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**Subject: Linux**

## **Activity No. 2**

Q1.

Code:

```
1 #include <stdio.h>
2 #include <string.h>
3 int main()
4 {
5     char filename[50], choice;
6     int count_char=0, count_space=0, count_tab=0, count_newline=0;
7     printf("Enter filename: ");
8     fgets(filename, sizeof(filename), stdin);
9     filename[strlen(filename) - 1] = '\0';
10    FILE *fptr = fopen(filename, "r");
11    if(fptr==NULL)
12    {
13        perror("Error opening the file!!");
14        return(-1);
15    }
16    else
17    {
18        while(fptr)
19        {
20            choice = fgetc(fptr);
21            if(choice==EOF)
22                break;
23            count_char++;
24            if(choice==' ')
25                count_space++;
26            if(choice=='\t')
27                count_tab++;
28            if(choice=='\n')
29                count_newline++;
30        }
31    }
32    fclose(fptr);
33    printf("\nCount of characters : %d", count_char);
34    printf("\nCount of spaces : %d", count_space);
35    printf("\nCount of tabs : %d", count_tab);
36    printf("\nCount of new lines : %d\n", count_newline);
37    return(0);
38 }
```

Output:

```
prathamesh@prathamesh:~/Documents$ ls
Activity_2  menu.sh      script  sum.sh
case.sh     prathamesh.sh  sum1.sh  threenum.sh
prathamesh@prathamesh:~/Documents$ cd Activity_2
prathamesh@prathamesh:~/Documents/Activity_2$ cat sample_1.txt
Hello My name is Prathamesh Sawant
I am      in Btech
MIT Academy          of Engineering
prathamesh@prathamesh:~/Documents/Activity_2$ gcc act2_1.c -o act2_1
prathamesh@prathamesh:~/Documents/Activity_2$ ./act2_1
Enter filename: sample_1.txt

Count of characters : 79
Count of spaces : 11
Count of tabs : 3
Count of new lines : 3
prathamesh@prathamesh:~/Documents/Activity_2$ cat sample_2.txt
Good Morning          Have a Good Day!
prathamesh@prathamesh:~/Documents/Activity_2$ ./act2_1
Enter filename: sample_2.txt

Count of characters : 32
Count of spaces : 5
Count of tabs : 2
Count of new lines : 1
prathamesh@prathamesh:~/Documents/Activity_2$
```

Q2.

Code:

```
1 #include <stdio.h>
2 #include <string.h>
3
4 int fSubstr(char *str1, char *str2)
5 {
6     char *ptr;
7     ptr = strstr(str1, str2);
8     if(ptr)
9         return(1);
10    return(0);
11 }
12
13 void fConcat(char *str1, char *str2)
14 {
15     strcat(str1, str2);
16 }
17
18 void fCompare(char *str1, char *str2)
19 {
20     int val = strcmp(str1, str2);
21     if(val == 0)
22         printf("Strings are same\n");
23     else printf("Strings are not same\n");
24 }
25 }
26
27 int fLen(char *str1)
28 {
29     int i;
30     for(i=0; str1[i]!='\0'; ++i);
31     return(i);
32 }
```

```

1 #include <stdio.h>
2 int fSubstr(char *,char *);
3 void fConcat(char *,char *);
4 void fCompare(char *,char *);
5 int fLen(char *);
6 int main()
7 {
8     char str1[50],str2[20],str3[20],str4[20],str5[30];
9     printf("Check if a string is substring of other : \n");
10    printf("Enter 1st string: ");
11    scanf("%s",str1);
12    printf("Enter 2nd string: ");
13    scanf("%s",str2);
14    if(fSubstr(str1,str2))
15        printf("%s is a substring of %s\n",str2,str1);
16    else printf("%s is not a substring of %s\n",str2,str1);
17
18    printf("\nConcat two strings: \n");
19    printf("Enter 1st string: ");
20    scanf("%s",str1);
21    printf("Enter 2nd string: ");
22    scanf("%s",str2);
23    printf("%s + %s = ",str1,str2);
24    fConcat(str1,str2);
25    //printf("%s + %s = ",str5,str2);
26    printf("%s\n",str1);
27
28    printf("\nCompare two strings:");
29    printf("\nEnter 1st string: ");
30    scanf("%s",str3);
31    printf("Enter 2nd string: ");
32    scanf("%s",str4);
33    fCompare(str3,str4);
34
35    printf("\nLenght of string: \n");
36    printf("Enter the string: ");
37    scanf("%s",str5);
38    int len= fLen(str5);
39    printf("Length of %s is: %d\n",str5,len);
40    return(0);
41 }

```

Output:

```

prathamesh@prathamesh:~/Documents/Activity_2$ gcc act2_2.c mainStr.c -o str.o
prathamesh@prathamesh:~/Documents/Activity_2$ ./str.o
Check if a string is substring of other :
Enter 1st string: prathamesh
Enter 2nd string: tha
tha is a substring of prathamesh

Concat two strings:
Enter 1st string: Good
Enter 2nd string: Morning
Good + Morning = GoodMorning

Compare two strings:
Enter 1st string: Prathamesh
Enter 2nd string: Sawant
Strings are not same

Lenght of string:
Enter the string: SawantPrathamesh
Length of SawantPrathamesh is: 16
prathamesh@prathamesh:~/Documents/Activity_2$

```