Week-07 Program-05

Due on 2020-03-19, 23:59 IST

Write a C program to print Largest and Smallest Word from a given sentence. If there are two or more words of same length then the first one is considered.
Here single letter such as "I", "a" is considered as a word.

Sample Test Cases

<table>
<thead>
<tr>
<th>Test Case</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AICTE Approved FDP Course.</td>
<td>Largest Word is: Approved Smallest word is: FDP</td>
</tr>
<tr>
<td>2</td>
<td>Problem Solving through Programming in C.</td>
<td>Largest Word is: Programming Smallest word is: C</td>
</tr>
<tr>
<td>3</td>
<td>NPTEL is a joint initiative of the IITs and IISc.</td>
<td>Largest Word is: initiative Smallest word is: a</td>
</tr>
</tbody>
</table>

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.
Sample solutions (Provided by instructor)
Problem solving through Programming In C - Course

#include<stdio.h>
#include<string.h>

int main()
{
    char str[100]={'0'}, substr[100][100]={'0'};
    //str[100] is for storing the sentence and substr[50][50] is for storing the sentence from the test case data.
    scanf("%[^\n]s", str); //Accepts the sentence from the test case data.

    /* Complete the program to get the desired output.
    The print statement should be as below
    printf("Largest Word is: %s
Smallest word is: %s\n", -------,--------)
    */

    int i=0, j=0, k=0, a, minIndex=0, maxIndex=0, max=0, min=0;
    char c;
    while(str[k]!='\0') //for splitting sentence into words
    {
        j=0;
        while(str[k]!='\0' & str[k]!='.' & str[k]!='\n')
        {
            substr[i][j]=str[k];
            k++;
            j++;
        }
        substr[i][j]='\0';
        i++;
        if(str[k]=='\n')
        {
            k++;
        }
    }

    int len=i;
    max=strlen(substr[0]);
    min=strlen(substr[0]);

    //After splitting getting length of string and finding its index having longest string
    for(i=0; i<len; i++)
    {
        a=strlen(substr[i]);
        if(a>max)
        {
            max=a;
            maxIndex=i;
        }
        if(a<min)
        {
            min=a;
            minIndex=i;
        }
    }

    printf("Largest Word is: %s
Smallest word is: %s\n", substr[maxIndex], substr[minIndex]);
    return 0;
}