LEX PROGRAM

READING FROM FILE

1. Reading input from a file

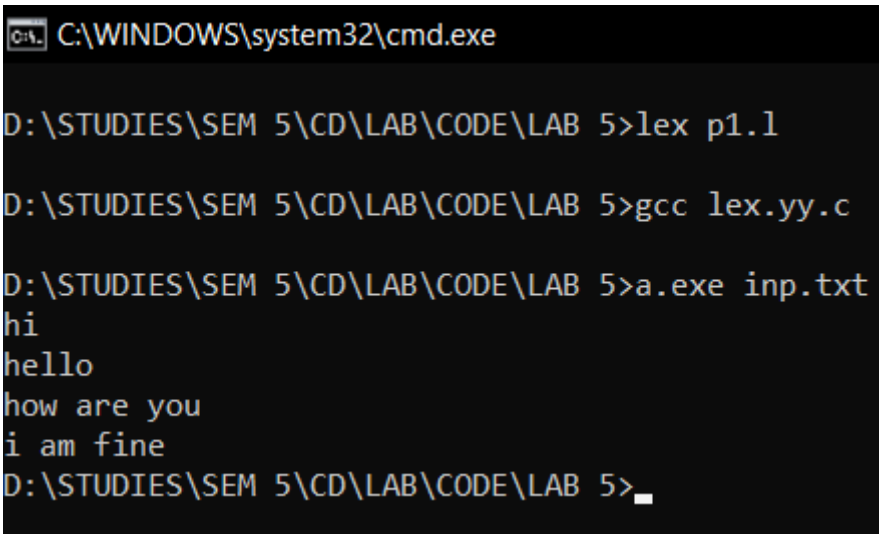
CODE :-

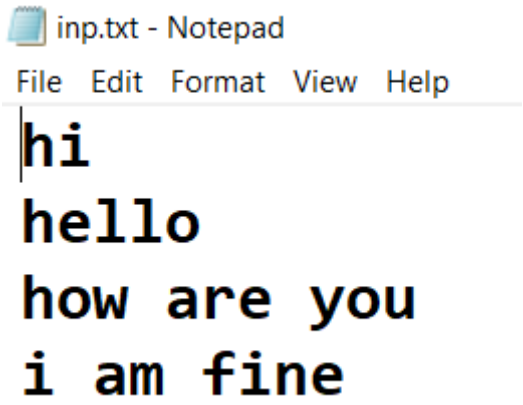
```
%option noyywrap
%{
        #include<stdio.h>
%}

%%
%%

int main(int argc, char* argv[])
{
        if(argc > 1)
        {
                FILE *fp = fopen(argv[1], "r");
                if(fp)
                yyin = fp;
        }
        yylex();
        return 1;
}
```

OUTPUT :-





READING AND WRITING INTO FILE

2. Replace the character with another character using file

CODE :-

```
%option noyywrap
%{
        #include<stdio.h>
        #include<string.h>
        char replace_with [] = "Best";
        char replace [] ="A";
%}

%%
[a-zA-Z]+ {
        if(strcmp(yytext, replace)==0)
                fprintf(yyout, "%s", replace_with);
        else
                fprintf(yyout, "%s", yytext);
}
. fprintf(yyout, "%s", yytext);
%%

//int yywrap() { return 1; }
int main()
{
        extern FILE *yyin, *yyout;
        yyin=fopen("inp1.txt", "r");
        yyout=fopen("out1.txt", "w");
        yylex();
        return 0;
}
```

OUTPUT :-

```
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>lex p2.l

D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>gcc lex.yy.c

D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>a.exe inp1.txt

D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>type out1.txt
Best Art in the world
Best price to sell your product
Classical Music is Best Relaxing
Best football player plays well
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>
```

inp1.txt - Notepad

File Edit Format View Help

```
Best Art in the world
Best price to sell your product
Classical Music is Best Relaxing
Best football player plays well
```

out1.txt - Notepad

File Edit Format View Help

```
Best Art in the world
Best price to sell your product
Classical Music is Best Relaxing
Best football player plays well
```

3. yyless(k) - returns the first k characters in yytext

CODE :-

```
%option noyywrap
%{
        #include<stdio.h>
%}

%%
[a-z]+ {
        printf("\n Lower ="); ECHO;
        yyless(3);
        printf("\nThe word after yyless() = "); ECHO;
}
[a-zA-Z]+ {
        printf("\nMixed letter is = "); ECHO;
}
%%

int main()
{
        yylex();
        return 0;
}
```

OUTPUT :-

```
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>lex p3.l

D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>gcc lex.yy.c

D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>a.exe
concatenation two string

 Lower =concatenation
The word after yyless() = con
 Lower =catenation
The word after yyless() = cat
 Lower =enation
The word after yyless() = ena
 Lower =tion
The word after yyless() = tio
 Lower =n
The word after yyless() = n t
 Lower =wo
The word after yyless() = wo
 Lower =string
The word after yyless() = str
 Lower =ing
The word after yyless() = ing
```

4. ymore() - returns the next token.

CODE :-

```
1  %{
2  %}
3
4  %%
5  [a-z]+ {
6          printf("\nLowercase letter = "); ECHO;
7          printf("\nStart of 1st yymore\n");
8          yymore();
9          printf("\nEnd of 1st yymore\n");
10 }
11 [A-Z]+ {
12         printf("\nUppercase letter = "); ECHO;
13         printf("\nStart of 2nd yymore\n");
14         yymore();
15         printf("\nEnd of 2nd yymore\n");
16 }
17 %%
18
19 int main()
20 {
21         yylex();
22 }
```

OUTPUT :-

```
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>lex p4.l

D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>gcc lex.yy.c

D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5>a.exe
GooD EXAMple

Uppercase letter = G
Start of 2nd yymore

End of 2nd yymore

Lowercase letter = Goo
Start of 1st yymore

End of 1st yymore

Uppercase letter = GooD
Start of 2nd yymore

End of 2nd yymore
GooD
Uppercase letter = EXAM
Start of 2nd yymore

End of 2nd yymore

Lowercase letter = EXAMple
Start of 1st yymore

End of 1st yymore
EXAMple
```