**Assignment - 19 A Job Ready Bootcamp in C++, DSA and IOT MySirG**

**Handling multiple Strings in C Language**

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/\*1. Write a program to find the number of vowels in each of the 5 strings stored in two

dimensional arrays, taken from the user.\*/

#include<stdio.h>

#include<string.h>

int main()

{

    char s[5][20];

    int i,j,vowel=0;

    printf("Enter the strings:");

    for(i=0; i<5; i++)

    {

        fgets(s[i],20,stdin);

    }

    printf("\n");

    for(i=0; i<5; i++)

    {

        for(j=0; s[i][j]; j++)

        {

            if (s[i][j] == 'a' || s[i][j] == 'e' || s[i][j] == 'i' || s[i][j] == 'o' || s[i][j] == 'u' ||

                s[i][j] == 'A' || s[i][j] == 'E' || s[i][j] == 'I' || s[i][j] == 'O' || s[i][j] == 'U')

                vowel++;

        }

            printf("%s = %d\n",s[i],vowel);

            vowel=0;

    }

    return 0;

}

/\*2. Write a program to sort 10 city names stored in two dimensional arrays, taken from

the user.\*/

#include<stdio.h>

#include<string.h>

int main()

{

    char a[20][20],temp[20];

    int i,j,n;

    printf("Enter the size of array:");

    scanf("%d",&n);

    for(i=0; i<n; i++)

    {

        printf("Enter the city name:a[%d]:",i);

        scanf("%s",&a[i]);

    }

    for(i=0; i<n; i++)

    {

        for(j=0; j<n; j++)

        {

            if(strcmp(a[j-1],a[j])>0)

            {

               strcpy(temp,a[j-1]);

               strcpy(a[j-1],a[j]);

               strcpy(a[j],temp);

            }

        }

    }

    printf("\n\tSorting city name:\n");

    for(i=0; i<n; i++)

    {

        printf("%s\n",a[i]);

    }

    return 0;

}

//3. Write a program to read and display a 2D array of strings in C language.

#include<stdio.h>

#include<string.h>

int main()

{

    char s[20][20];

    int i,n;

    printf("Enter the number of strings:");

    scanf("%d",&n);

    for(i=0; i<n; i++)

    {

        printf("Enter the strings:s[%d]:",i);

        scanf("%s",&s[i]);

    }

    printf("Reads the strings:\n");

    for(i=0; i<n; i++)

    {

        puts(s[i]);

    }

    return 0;

}

//4. Write a program to search a string in the list of strings.

#include<stdio.h>

#include<string.h>

int main()

{

    char s[5][30];

    int i;

    for(i=0; i<3; i++)

    {

        gets(s[i]);

    }

    for(i=0; i<3; i++)

    {

        if(strcmp(s[i],"abhishek")==0)

        {

            printf("string found:");

            break;

        }

    }

    return 0;

}

/\*5. Suppose we have a list of email addresses, check whether all email addresses have

‘@’ in it. Print the odd email out\*/

#include <stdio.h>

#include <string.h>

int main()

{

    char s[40];

    int i;

    printf("Enter the strings:");

    scanf("%s",&s);

    if(strchr(s,'@')!=0)

    {

        printf("Email id is valid:");

    }

    else

    {

        printf("Email id is not valid:");

    }

    return 0;

}

//6. Write a program to print the strings which are palindrome in the list of strings.

#include<stdio.h>

#include<string.h>

int main()

{

    char s[30],s2[30];

    int i,n;

    printf("Enter the number of list:");

    scanf("%d",&n);

    for(i=0; i<n; i++)

    {

        printf("Enter the strings:");

        scanf("%s",&s);

    }

    strcpy(s2,s);

    strrev(s2);

    if(strcmp(s2,s)==0)

    {

        printf("Palindrome:");

    }

    else

    {

        printf("Not Palindrome:");

    }

    return 0;

}

//7. From the list of IP addresses, check whether all ip addresses are valid.

#include<stdio.h>

#include<string.h>

int main()

{

    char s[20]="192.64.25.3";

    char s1[20]="182.52.63.7";

    if(strcmp(s,s1)==0)

    {

        printf("IP address is valid:");

    }

    else

    {

        printf("IP address is not valid:");

    }

    return 0;

}

/\*8. Given a list of words followed by two words, the task is to find the minimum distance

between the given two words in the list of words.

(Example : s = {“the”,”quick”,”brown”,”fox”,”quick”}

 word1 = “the”, word2 = “fox”, OUTPUT : 1 )\*/

/\*9. Write a program that asks the user to enter a username. If the username entered is

one of the names in the list then the user is allowed to calculate the factorial of a

number. Otherwise, an error message is displayed\*/

#include <stdio.h>

#include <string.h>

int main()

{

    char u[30] = "abhiraj62055@gmail.com", s[30] = "raj@369";

    char u1[30], s1[30];

    int n, i, c, fact = 1;

    printf("Enter the User name:");

    gets(u1);

    printf("Enter the User password:");

    gets(s1);

    if (strcmp(u1, u) == 0 && strcmp(s1, s) == 0)

    {

        printf("\n\tUser is allwoed:\n");

        printf("Enter the number of factorial:");

        scanf("%d", &n);

        for (i = 1; i <= n; i++)

        {

            fact = fact \* i;

        }

        printf("Factorial %d", fact);

    }

    else

    {

        printf("\n\tUser is not allowed:\n");

    }

    return 0;

}

// 10. Create an authentication system. It should be menu driven.

#include<stdio.h>

#include<string.h>

int main()

{

    char s[30]="abhiraj62055@gmail.com", p[30]="hello@123";

    char s1[30],p1[30];

    printf("Enter the User i'd:");

    gets(s1);

    printf("Enter the password:");

    gets(p1);

    if(strcmp(s,s1)==0 && strcmp(p,p1)==0)

    {

        printf("Login Successsfuly:");

    }

    else

    {

        printf("Wrong Password:");

    }

    return 0;

}