6a) Write a LEX program to eliminate *comment lines* in a *C* program and copy the resulting program into a separate file.

```
%{
#include<stdio.h>
int count=0;
%}
BC ^[ \t]*[/][\*]
EC [\*][/]
QT [\"]
%x CMT
%x QUOT
%%
{BC} {BEGIN CMT;}
<CMT>{EC} {count++;BEGIN 0;}
<CMT>. |
<CMT>\n ;
{QT} {ECHO; BEGIN QUOT;}
<QUOT>{QT} {ECHO;BEGIN 0;}
<QUOT>.|\n {ECHO;}
"//".* {count++;}
%%
main(int argc, char *argv[])
{
      FILE *fin,*fout;
      if(argc!=3)
      {
            printf("Usage:<Executable file><input file><outputfile>");
            exit(1);
      }
      fin=fopen(argv[1],"r");
      if(!fin)
      {
            fprintf(stderr, "Couldnt open %s\n",argv[1]);
            exit(1);
      }
      yyin=fin;
      fout=fopen(argv[2],"w");
      if(!fout)
      {
            fprintf(stderr, "Couldnt open %s\n",argv[2]);
            exit(1);
      }
      yyout=fout;
      yylex();
      printf("The Number of Comment Lines=%d\n",count);
}
```

Instructions:

1) Compile lex program file : **lex 6a.l**
2) Compile lex.yy.c : **gcc –o 6a lex.yy.c –ll**
3) Create a source C file, say **source.c** and write some C statements along with the comments. For ex,

```
#include<stdio.h>          //Declare Header File
int main()
{
        /*Declare Variables
        ……..*/
        int a=10,b=20,c=0;
        c=a+b;             //Perform Addition
        printf(" /* DISPLAY OUTPUT */ ");
        printf("sum=%d\n",c);
        return 0;           /*return*/
}
```

4) Create a new destination file, say **dest.c** and do not write anything into it. (*Even if the destination file is not created, it does get created when the command given below gets executed.)*

5) Now run the executable file using the command
   ./6a source.c dest.c
   (This command copies everything from source.c to dest.c except comment lines.)

6) Press Cntrl+D. You'll get the output as:
   `The Number of Comment Lines=4`

7) Open **dest.c** and check its content. Now, It's content should be free from comment lines. For our example, the file content must look like:

```
#include<stdio.h>
int main()
{



        int a=10,b=20,c=0;
        c=a+b;
        printf(" /* DISPLAY OUTPUT */ ");
        printf("sum=%d\n",c);
        return 0;
}
```