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**C1-16**
**Practical 2**

# Code:

```
#include<stdio.h>
#include<stdlib.h>
#include<sys/types.h>
#include<string.h>
#include<fcntl.h>
#include<unistd.h>
void main(){
   int choice,num,b;
   char temp[100],temp2[100],temp3[100],temp4[100],temp5[100],temp6[100];
   char tempC;
   while(1){
        printf("\n\nEnter choice of
operation\n1.create\n2.Open\n3.Close\n4.Read\n5.Writing\n6.Unlink/Remove\n7.
Read in reverse order\n8.Resources Allocated\n9.Exit");
        scanf("%d",&choice);
        switch(choice){
                case 1:
                        //create file
                        printf("Enter the name of the file to be created\n");
                        scanf("%s",temp);
                        int fdCreat=creat(temp,0777);
                        printf("\n%s create at fd %d ",temp,fdCreat);
                        break;
                case 2:
                        //Open file
                        printf("Enter the name of the file to be opened\n");
                        scanf("%s",temp);
                        int fdOpen=open(temp,O_RDONLY|O_CREAT);
                        printf("\n%s opened at fd %d ",temp,fdOpen);
                        break;
                case 3:
                        //Close file
```

```
        printf("Enter fd to be closed\n");
        scanf("%d",&num);
        int fdClose=close(num);
        if(fdClose!=-1){
                printf("\n%d fd closed",num);
        }
        else{
                printf("\n%d fd cannot be closed",fdClose);
        }
        break;
case 4:
        //Read from file
        printf("Enter the name of the file to read\n");
        scanf("%s",temp5);
        int a=open(temp5,O_RDONLY);
        printf("\n%d",a);
        b=lseek(a,0,2);
        int fdLseek2=lseek(a,0,0);
        int fdRead=(ssize_t)read(a,temp3,b);
        if(fdRead!=-1){
                printf("\n\nContent of File : %s",temp3);
        }
        else{
                printf("\n\nCannot read file content");
        }
        break;
case 5:
        //WRITE in file
        printf("Enter the name of the file to write in\n");
        scanf("%s",temp);
        int fdOpen2=open(temp,O_WRONLY|O_CREAT);
        printf("\nEnter no. of bytes to be written ");
        scanf("%d",&b);
        printf("\nEnter content to be written ");
        scanf("%s",temp2);
        int fdWrite=write(fdOpen2,temp2,b);
        if(fdWrite!=-1){
```

```
                        printf("\n%d Byted written in the file with fd %d :
",fdWrite,fdOpen2);
                }
                else{
                        printf("\nCannot be written");
                }
                break;
        case 6 :
                //Unlink File
                printf("Enter the name of the file to unlinked\n");
                scanf("%s",temp4);
                int fdUnlink =unlink(temp4);
                if(fdUnlink!=1){
                        printf("\nFile Unlinked");
                }
                else{
                        printf("File cannot be UnLinked");
                }
                break;
        case 7:
                //Read in Reverse
                printf("Enter the name of the file to read from\n");
                scanf("%s",temp6);
                int g=open(temp6,O_RDONLY);
                int fdLseektemp=lseek(g,0,2);
                int b=fdLseektemp;
                for(int i=2;i<=b;i++){
                        int fdLseek2=lseek(g,-2,1);
                        int fdRead=(ssize_t)read(g,&tempC,1);
                        printf("%c",tempC);
                }
                printf("%c",tempC);
                break;
        case 8 :
                //Finding Resources allocated
                printf("\n");
                int temp0=getpid();
```

```
                printf("\n%d\n",temp0);
                char tt2[100];
                sprintf(tt2,"ls /proc/%d/fd",temp0);
                system(tt2);
                break;
        case 9:
                exit(0);
                break;
    }
  }
}
```

# Output :

```
Enter choice of operation
1.create
2.Open
3.Close
4.Read
5.Writing
6.Unlink/Remove
7.Read in reverse order
8.Resources Allocated
9.Exit1
Enter the name of the file to be created
File10

File10 create at fd 3

Enter choice of operation
1.create
2.Open
3.Close
4.Read
5.Writing
6.Unlink/Remove
7.Read in reverse order
8.Resources Allocated
```

9.Exit2
Enter the name of the file to be opened
File10

File10 opened at fd 4

Enter choice of operation
1.create
2.Open
3.Close
4.Read
5.Writing
6.Unlink/Remove
7.Read in reverse order
8.Resources Allocated
9.Exit4
Enter the name of the file to read
File10

5

Content of File : Hello World

Enter choice of operation
1.create
2.Open
3.Close
4.Read
5.Writing
6.Unlink/Remove
7.Read in reverse order
8.Resources Allocated
9.Exit5
Enter the name of the file to write in
File10

Enter no. of bytes to be written 5

Enter content to be written Hello

5 Byted written in the file with fd 6 :

Enter choice of operation
1.create
2.Open
3.Close
4.Read
5.Writing
6.Unlink/Remove
7.Read in reverse order
8.Resources Allocated
9.Exit6
Enter the name of the file to unlinked
File10

File Unlinked

Enter choice of operation
1.create
2.Open
3.Close
4.Read
5.Writing
6.Unlink/Remove
7.Read in reverse order
8.Resources Allocated
9.Exit7
Enter the name of the file to read from
File11
dlroW olleHH

Enter choice of operation
1.create
2.Open
3.Close
4.Read
5.Writing
6.Unlink/Remove

7.Read in reverse order
8.Resources Allocated
9.Exit8

4960
0  1  2  3  4

Enter choice of operation
1.create
2.Open
3.Close
4.Read
5.Writing
6.Unlink/Remove
7.Read in reverse order
8.Resources Allocated
9.Exit9
rcoem@rcoem-Vostro-3910:~/c1tina$