Question 1

You are given a sentence contained in given string S. Write a function which will replace all the words within the sentence whose length is even and greater than equal to 4, with a space between the two equal halves of the word.

Input –
"Men have become the tool of their tools"

Output –
"Men ha ve bec ome the to ol of their tools"

Function Prototype:
string ReaplceEvenWord(string S)

Question 2

You are given with an array of negative and positive numbers. Write an function to find the index at which the array should be divided into 2 sub-arrays in such a way that the difference between the sum of the 2 sub-array is maximum.

Example –
Input – [2, -4, 3, 1, -6, -1, 2, 7]
Output – 5
[2, -4, 3, 1, -6, -1] and **[2, 7]**. The difference is **9 – (-5) = 14**, which is maximum

Function Prototype:
int PartitionMaxDifferenceSubArray(int[] array)

Question 3

Write serialize and deserialize functions for a binary tree.