```
#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>
#include<dirent.h>    //opendir(),readdir(),closedir()
#include<sys/stat.h>
#include<string.h>
#include<fcntl.h>     // open,read(),close() : file related function
void list(char *p1,char*dname)
{
     DIR *dir;
     struct dirent *entry;      //used to hold entry of directory i.e
file or dir
     struct stat info;          //hold inforrmation about file i.e
inode, regular file
     int cnt=0;

     dir=opendir(dname);
     if(dir==NULL)
     {
           printf("\n Directory %s Not Found....",dname);
     }
     else
     {
           if(strcmp(p1,"F")==0)
           {
                 while((entry=readdir(dir))!=NULL)
                 {
                       stat(entry->d_name,&info);
                       if(info.st_mode & S_IFREG)  //s_mode =2 is for
regular file regular file
                             printf("%s\n",entry->d_name);
                 }
           }
           else if(strcmp(p1,"N")==0)
           {
                 cnt=0;
                 while((entry=readdir(dir))!=NULL)
                         {
                       cnt++;
                         }
                 printf("\nTotal no. of entries in directory '%s' = %d
",dname,cnt);
           }
           else if(strcmp(p1,"I")==0)
           {
                 while((entry=readdir(dir))!=NULL)
                         {
                               stat(entry->d_name,&info);
                               if(info.st_mode & S_IFREG)
//s_mode =2 is for regular file regular file
                               {
                             printf("File name =%s\t",entry->d_name);
```

```
                           printf("Inode=%d\n",info.st_ino);
                      }
                        }

           }
      }


}
int main()
{
        char cmd[80],tok1[10],tok2[10],tok3[10],tok4[10];
        int n;
        while(1)
        {
                printf("\nMYSHELL $]");

                fgets(cmd,80,stdin);

                n=sscanf(cmd,"%s%s%s%s",tok1,tok2,tok3,tok4);   //n=no
of tokens are formed from given command

                switch(n)
                {
                        case 1:

                                if(fork()==0)
                                {
                                        execlp(tok1,tok1,NULL);
//paramenters- nameOfProcess,parametersOfProcess
                                }
                                wait(0);
                                break;
                        case 2 :
                                if(fork()==0)
                                {
                                        execlp(tok1,tok1,tok2,NULL);
                                }
                                wait(0);
                                break;
                        case 3:
                      if(strcmp(tok1,"list")==0)
                      {
                           list(tok2,tok3);
                      }
                      else
                      {
                                 if(fork()==0)
                                 {

     execlp(tok1,tok1,tok2,tok3,NULL);
                                 }
                                 wait(0);
                      }
                                break;
                        case 4 :
                                if(fork()==0)
                                {
execlp(tok1,tok1,tok2,tok3,tok4,NULL);
                                }
                                wait(0);
                                break;

                }
        }


}
/*              OUTPUT
 *    [shalmali@localhost SHELL]$ ./a.out
 *      [shalmali@localhost SHELL]$ ./a.out
 *
 *      MYSHELL $]list I .
 *      File name =seta2.c Inode=73504
 *      File name =seta3.c Inode=73495
 *      File name =.~lock.setaALL.odt#Inode=73490
 *      File name =setc1.c Inode=73502
 *      File name =setaALL.pdf   Inode=73500
 *      File name =setb2.c Inode=73499
 *      File name =setaALL.odt   Inode=73494
 *      File name =a.txt   Inode=73501
 *      File name =setb3.c Inode=73493
 *      File name =setb1.c Inode=73496
 *      File name =seta1.c Inode=73498
 *      File name =a.out   Inode=73489
 *
 *      MYSHELL $]list F .
 *      seta2.c
 *      seta3.c
 *      .~lock.setaALL.odt#
 *      setc1.c
 *      setaALL.pdf
 *      setb2.c
 *      setaALL.odt
 *      a.txt
 *      setb3.c
 *      setb1.c
 *      seta1.c
 *      a.out
 *
 *      MYSHELL $]list N .
 *
 *      Total no. of entries in directory '.' = 14
 *      MYSHELL $]^C
```

```
*
* [shalmali@localhost SHELL]$
* */
```