

Question 1

Given a number N, write a program to list the ways of obtaining N by using numbers from 1 to N-1 any number of times.

Example :

Input - N= 4

Output –

1,1,1,1

1,1,2

1,3

2,2

3,1

2,1,1

1,2,1

Question 2

Given two strings S and T. Write a function that returns the minimum length substring in S which contains all characters in T.

Example:

S: "this is a test string"

T: "tist"

Output String: "t stri"

Question 3

Given n pairs of parentheses, write a function to generate all combinations of well-formed parentheses.

For example, given n = 3, a solution set is: "((()))", "(()())", "(())()", "()()()", "()(())"

Question 4

Suppose in a country a couple keeps on reproducing until they get a girl child. They stop after they get their first girl child. What is the the ratio of boys:girls in this country?