Structured Programming Quiz 4V3

Student Name /ID:

**Q1: (A)** Write a function called **FindSubstring(char arr[], char startL, char endL)**. This function will find and print the longest substring from the arr[] with the starting letter startL and ending letter endL. Also, it will return the length of the substring. If any of letters are not found or the ending letter is before the starting letter, show a “Not Found” Message and return 0.

int FindSubstring(char arr[], char startL, char endL) {

int n = Strlength(arr);

int maxLength = 0;

int start = -1, end = -1;

for (int i = 0; i < n; i++){

if (arr[i] == startL){

start = i;

break;

}

}

for (int i = n - 1; i > start; i--){

if (arr[i] == endL) {

end = i;

break;

}

}

if (start != -1 && end != -1 && start < end){

printf("The longest substring is: ");

for (int i = start; i <= end; i++){

printf("%c", arr[i]);

}

printf("\n");

maxLength = end - start + 1;

}

else{

printf("Not Found\n");

}

return maxLength;

}

Q1: (B)Write a main function that asks the user to enter a string (assume the size is 100) and two letters, then call the function developed in **part A** and print result returned by the function

int main() {

char arr[100];

char startL;

char endL;

printf("Enter a string");

scanf("%s", arr);

printf("Enter a starting letter");

scanf(" %c", &startL);

printf("Enter a ending letter");

scanf(" %c", &endL);

int result = FindSubstring(arr, startL, endL);

printf("The length of the longest substring is: %d\n", result);

return 0;

}