

C Program Assignment

1. WAP to find the exponential series of $1+x+(x^2/2!)+(x^3/3!)+.....+(x^n/n!)$.
2. WAP to sort integer array in ascending order using insertion sort.
3. WAP to convert a decimal to binary (For float number also).
4. WAP to insert new element in sorted array.
5. WAP to calculate a expression $\sin(x)=x-(x^3/3!)+(x^5/5!)+.....$ n terms.
6. WAP to calculate a expression $\cos(x)=1-(x^2/2!)+(x^4/4!)+.....$ n terms.
7. WAP to convert decimal to Hexadecimal number system.
8. Write a function that will round a floating point number to an indicated decimal place. Ex : the number is 17.457 would the value 17.46 when it is round off to two decimal places.
9. Write a function that will scan a character string passed as an argument and convert all lowercase character into uppercase equivalent.
10. WAP to replace a particular word in a given string. Ex :- The word "Pascal" should be replaced by "C" in the sentence. " It is good to program in Pascal Language".
11. WAP to print Pascal triangle using array.

```
1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1
```

12. WAP to create list which contains at least five elements using DYNAMIC MEMEORY ALLOCATION.
13. Write a function " Replace" which takes a pointer to a string as a parameter, which replaces all spaces in that sting by minus signs, and deliver the number of spaces it replaced.
14. Write a simple database program that will store a person details such as age ,DOB, Address etc.
15. WAP to find the number of times that a given word occurs.

Ex :- The word is "**the**".

The sentence is "**the** cat sat on **the** mat".

The word occurs 2 times.

16. WAP that take three variables(**a,b,c**) and rotate the values stored so that value **a** goes to **b**, **b** goes to **c**, **c** goes to **a**.
17. Given a Boolean variable x_1, \dots, x_n . We wish to print all possible combination of truth values they can assume. For instance , if $n=2$, there are four possibilities : [(True , True),(True ,false), (False,False),(False,True)]. WAP to accomplish this and do a frequency count .
18. WAP to add two numbers using command line arguments.
19. WAP to print out the integer value of x,y,z in non decreasing order.
20. WAP to search an element in an array.
21. WAP to print Fibonacci series , also by recursion.
22. WAP to determine perfect number . (The sum of factors of a number is equivalent to that number is perfect number)
23. WAP to find n^{th} greatest number from given array .n can be taken from user as input.
24. Write a macro to obtain the largest of three number .

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25. A NxN matrix is said to have a saddle point if some entry $a[i][j]$ is the smallest value in row i and the largest value in column j . WAP to create that determine the location of a saddle point if one exist.
26. WAP to create a function frequency(), that determines the frequency of occurrence of each of the distinct character in the string. Test your function using suitable data.
27. WAP to create a function delete(), that accept two integers, start and length. The function delete() computes a new string that is equivalent to the original string have been removed.
28. WAP to create a function chardelete(), that accept a character, the function returns the string with all the occurrence of that character removed.
29. WAP to create a function to make an in-place replacement of a substring w of a string by the string n.
30. WAP to read a line of text containing more than three words and replaces all the blank spaces with an underscore(_).
31. WAP that counts the number of occurrence of particular character say 'e' in a line of text.
32. WAP that read the following text and count the number of times the world appear in it.
33. WAP that count the number of words starting with specified character.
34. WAP that read several city names from keyword and display only those name beginning with character inputted by user.
35. If given string is "123456789". WAP that display the following :

1
232
34543
4567654
567898765

36. WAP that read a text file and create another file that is identical except that every sequence of consecutive blank spaces is replaced by a single space.
37. Write a program for a match-stick game between the computer and a user. Your program should ensure that the computer always wins. Rules for the game are as follows:
 - There are 21 match-sticks.
 - The computer asks the player to pick 1, 2, 3 or 4 match-sticks.
 - After the person picks, the computer does its picking.
 - Whoever is forced to pick up the last match-stick loses the game.