

Question 1

Suppose you are given with the stock price of ABC Company for next 15 days in an array of integer. Write a program to find out the best buying and selling day for 1 share such that profit is maximum. Remember that share must be sold any day after buying date.

Example – (price are in thousands)

Input –

Prices – {8, 10, 5, 1, 4, 6, 7, 8, 4, 3, 7, 9, 7, 6, 9}

Output –

Max benefit is – Buying on 4th day and selling on 12th day
(which is 9 - 1 = 8 thousand)

Function Prototype –

void FindMaxBenefit(int[] prices)

Question 2

An N-palindrome string is a string which transforms into a palindrome on removing maximum N characters from the string. You are given with a string S, and an integer N, write a function to find whether the given string S is an N-palindrome string or not.

Example –

Input –

S = "acddxc"

N = 1

Output – true (the string become palindrome on removing one char – either x or a)

Input –

S = "create"

N = 2

Output – false

Input –

S = "create"

N = 3

Output – true (the string become palindrome on removing 3 chars)

Prototype of the function:

bool IsNPalindromString(string S, int N)

Question 3

An absolute number is defined as one in which each digit is strictly smaller than the digit to its right (if any). For e.g. 1234, 2478, 3569 are all absolute numbers. 1205, 4859 are not. Write an efficient program, which takes a number n as input and returns the smallest absolute number greater than n. e.g. if n = 1000 output = 1234

Function Prototype:

int getAbsoluteNumber(int n)