**A Micro Project Report on**

**Problem Solving using C Language**

*Submitted by*

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET (AUTONOMOUS)**

**Accredited by NAAC with A+ Grade and NBA under Tier-1**

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**NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET**

**(AUTONOMOUS)**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**



**CERTIFICATE**

**This is to certify that PEMMA ANU PRIYA,23471A05CP, Second Year Student of the Department of Computer Science and Engineering, has completed the Micro Project Satisfactorily in “Problem Solving using C Language" for the Academic Year 2024-2025.**.

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**C program to check string palindrome without string palindrome without string handling functions**

AIM:

**Write a C program to check string palindrome without string palindrome without string handling functions**

**SOURCE CODE:**

#include<stdio.h>

#include<string.h>

int main(){

char str1[20];

int i,length,flag=0;

printf("enter string:",str1);

scanf("%s",str1);

length=strlen(str1);

for(i=0;i<length/2;i++){

if(str1[i]!=str1[length-i-1]){

flag=1;

break;

}

}

if(flag){

printf("%s is not a palindrome",str1);

}

else{

printf("%s is a palindrome",str1);

}

return 0;

}

OUTPUT:

enter string:anupriya

anupriya is not a palindrome

Find shortest word from given sentence

Find shortest word in the given sentence

SOURCE CODE:

#include <stdio.h>

#include <string.h>

#include <ctype.h>

#define MAX\_LENGTH 100

int main() {

char sentence[MAX\_LENGTH];

char shortest[MAX\_LENGTH];

int minLength = MAX\_LENGTH;

printf("Enter a sentence: ");

fgets(sentence, sizeof(sentence), stdin);

char \*word = strtok(sentence, " \n");

while (word != NULL) {

int length = strlen(word);

if (length < minLength) {

minLength = length;

strcpy(shortest, word);

}

word = strtok(NULL, " \n");

}

OUTPUT:

Enter a sentence: good morning

Shortest word : good

String copy without strcpy()

AIM: Write a C program to copy the string without strcpy()

SOURCE CODE:

#include<stdio.h>

int main()

{

char str1[20],str2[30];

int i;

printf("enter string1:",str1);

scanf("%s",str1);

printf("enter string2:",str2);

scanf("%s",str2);

for(i=0;str1[i]!='\0';i++){

str2[i]=str1[i];

}

str2[i]='\0';

printf("string2=%s",str2);

return 0;

}

OUTPUT:

Enter string1:anupriya

Enter string2:raji

String2=anupriya

String comparision without strcmp()

AIM:Write a C program to compare the stings without using strcmp()

SOURCE CODE:

#include<stdio.h>

int main(){

char str1[5];

char str2[5];

int i;

printf("enter string1:",str1);

scanf("%s",str1);

printf("enter string2:",str2);

scanf("%s",str2);

if(str1[i]==str2[i]){

printf("both strings are equal");

}

else{

printf("both are not equal");

}

return 0;

}

OUTPUT:

enter string1:anu

enter string2:priya

both are not equal

AIM:

|  |
| --- |
| Write a C program that uses an array of pointers to strings str[].receive two strings str1 and str2 and check if str1 is embedded in any of the strings in str[].if str1 is found ,them replace it with str2.  Char \* str[]={“We will teach you how to…”,  “move a mountain “,”level a building”,  “erase the past”,”make a million”,  “…all through C!”};  For example if str1 contains “mountain” and str2 contains “car”,then second string in str should get changed to “move a car”. |

SOURCE CODE:

#include<stdio.h>

#include<malloc.h>

#include<string.h>

#define LINE 6

#pragma warning (disable : C4267)

void ser\_rep(char \*\*str, char \*old, char \*news){

int i, j, k, m, c;

j = k = m = i = c = 0;

char ans[10][100], \*p;

for (i = 0; i <= LINE - 1; i++){

m = 0;

c = 0;

for (j = 0; str[i][j] != '\0';){

if (str[i][c] == old[k]){

k++;

c++;

if (old[k] == '\0'){

for (k = 0; news[k] != '\0'; k++, m++){

ans[i][m] = news[k];

j = c;

k = 0;

}

}

else{

ans[i][m] = str[i][j];

m++;

j++;

c = j;

k = 0;

}

}

ans[i][m] = '\0';

j = k = m = 0;

}

for (i = 0; i <= LINE - 1; i++){

p = (char\*)malloc(strlen(ans[i]) + 1);

strcpy(p, ans[i]);

str[i] = p;

}

}

int main(){

char \*str[] = {

"We will teach you how to...",

"Move a mountain",

"Level a building",

"Erase the past",

"Make a million",

"...all through C!"

};

char str1[10], str2[10];

puts("Enter the word you want to replace.");

scanf("%s", str1);

puts("Enter the word you want to put.");

scanf("%s", str2);

ser\_rep(str, str1, str2);

for (int i = 0; i <= LINE - 1; i++)

puts(str[i]);

return 0;

}

OUTPUT:

Enter the word you want to replace.

mountain

Enter the word you want to put.

car

We will teach you how to...

Move a car

Level a building

Erase the past

Make a million

...all through C!