

C PROGRAMMING ASSIGNMENT:

19

DATE: 13.01.2022

SUBMITTED BY: -

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BRANCH: CSE

SECTION: B22

ROLL NO.: 21052258

1. WAP to find out the largest element present in a 5 X 4 matrix . In the same fun store the largest element of each row in a 1D array

Code:

```
#include <stdio.h>

int main()
{
    int m,n,a[10];
    printf("Enter the number of rows and column: \n");
    scanf("%d %d",&m,&n);
    int arr[10][10];
    printf("\nEnter the elements of the matrix: \n");
    for(int i=0;i<m;i++)
    {
        for(int j=0;j<n;j++)
        {
            scanf("%d",&arr[i][j]);
        }
    }
    printf("\nThe elements in the matrix are: \n");
    for(int i=0;i<m;i++)
    {
        for(int j=0;j<n;j++)
        {
            printf("%d ",arr[i][j]);
        }
        printf("\n");
    }
    int i = 0, j;
    int max = 0;
    int res[m];
    while (i < m)
    {
        for ( j = 0; j < n; j++)
        {
            if (arr[i][j] > max)
            {
                max = arr[i][j];
            }
        }
        res[i] = max;
        max = 0;
        i++;
    }
    printf("Largest element in each rows are\n" );
    for(int i = 0; i < n; i++)
    {
        printf(" %d \t", i);
    }
}
```

```

printf("\n");
for(int i = 0; i < n; i++)
{
    printf(" %d \t", res[i]);
}

return 0;
}

```

Output:

```

empCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerF
Enter the number of rows and column:
5 4

Enter the elements of the matrix:
1
2
3
4
5
3
4
6
8
5
67
8
6
5
6
4
6
4
7
5

The elements in the matrix are:
1 2 3 4
5 3 4 6
8 5 67 8
6 5 6 4
6 4 7 5
Largest element in each rows are
0      1      2      3
4      6      67     6
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19> 

```

2. WAP to reverse a string

Code:

```
#include <stdio.h>
#include <string.h>
void revstr(char *str1)
{
    static int i, len, temp;
    len = strlen(str1);

    if (i < len/2){
        temp = str1[i];
        str1[i] = str1[len - i - 1];
        str1[len - i - 1] = temp;
        i++;
        revstr(str1);
    }
}

int main()
{
    char str1[50];
    printf (" Enter the string: ");
    gets(str1);

    printf (" \n Before reversing the string: %s \n", str1);

    revstr(str1);
    printf (" After reversing the string: %s", str1);
}
```

Output:

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneDrive\Desktop\C programming\lab"
c tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile
Enter the string: Som

Before reversing the string: Som
After reversing the string: moS
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19> █
```

3. Wap to count the numbers of vowels in the string

Code:

```
#include <stdio.h>
int main()
{
    int c = 0, count = 0;
    char s[1000];

    printf("Input a string\n");
    gets(s);
    while (s[c] != '\0')
    {
        if (s[c] == 'a' || s[c] == 'A' || s[c] == 'e' || s[c] == 'E' || s[c] == 'i' || s[c] == 'I' || s[c] == 'o' || s[c] == 'O' || s[c] == 'u' || s[c] == 'U')
            count++;
        c++;
    }
    printf("Number of vowels in the string: %d", count);
    return 0;
}
```

Output:

```
Windows PowerShell
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PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19"
.c -o 3 } ; if ($?) { .\3 }
Input a string
Muktesh
Number of vowels in the string: 2
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19> █
```

4. Wap to find length of a string

Code:

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

int main()
{
    char Str[100],c=0;
    int i;

    printf("Enter the String: ");
    scanf("%s", Str);

    for (i = 0; Str[i] != '\0'; ++i)
    {
        c++;
    }

    printf("Length of Str is %d", c);

    return 0;
}
```

Output:

```
Windows PowerShell
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PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneDrive\
c tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile
Enter the String: Muktesh
Length of Str is 7
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19> █
```

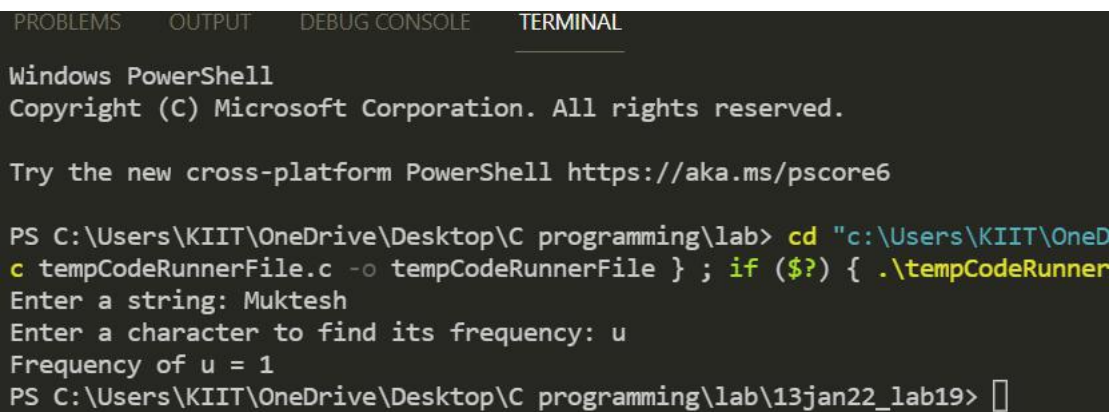
5. Wap to find frequency of characters in a string

Code:

```
#include <stdio.h>
#include <string.h>
int main() {
    char str[1000], ch;
    int count = 0;

    printf("Enter a string: ");
    fgets(str, sizeof(str), stdin);
    printf("Enter a character to find its frequency: ");
    scanf("%c", &ch);
    for (int i = 0; str[i] != '\0'; ++i) {
        if (ch == str[i])
            ++count;
    }
    printf("Frequency of %c = %d", ch, count);
    return 0;
}
```

Output:



The screenshot shows a Windows PowerShell terminal window with the following content:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneD
c tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunner
Enter a string: Muktesh
Enter a character to find its frequency: u
Frequency of u = 1
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19> █
```

6.Wap to find concatenation of string

Code:

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

int length(char *s)
{
    int k = -1;
    while (s[++k]);
    return k;
}

int main()
{
    char s1[100], s2[100], ch;
    int i, j;
    printf("Enter first string=");
    scanf("%s", s1);
    scanf("%c", &ch);
    printf("Enter second string=");
    scanf("%s", s2);
    i = 0;
    j = length(s1);
    while (s1[j++] = s2[i++]);
    printf("After concatenation:%s", s1);
    return 0;
}
```

Output:

```
Windows PowerShell
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PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19" & gcc tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile.exe
Enter first string=Som
Enter second string=Muktesh
After concatenation:SomMuktesh
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19> █
```


7. wap to find copy of a string

Code:

```
#include <stdio.h>
int main()
{
    int oldName[10], newName[10];
    printf("\nEnter the name: ");
    scanf("%s", oldName);
    printf("\nOriginal Name is: %s", oldName);
    int i = 0;
    while (oldName[i] != '\0')
    {
        newName[i] = oldName[i];
        i++;
    }
    newName[i] = '\0';
    printf("\nCopied string is: %s", newName);
}
```

Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab> cd "c:\Users\KIIT\OneDrive\Desktop\C programming\lab" & gcc tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile.exe
Enter the name: Som

Original Name is: Som
Copied string is: Som
PS C:\Users\KIIT\OneDrive\Desktop\C programming\lab\13jan22_lab19> █
```