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Group N

Lab 502 / Lecture 004

Questions:

I had no questions.

Acknowledgement:

I was the only one who contributed to my code.

//Main Pseudocode:

Data: a[], the array that will store the users values.

\*p, a pointer that will be used to interact with the array.

n, the number of elements that the user entered.

Plan: //Subproblem 1: set p equal to &a[0].

//Subproblem 2: set n equal to the number of entries made by the user.

n = GetSeries(p)

//Subproblem 3: print the reverse order of the series.

ReverseArray(n,p)

//Subproblem 4: print the maximal number in the series.

printf(“%d”, CalculateMax(n,p))

//Function Definition

Function Name: GetSeries

Input: \*a, a pointer where \*a is an integer.

Output: n, the number of entires made by the user.

side effect: \*a, \*(a+1), … are set equal to the numbers the user entered.

Data: n, the local integer that stores the number of entries the user enters.

Plan: //Subproblem 1: Print the prompt for the user to enter a series.

//Subproblem 2: Assign the users input using a for loop to \*(a+i).

scanf(“%d”, (a+i))

//Subproblem 2.1: Stop the loop if the entered integer is 0.

//Subproblem 2.2: If the input is not 0 then n++.

//Subproblem 3: return the value of n.

//Function Definition

Function Name: ReverseArray

Input: n, the number of elements in the series.

\*a, a pointer where \*a is an integer.

Output: none

side effect: the number in the array will be printed in reverse order

Data: N.A.

Plan: //Subproblem 1: Start a for loop that iterates from i = n-1 to 0.

//Subproblem 1.1: if i is = to 0, print the value \*(a+i) with a period after it.

//Subproblem 1.2: if i is not = to 0, print the value \*(a+i) with a comma after it.

//Function Definition

Function Name: CalculateMax

Input: n, the number of elements in the series.

\*a, a pointer where \*a is an integer.

Output: max, the maximum value in the series.

Data: max, the local variable that store the max value in the series.

Plan: //Subproblem 1: Set max to the first element in the series.

//Subproblem 2: Start a for loop that iterates from i = n-1 to 0.

//Subproblem 2.1: if \*(a+i) > max, set max = to \*(a+i).

//Subproblem 3: Return max.