimum value.

24. Menu driven program to check the entered number.
    1. Check for positive or negative number
    2. Check for odd or even number
    3. Check for primary number
    4. Check for Palindrome number
    5. Check for Armstrong number
    6. Check for number whether a member of fibonacci series
    7. Exit

25. Write a java program to create a class named Rectangle having member variable **length and breadth.** Define various constructors with and without arguments. Also create two methods **area** and **perimeter**.
    (**Formulas :** Area = length * breadth & Perimeter = 2 * (length + breadth)

26. Write a java program to create a class named **Square** having member variable **length.** Define constructor with and without arguments. Also create two methods **area** and **perimeter**.
    (**Formulas :** Area = length * length & Perimeter = 4 * (length)

27. Write a java program to create a class named circle having member variable **radius.** Also create two methods **area** and **circumference**. Initialize the radius value by constructor or **setRadius() method**.
    (**Formulas :** Area = PI * radius * radus & Circumference = 2 * PI * radius)

28. Define a **Sphere class** with **two constructors** and **one method**. The first form of constructor accepts no arguments. The second form of constructor accepts only radius of the sphere. The method is to find the area of sphere. (**Formula:** Area of sphere = 4* PI * radius * radius)

29. Declare a **three class rectangle, square and triangle**. Each class having **two methods perimeter and area**. Create an object of each class & find its area and perimeter. Use constructor overloading concepts in each classes.

30. Write a program to accept two integer numbers and one operator from the user and according to input data apply the operation on numbers and display the result. (**Hint:** Make a **class MathOp** having methods for addition, subtraction, division and multiplication.)

31. Write a program to create a class Employee having two member variables emp_id and emp_name. Also methods to store input data & retrieve output data. Accepts data of 5 employees from the user & display in proper format.

32. Write a program to create a class for MathFun having methods even_odd_check, prime_no_check, palindrome_check, armstrong_check. Create an object of class, accept one integer number from the user and list menu for the above methods and according to user choice display the proper output.
33. Write a program to Arr_operation having two methos sort_data and search_element. Accept N numbers from the user and choice of operation.

34. Write a program to create a class MatrixOperation having three methods Mat_Add, Mat_Sub & Mat_Mul. Accepts two matrice from the user and choice of operation.

35. Create a class of student to store the roll_no, stud_name and marks of 3 subjects. Accepts the data of 5 students from the user and display the marksheet in proper format.

36. Create a class of product to store product id, product name, product price and product quantity. Accepts the data of N products from the user. Also fetch product details by passing product id or product price.

37. Declare a class named Person. It have a name, age & salary. Create an array of person objects to accept the data and display it.

38. Calculate the net salary of an employee by considering the parameters called HRA (House rent allowance), DA (Dearness allowance), GS (Gross salary) and income tax. Let us assume some parameters.

    HRA = 10% of basic salary
    DA = 73% of basic salary
    GS = basic salary + DA + HRA
    Income tax = 30% of gross salary
    net salary = GS - income tax

    Take the input from the user **N** employees name, id and basic salary and display output in proper format

39. Write a program to take some integer values from command line and display max. value, min. value & sum, average of values, count +ve, -ve numbers.

40. Write a program to take some integer values from command line and display entered numbers in sorted order.