ASSIGNMENT 22

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Q1. Write a program to read the contents of a file.

Code:

```c
//this program reads a file and finds the sum of the elements
#include <stdio.h>

int main()
{
    FILE *fp;
    int a[10], i, sum=0;
    fp=fopen("data.in", "r");
    for(i=0;i<10;i++)
    {
        fscanf(fp,"%d",&a[i]);
        sum+=a[i];
    }
    printf("SUM= %d", sum);
    for(i=9;i>-1;i--)
    printf("\n %d", a[i]);
    fclose(fp);
    return 0;
}
```

Output:

```
SUM= 55
 10
 9
 8
 7
 6
 5
 4
 3
 2
 1
```

File:

```
1       1 2 3 4 5 6 7 8 9 10
```

Q2. Write a program to write contents into a file.

Code:

```c
//this program writes the contents of an array into a file
#include <stdio.h>

int main()
{
    FILE *fp;
    int i, a[10]={2,4,6,8,1,3,5,7,9,0};
    fp=fopen("data.out","w");
    for(i=0;i<10;i++)
        fprintf(fp,"%d ",a[i]);
    fclose(fp);
    return 0;
}
```

File:

```
1       2 4 6 8 1 3 5 7 9 0
```

Q3. Write a program to display contents of a file.

Code:

```c
//this program displays contents of a file
#include <stdio.h>

int main()
{
    FILE *fp;
    char ch;
    fp=fopen("demo.txt","r");

    while((ch=fgetc(fp))!=EOF)
        printf("%c",ch);

    fclose(fp);
    return 0;
}
```

Output:

File:

Q4. Write a program to count characters, spaces and newlines of a file.

Code:

```c
//this program counts chars, blank spaces, tabs, and newlines in a file
#include <stdio.h>

int main()
{
    FILE *fp;
    char ch;
    int noc=0, nob=0, not=0, non=1;
    fp=fopen("demo.txt","r");
    while((ch=fgetc(fp))!=EOF)
    {
        noc++;
        if(ch==' ')
            nob++;
        if(ch=='\t')
            not++;
        if(ch=='\n')
            non++;
    }
    fclose(fp);

    printf("\nNo. of characters: %d", noc);
    printf("\nNo. of blanks: %d", nob);
    printf("\nNo. of tabs: %d", not);
    printf("\nNo. of lines: %d", non);

    return 0;
}
```

Output:

```
No. of characters: 26
No. of blanks: 9
No. of tabs: 0
No. of lines: 3
```

File:

```
1    H E L L O
2    . . . .
3    W O R L D !
```