

C Programming – Lab Report II

1. Write a program to check whether a number is even or odd
2. Write a program to print the largest number among three numbers input by the user
3. Write a program to compare two numbers
4. Write a program to input a number and check the entered number is negative or non-negative.
5. Write a program to calculate discount. If purchased amount is greater than or equal to 1000, discount is 5%. If purchased amount is less than 1000, discount is 3%
6. Write a program to calculate discount
 - a. If purchased amount is greater than or equal to 5000, discount is 10%
 - b. If purchased amount is greater than or equal to 4000 and less than 5000, discount is 7%
 - c. If purchased amount is greater than or equal to 3000 and less than 4000, discount is 5%
 - d. If purchased amount is greater than or equal to 2000 and less than 3000, discount is 3%
 - e. If purchased amount is less than 2000, discount is 2%
7. Write a program to calculate the simple interest.
 - a. If balance is greater than 99999, interest is 7 %
 - b. If balance is greater than or equal to 50000 and less than 100000, interest is 5 %
 - c. If balance is less than 50000, interest is 3%
8. Admission to a professional course is subject to the following conditions:
 - a. Marks in mathematics ≥ 60
 - b. Marks in physics ≥ 50
 - c. Marks in chemistry ≥ 40
 - d. Total in all three subjects ≥ 200OR
Total in mathematics and physics ≥ 150
Write a program to process the applications to list eligible candidate
9. A leap year should meet the following condition:
 - a. For non-century years it should be exactly divisible by 4
 - b. For century years it should be exactly divisible 400Write a program to check a year for leap

10. Rates of tax on gross salary are as shown below:

Income	Tax
Less than 10,000	Nil
Rs. 10,000 to 19,999	10%
Rs. 20,000 to 39,999	15%
Rs. 40,000 to above	20%

Write a program to compute the net salary after deducting the tax for the given information

11. Jet Company gives 5% commission to its salesman if their monthly sales are less than Rs. 10,000 and a 10% commission if it is equal to or greater than Rs. 10,000. Write a program to calculate commission at the end of the month

12. A bank accepts deposits for one year or more and the policy it adopts on interest rate is as follows:

- If a deposit is less than Rs. 1,000 and for 2 or more years the interest rate is 5 percent compounded annually
- If a deposit is Rs. 1,000 or more but less than Rs. 5,000 and for 2 or more years the interest rate is 7 percent compounded annually
- If a deposit is more than Rs. 5,000 and is for 1 year or more the interest rate is 8 percent compounded annually
- On all deposits for 5 years or more interest is 10 percent compounded annually
- On all other deposits not covered by the above conditions the interest is 3 percent compounded annually

At the time of withdrawal, a customer data is given with the amount deposited and the number of years the money has been with the bank. Write a program to obtain the money in the customer's account and the interest credited at the time on withdrawal

13. Given marks in five subjects. Write a program (a) to display "PASS" or "FAIL" if assumed pass marks is 45 in each subject, (b) to find percentage of marks obtained, and (c) to find division for "PASS" students assuming that 80% and above for "DISTINCTION", 60% and above for "FIRST DIVISION" otherwise "SECOND DIVISION"

14. Write a program using switch statement to display EXCELLENT, VERY GOOD, GOOD, SATISFACTORY, or FAIL if the user enters A, B, C, D, or E respectively

15. Write a program to display number of days in a month using switch statement

16. Write a program using switch statement to develop a simple calculator for +, -, *, /, and % operators

17. A cloth showroom has announced the following seasonal discounts on purchase of items

Purchase amount	Discount	
	Mill cloth	Handloom items
0 – 100	-	5%
101 – 200	5%	7.5%
201 – 300	7.5%	10%
Above 300	10%	15%

Write a program using switch and if statements to compute the net amount to be paid by a customer

18. Write a program to read 5 subject marks and calculate percentage as follows if passed.

- Percentage ≥ 75 , Distinction with percentage
- Percentage ≥ 60 and < 75 First division with percentage.
- Percentage ≥ 45 and < 60 Second division with percentage.
- Percentage ≥ 35 and < 45 Pass division with percentage.
- Otherwise Fail

19. Write a program to print names of days according as number input from keyboard such as 1 for Sunday, 2 for Monday,, 7 for Saturday and other for wrong input.

20. Write a program to Check Whether a Character is Lowercase or not

21. Write a program to Check Whether a Character is Digit or not

22. Write a program to read your name and display it 5 times.

23. Write a program to print the number from 1 to 100.

24. Write a program to print even numbers from 100 to 0.

25. Write a program to input a number and find out if it is even or odd using goto statement

26. Write a program to read a number from keyboard until a zero or negative number is entered. Finally, calculating the sum and average of entered numbers.

27. Write a program to test whether an entered number is prime or not.

28. Write a program to generate the following pattern given below:

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1
1 2
1 2 3
1 2 3 4
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29. Write a program to Print even numbers only

30. Write a program to ask two numbers and display message "Either number is negative", if one of the numbers is negative; otherwise display message "Both numbers are positive"

31. Write a program for Armstrong number

32. Write a program for reversing a number

33. Write a program to compute sum of digits of an integer

34. Write a program to read a number from keyboard and check whether it is a palindrome or not

35. Write a program to display Fibonacci sequence: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...

36. Write a program to Find Factorial of a Given Number

37. Write a program to Convert Decimal Number to Binary Number

38. Write a program to Generate ASCII Table

39. Write a program to Generate Star Pyramid Pattern

40. Write a program to Generate Half Pyramid Star Pattern

41. Write a program to Generate Inverted Star Pyramid Pattern

42. Write a program to Generate Inverted Half Pyramid Star Pattern

43. Write a program to generate plus like pattern of star

44. Write a program to generate CROSS like pattern of star

45. Write a program to Generate Diamond Pattern Using Stars

46. Write a program to Generate Hollow Diamond Pattern Using Stars