Basic Programming Questions

1. Write a program which accept two numbers and print their sum

2. Write a program which accept principle, rate and time from user and print the simple interest.

3. Write a program which accepts a character and display its ASCII value.

4. Write a program to swap the values of two variables

5. Write a program to calculate area of circle

6. Write a program to check whether the given number is positive or negative (using ? : ternary operator)

7. Write a program to check whether the given number is even or odd (using ? : ternary operator)

8. Write a program to swap value of two variables without using third variable.

9. Write a program which input three numbers and display the largest number using ternary operator.

10. Write a program which accepts amount as integer and display total number of Notes of Rs. 500, 100, 50, 20, 10, 5 and 1.

    For example, when user enter a number, 575,

    the results would be like this...

    500: 1

    100: 0

    50: 1

20: 1

10: 0

5: 1

1: 0

11. Write a program which accepts a character and display its next character.

12. Write a program which accepts days as integer and display total number of years,

    months and days in it.

    for example : If user input as 856 days the output should be 2 years 4 months 6 days.

13. Write a program that takes length as input in feet and inches. The program should then convert the lengths in centimeters and display it on screen. Assume that the given lengths in feet and inches are integers.

14. Based on the problem, you need to design an algorithm as follows:
    1. Get the length in feet and inches.
    2. Convert the length into total inches.
    3. Convert total inches into centimeters.
    4. Output centimeters.

15. Write a program to check whether a triangle is valid or not, when the three angles of

    the triangle are entered by the user. A triangle is valid if the sum of all the three angles

    is equal to 180 degrees.

16. Any year is input by the user. Write a program to determine whether the year is a leap year or not.

17. In a company an employee is paid as under:

    If his basic salary is less than Rs. 1500, then HRA = 10% of basic salary and DA = 90% of

    basic salary.

If his salary is either equal to or above Rs. 1500, then HRA = Rs. 500 and DA = 98% of basic salary.

If the employee's salary is input by the user write a program to find his gross salary.

18. Write a program to calculate the monthly telephone bills as per the following rule:

    Minimum Rs. 200 for upto 100 calls.

    Plus Rs. 0.60 per call for next 50 calls.

    Plus Rs. 0.50 per call for next 50 calls.

    Plus Rs. 0.40 per call for any call beyond 200 calls

19. The marks obtained by a student in 5 different subjects are input by the user. The student gets a division as per the following rules:

    Percentage above or equal to 60 - First division
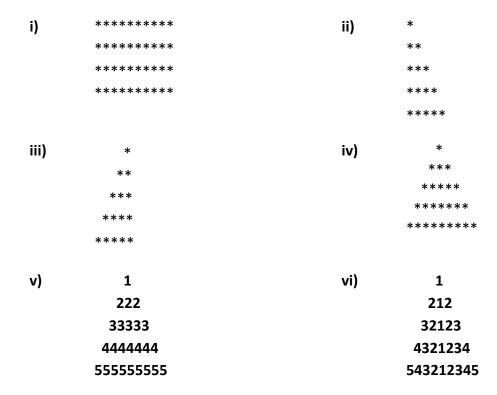
    Percentage between 50 and 59 - Second division

    Percentage between 40 and 49 - Third division

    Percentage less than 40 - Fail

    Write a program to calculate the division obtained by the student.

20. Write a program to print following :

i)
```
**********
**********
**********
**********
```

ii)
```
*
**
***
****
*****
```

iii)
```
    *
   **
  ***
 ****
*****
```

iv)
```
    *
   ***
  *****
 *******
*********
```

v)
```
    1
   222
  33333
 4444444
555555555
```

vi)
```
    1
   212
  32123
 4321234
543212345
```

20. Write a C++ program to prompt the user to input 3 integer values and print these values in forward and reversed order, as shown below.

```
Please enter your 3 numbers: 12 45 78
Your numbers forward:
12
45
78

Your numbers reversed:
78
45
12
```