

**PPS Lab Activity**

*Department of CSE Certified that this is a Bonafide Record of*

*the word done by:*

G.Sahasra- 23WH1A05I2

S.Sathvika- 23WH1A05D6

N.Leisha- 23WH1A05I5

K.Akhila- 23WH1A05I6

*Of Class CSE C of Year 1 of Semester 1 in PPS Laboratory*

**Date: Signature:**

**Problem Statement: Write a c program for unscrambling the given words.**

**This program is written for unscrambling the words.**

**If we give scrambled words as input,it gives unscrambled words as output.**

**SOURCE CODE:**

#include <stdio.h>

#include<string.h>

#include<stdlib.h>

#include<time.h>

#include<ctype.h>

#include<stdbool.h>

void scramble(char \*s);

int main()

{

srand(time(NULL));

char original[100]="sahasra";

char scrambled[100];

char answer[100];

strcpy(scrambled,original);

scramble(scrambled);

bool game\_over=false;

do

{

printf("Unscramble the word:%s\n\n",scrambled);

printf("Answer:");

scanf("%s",answer);

if(strcmp(answer,original)==0)

{

printf("\nYou got it!\n\n");

game\_over=true;

}

else printf("\n Try again!\n\n");

} while (!game\_over);

return 0;

}

void scramble(char \*s)

{

int length =strlen(s);

for(int i=0;i<length;i++)

s[i]=tolower(s[i]);

if(length==1) return ;

if(length==2)

{

char temp=s[0];

s[0]=s[1];

s[1]=temp;

return ;

}

char original[length+1];

strcpy(original,s);

double diff=0;

bool same\_start=false;

bool same\_end=false;

int times\_stuck=0;

do

{

int i=0;

while(i<length)

{

int pos1=rand()%length;

int pos2=rand()%length;

if(pos1!=pos2)

{

char temp=s[pos1];

s[pos1]=s[pos2];

s[pos2]=temp;

I++;

}

}

int differences=0;

for(int j=0;j<length;j++)

if(original[j]!=s[j]) differences++;

diff=(double) differences/length;

same\_start=s[0]==original[0];

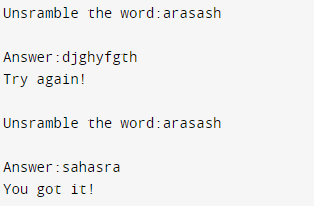
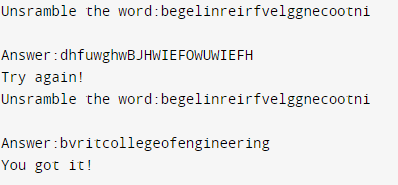
same\_end=s[length-1]==original[length-1];

Times\_stuck++;

}while (((same\_start && same\_end)||

(diff<0.5))&&(times\_stuck<100));

}

**OUTPUT:**