Assignment #. 1

Assignment Topic: Formula Translation

Dead Line: 18-April-2018(Thursday) 11:59 pm

Dear Students,

Please complete this assignment seriously and submit before the dead line. Believe on yourself and start it now.

Dear students please don't disappoint. If you have any query, then come in my office STD-403 at any time to ask anything about these problems. Don't use any loop or conditional statement if else in this assignment. Only use the things which we have learnt in the class and lab. Best of luck

1. Print it using **output** shape.

My----------
--------- Name----------
---------- Is---------- (your name)

2. Write a c++ program to print following shape.

```
        *
       ***
      *****
     *******
    *********
     *******
      *****
       ***
        *
```

3. Write a c++ program to print following shape.

```
      *
     ***
    *****
   *******
  *********
  *********
  *********
    ***   ***
    ***   ***
    ***   ***
    ***   ***
```

4. Using only the techniques you learned about c++, Write a program that calculates the square and cube of a number from 0-9. Use tabs to print the following table of values.

```
numbe   number   square
0       0        0
1       1        1
2       2        4
3       3        9
4       4        16
5       5        25
6       6        36
7       7        49
8       8        64
9       9        81
10      10       100
```

5. Take a number from user and print its table in c++

Hint 2 x 1 = 2

2 x 2 = 4

.

.

2 x 10 = 20

6. Initialize two variables with 50 and 100
And print their values in this format

Value of first variable
is 50
and value of second variable is
100

7. Initialize variables as many as required and print the following.

I have 10 rupees and you have 20 rupees.
So we have enough money for to buy a coffee.Yahooooo....

8. Take three inputs from user and divide first by second and divide answer by third input in c++

9. Find distance between two points
in c++
Hint : $sqrt((x_2-x_1)^2 + (y_2-y_1)^2)$

10. Find discriminant of quadratic
equation Hint $D=b^2-4ac$.

11. Find roots of quadratic equation -
$b+sqrt(b^2-4ac) /2a$, $-b-sqrt(b^2-4ac) /2a$

12. Take two inputs from user and perform the operations addition, subtraction, quotient and remainder in c++

13. Take negative input from user and convert it into positive number in c++

14. Find area and perimeter of triangle. Take values of all sides of triangle from user.

15. Take five inputs from user and find their average

16. A soft drinks company recently surveyed 12,467 of its customers and found that approximately 14 percent of those purchase one or more energy drinks per week. From those customers who purchase energy drinks, approximately 64 percent of them prefer flavored energy drinks, write a program that displays the following:

- The approximate number of customers in the survey who purchase one or more energy drinks per week.
- The approximate number of customer in the survey who prefers flavored energy drinks.

17. Talal's basic salary is input through the keyboard. His dearness allowance is 40% of basic salary, and house rent allowance is 20% of basic salary. Write c++ to calculate his gross salary.

18. The distance between two cities (in km.) is input through the keyboard. Write c++ to convert and print this distance in meters, feet, inches and centimeters.

19. If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.

20. Temperature of a city in Fahrenheit degrees is input through the keyboard. Write c++ to convert this temperature into Centigrade degrees.

21. The length & breadth of a rectangle and radius of a circle are input through the keyboard. Write c++ to calculate the area & perimeter of the rectangle, and the area & circumference of the circle.

22. Two numbers are input through the keyboard into two locations C and D. Write c++ to interchange the contents of C and D.

23. If the total selling price of 15 items and the total profit earned on them is input through the keyboard, write c++ to find the cost price of one item.

24. Find the Distance between two points

$$d = \sqrt{(x2 - x1)^2 + (y2 - y1)^2}$$

Where (x1,y1) and (x2,y2) are two points on a coordinate plane. Take the values of points from user.

25. The standard one kilo gram is a platinum-iridium cylinder 39.0 mm in height and 39.0 mm in diameter. What is the density of the material?

Density = pi*h*r*2

Happy Mental Exercise

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