

Zoho Level 3 Questions

1. Reverse the sentence by word, but with a constraint the characters except alphabet should stay in the same position in output string as in input string.

Eg:

i/p: Hi... I didn't expect this from you...
o/p: yo... u from'thisexpectdidntIHi...

Eg:

i/p: This is version 4.1.005-e...
o/p: ever sionisthi 4.1.005-T...

2. Calculate the maximum size of palindrome string that can be generated from the given input string and also display any one of the possible palindrome.

Eg:

i/p: ABDBAF

o/p: Max size 5
Palin string (any one below)
ABDBA
BADAB
ABFBA
BAFAB

i/p: AAABBB
o/p: max size 5
palin string(any one below)
ABBBA

ABABA
sBABAB
BAAAB

3. Implement tic-tac-toe game

Get the input size of the grid or board if size is 3x3 or 4x4 then the max length that a player need to match is 3 and 4 respectively

If size of grid is greater than four like 5x5, 5x7, 6x10 then the winning length will be four

Handle math tie case and wrong position entering etc...

Eg:

Enter the width of the grid:3

Enter the height of the grid:3

Enter the first player name :muthu

Enter the second player name: rathinam

Enter the x position for the player muthu(X): 1

Enter the y position for the player muthu(X): 1

- - -
- X -
- - -

Enter the x position for the player rathinam(O):0

Enter the y position for the player rathinam(O):0

O - -
- X -
- - -

.....

O X X

-	X	O
X	O	-

Muthu Won.

4. This problem is the extended version of the above.

In this version only the column position will be given and we have to consider that the board is position in vertical manner so whenever the column of the position is given we have to place it in the first row of the specified column the it should be moved to the last empty row in the same column like a gravity pull

Eg:

Enter the width of the grid:3

Enter the height of the grid:3

Enter the first player name :muthu

Enter the second player name: rathinam

Enter the x position for the player muthu(X): 1

-	-	-
-	-	-
-	X	-

Enter the x position for the player rathinam(O):1

-	-	-
-	O	-
-	X	-

.....

-	X	O
X	O	O

X X O

Rathinam Won.

5. Four men have to cross a bridge at night. Any party who crosses, either one or two men, must carry the flashlight with them. The flashlight must be walked back and forth; it cannot be thrown, etc. Each man walks at a different speed. One takes 1 minute to cross, another 2 minutes, another 5, and the last 10 minutes. If two men cross together, they must walk at the slower man's pace. There are no tricks--the men all start on the same side, the flashlight cannot shine a long distance, no one can be carried, etc. And the question is What's the fastest they can all get across. Give the general solution for the all cases like any no.of men and with any speed.

For the above problem 17 is the best solution. Also code to find the solution for any given input.

6. Do the above problem in a recursive manner.