

VASAVI COLLEGE OF ENGINEERING

(AUTONOMOUS)
(Affiliated to Osmania University)

Hyderabad - 500 031.

DEPARTMENT OF

: CSE

NAME OF THE LABORATORY : PPS LAB

Name K.SREE INDIRA SIVAN Roll No. 1602-21-733-052 Page No. 151

PRELAB QUESTIONS - 11

- 1) Differentiate between a text file and binary file.

Ans: Binary file: A binary file consists of data which are not in a readable format; but can be used to retrieve data and use in a program.

Text file: A text file consists of data which is in a readable format and is used in our program.

- 2) List the different modes of opening a file.

Ans: 1) read mode = "r", "rb"
2) write mode = "w"; "wb"
3) append mode = "a"; "ab"

4) read and write = "rt"; "rbt"

5) write and read = "wt"; "wbt"

6) read and append = "at"; "abt"

- 3) How to check whether a file exist in the current directory?

Ans: ~~fopen~~ = ("sample.dat", "r");
if (fp == NULL)

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```
{  
    printf("File does not exist");  
}  
else  
{  
    printf("File exists");  
}
```

4) What is EOF?

Ans: EOF i.e. end of file locates the pointer to the end location of the file and stops the execution of task.

5) What are streams?

A stream can be associated with a physical device; such as terminal or with a file stored in auxiliary memory.

6) Discuss briefly about the various character I/O functions.

Ans: 1) fgetc → to read character from file.

2) fputc → to write character from file.

3)getc → it can be linked to file stream/pointer & stdio too.

4) putc → it can be linked to file stream/pointer & stdio too.

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PRELAB QUE PROGRAMS - 11

- 1) Program to read the text from the keyboard and write it into a file.

Ans.

```
#include <stdio.h>
int main ()
{ char ch;
FILE *fp;
fp = fopen ("sample.dat", "w");
if (fp==NULL)
{ printf("File cannot be created");
exit (0);
}
else
{ while ((ch=getchar())!=EOF)
{ fputc(ch,fp);
}
fclose (fp);
return 0;
}
```

- 2) Program to read the contents from a file and display it on the monitor.

→ OUTPUT:

① a b c d.

→ INPUT:

a a b c d.
ctrl + D.

Sample.dat

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Ans:

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
    char ch;
    FILE *fp;
    fp=fopen("sample.dat", "r");
    if(fp==NULL)
    {
        printf("File does not exist");
        exit(0);
    }
    else
    {
        while (!feof(fp))
        {
            ch = fgetc(fp);
            putchar(ch);
        }
        fclose(fp);
        return 0;
    }
}
```

- 3) Program to maintain the details of the students : insert, display, modify :

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

→ OUTPUT:

a b c d.

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```
typedef struct
{
    char name[20];
    int roll_no;
} Student;

int main()
{
    FILE *insert;
    int n,i;
    insert=fopen("student-details.txt","w");
    if(insert==NULL)
    {
        fprintf(stderr,"An error to open the file\n");
        exit(0);
    }
    printf("Enter the no. of students:");
    scanf("%d",&n);
    Student inp[n];
    for(i=0;i<n;i++)
    {
        printf("Enter the student details :\n");
        printf("Enter the name of the student : ");
        scanf("%s",inp[i].name);
        *(inp[i].name+strlen(inp[i].name)) = '\0';
        printf("Enter the roll number : ");
        scanf("%d",&inp[i].roll_no);
        fwrite(&inp[i],sizeof(Student),1,insert);
    }
    if(fwrite!=0)
```

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```
Pointf("Contents to file written successfully!\n");
else
    pointf("Error writing file!\n");
    fclose(insert);
FILE *display;
Student s1;
display = fopen("student-details.txt", "r");
if(display == NULL)
    pointf(stderr, "In error to open the file\n");
    exit(0);
while(fread(&s1, sizeof(student), 1, display))
{
    pointf("name=%s roll-no=%d\n", s1.name, s1.roll-no);
    fclose(display);
}
int m;
pointf("Enter the student you want to modify: ");
scanf("%d", &m);
FILE *modify;
Student s2;
modify = fopen("student-details.txt", "r+");
if(modify == NULL)
    pointf(stderr, "In error to open the file");
    exit(0);
fseek(modify, (m-1) * sizeof(Student), 0);
pointf("Enter the Student details:\n");
pointf("Enter the name of the student:");
scanf("%s", inp[m-1].name);
*(inp[m-1].name + strlen(inp[m-1].name)) = '\0';
pointf("Enter the roll number:");
scanf("%d", &inp[m-1].roll-no);
fwrite(&inp[m-1], sizeof(Student), 1, modify);
fclose(modify);
```

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```
printf("The modified details are:\n");
FILE *display2;
Student s3;
display2 = fopen ("Student-details.txt", "r");
if (display2 == NULL)
{
    printf(stderr, "Error to open the file\n");
    exit(0);
}
while(fread(&s3, sizeof(Student), 1, display2))
{
    printf("name=%s, roll_no=%d\n", s3.name, s3.roll_no);
}
return 0;
```

→ OUTPUT:

a b c d

"sample.dat"

→ OUTPUT:

Enter the no of students: 3

Enter the student details:

Enter the name of the student: sivani

Enter the roll number: 052

Enter the name of the student: sravani

Enter the roll number: 019

Enter the name of the student: aijun

Enter the roll number: 029.

contents to the file written successfully!

name = sivani roll-no=52.

name = sravani roll-no=19

name = aijun roll-no=29.

Enter the student you want to modify: 3

Enter the name of the student: vijay

Enter the roll number: 026.

The modified details are:

name = sivani roll-no=52

name = sravani roll-no=19

name = vijay roll-no=26.

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Name K. SREE INDIRA SIVANIL Roll No. 1602-21-733-052 Page No. 156.

* AIM: Program illustrate the working of files:

READ THE DATA & STORE IN FILE:

* PROBLEM STATEMENT: Write a program to read data from keyboard and store it in a file.

* PROGRAM:

```
#include <stdio.h>
#include <stdlib.h>
int main()
{ char ch;
    char C[10];
    printf("Enter the file name you want to open:\n");
    scanf("%s",C);
    FILE *fp;
    fp=fopen(C,"w");
    if(fp==NULL)
    { printf("File cannot be created");
        exit(0);
    }
    else
    { while((ch=getchar())!=EOF)
        { fputc(ch,fp); }
    }
    fclose(fp);
    return 0;
}
```

→ OUTPUT:

a b c d

"sample.dat"

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- * AIM: Program to show copying content from one file to another.

COPYING OF CONTENT FROM
ONE FILE TO ANOTHER:

- * PROBLEM STATEMENT: Write a program to copy the contents of one file to another file.

- * PROGRAM:

```
#include <stdio.h>
#include <stdlib.h>
int main()
{char ch;
 char s[10];
 printf(" Enter the file name to which you want to copy:");
 scanf("%s",s);
 FILE *fp1,*fp2;
 fp1 = fopen("Sample.dat", "r");
 fp2 = fopen(s, "w");
 if(fp1==NULL)
 {printf(" File does not exist");
 exit(0);
 }
 if(fp2==NULL)
```

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```
{ printf("File does not exist");
exit(0);
}
while(!feof(fp1))
{
    ch=fgetc(fp1);
    fputc(ch,fp2);
}
fclose(fp1);
fclose(fp2);
return 0;
}.
```

→ OUTPUT:

a b c d

"output.dat."

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Name K. SREE INDIRA SIVANI Roll No. 1602-21-733-052 Page No. 159.

* AIM: Program to illustrate the use of files.

READ AND STORE MARKS IN FILE:

* PROBLEM STATEMENT: Write a program to read marks, calculate the total & write the total in same file.

* PROGRAM:

```
#include <stdio.h>
#include <stdlib.h>
int main(int argc, char *argv[])
{
    float sum=0;
    float num;
    FILE *fp;
    fp=fopen(argv[1], "a+");
    if (fp==NULL)
    {
        printf("File does not exist");
        exit(0);
    }
    else
    {
        while (!feof(fp))
        {
            fscanf(fp, "%f", &num);
            sum+=num;
        }
        fprintf(fp, "total marks = %f", sum);
        fclose(fp);
    }
    return 0;
}
```

→ OUTPUT:

10 25 29 27 13

total marks = 104.000000

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* AIM: Program to illustrate files.

PROGRAM TO PRINT NO. OF WORDS, CHARACTERS AND LINES:

* PROBLEM STATEMENT: Write a program to read the data from a file and calculate no. of characters, words and lines.

* PROGRAM:

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
    FILE *fp;
    char ch;
    int w=0, l=0, c=0;
    fp=fopen("untitled.dat", "r");
    if(fp==NULL)
    {
        printf("File didn't open");
        exit(0);
    }
    while (!feof(fp))
    {
        ch=fgetc(fp);
        c++;
        if(ch==' ')
            w++;
        if(ch=='\n')
            w++;
    }
}
```

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```
l++;  
{  
if (ch == EOF)  
{ w++;  
l++;}  
}  
}  
printf(" no. of characters = %d \n no. of words = %d \n no. of lines = %d ",  
fclose(fp);  
c,w,l);  
return 0;  
}.
```

* OUTPUT:

no. of characters = 48
no. of words = 11
no. of lines = 3.

File:
hi everyone
how are u all?
i am well and good.

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* AIM: Program to illustrate files.

READ, STORE AND DISPLAY DETAILS:

* PROBLEM STATEMENT: Write a program to read student details from keyboard, store it in a file and display them from file.

* PROGRAM:

```
#include <stdio.h>
#include <stdlib.h>
struct student
{
    int rno;
    char name[30];
    int tmarks;
};

int main()
{
    int n, i;
    struct student s, q;
    FILE *fp;
    fp = fopen("Sample.dat", "wb");
    if (fp == NULL)
    {
        printf("File does not exist");
    }
    else
    {
        printf("Enter the no. of students:");
        scanf("%d", &n);
    }
}
```

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```
for(i=1; i<=n; i++)
{
    printf("Enter student record");
    printf("Enter rno");
    scanf("%d", &s.rno);
    printf("Enter name");
    scanf("%s", s.name);
    printf("Enter marks");
    scanf("%d", &s.tmarks);
    fwrite(&s, sizeof(s), 1, fp);
}
fclose(fp);

return 0; fp=fopen("studsample.dat", "rb");
for(i=1; i<=n; i++)
{
    fread(&q, sizeof(q), 1, fp);
    printf("%d\t %s\t %d\t \n", q.rno, q.name,
           q.tmarks);
}
fclose(fp);
return 0;
}
```

→ OUTPUT:

FILE:

Enter no. of students: 1

Enter student record: 052

Enter name: Sivani

Enter marks: 21

052 Sivani 21