

SPOT – EXERCISE

1. Append the next matched string to the current value of the yytext rather than replacing the contents of the yytext. Handle it for Uppercase and Lowercase

CODE :-

```

1  %option noyywrap
2  %{
3      #include<stdio.h>
4  %}
5
6  %%
7  [a-z]+ {
8      fprintf(yyout, "\nLowercase letter = "); ECHO;
9      fprintf(yyout, "\nFirst letter - %c, Last letter - %c", yytext[0], yytext[yytext[0]-1]);
10     yymore();
11 }
12 [A-Z]+ {
13     fprintf(yyout, "\nUppercase letter = "); ECHO;
14     fprintf(yyout, "\nFirst letter - %c, Last letter - %c", yytext[0], yytext[yytext[0]-1]);
15     yymore();
16 }
17 %%
18
19 int main()
20 {
21     extern FILE *yyin, *yyout;
22     yyin=fopen("input1.txt", "r");
23     yyout=fopen("output1.txt", "w");
24     yylex();
25     return 0;
26 }

```

OUTPUT :-

```

D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>lex p1.l
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>gcc lex.yy.c
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>a.exe
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>type output1.txt

Lowercase letter = com
First letter - c, Last letter - m
Uppercase letter = comPUTER
First letter - c, Last letter - RcomPUTER
Uppercase letter = SCI
First letter - S, Last letter - I
Lowercase letter = SCien
First letter - S, Last letter - n
Uppercase letter = SCienCE
First letter - S, Last letter - E

```

comPUTER SCienCE

Lowercase letter = com
First letter - c, Last letter - m
Uppercase letter = comPUTER
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Uppercase letter = SCI
First letter - S, Last letter - I
Lowercase letter = SCien
First letter - S, Last letter - n
Uppercase letter = SCienCE
First letter - S, Last letter - E

2.Match any string of one or more character that do not include lower case a-z.

CODE :-

```
1  %option noyywrap
2  %{
3      #include<stdio.h>
4      int i, flag=0;
5  %}
6
7  %%
8  [a-zA-Z]+ { flag=0;
9      for(i=0;i<yyleng;i++)
10         if(islower(yytext[i])) {
11             flag=1; break; }
12     if(!flag)
13         fprintf(yyout,"%s",yytext); }
14 . { fprintf(yyout, "%s", yytext); }
15 %%
16 int main()
17 {
18     extern FILE *yyin, *yyout;
19     yyin=fopen("input2.txt","r");
20     yyout=fopen("output2.txt","w");
21     yylex();
22     return 0;
23 }
```

OUTPUT :-

```
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>lex p2.1
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>gcc lex.yy.c
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>a.exe
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>type output2.txt
HELLO
COLLEGE    GUINDY
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>
```

input2.txt - Notepad

File Edit Format View Help

HELLO world
COLLEGE of enGINEEring GUINDY

output2.txt - Notepad

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HELLO
COLLEGE GUINDY

3.Comments consisting of string surrounded by /* and */ without intervening */, unless it is inside double-quotes("")

Input:

```
{
    while ( (c = input()) == '*' )
        ;
    if ( c == '/' )
        break;          /* found the end */
}

while (c != eof)
{if (c == 1 )
    return "YES";        /* Returns YES */
else
    return "NO";         /* Returns NO */
}
```

CODE :-

```
1 %option noyywrap
2 %{
3     #include<stdio.h>
4 }
5
6 %%
7 .\|\/\([a-zA-Z0-9 ]|\\"\\\/\"|(\"\"|\"/\") [a-zA-Z0-9 ])\|\/\.* {
8     fprintf(yyout,"---> The Below input line has a COMMENT: <---\n%s\n",yytext);
9 }
10 %%
11
12 int main()
13 {
14     extern FILE *yyin, *yyout;
15     yyin=fopen("z5test3ip.txt", "r");
16     yyout=fopen("z5test3op.txt", "w");
17     yylex();
18     return 0;
19 }
```

OUTPUT :-

```
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>lex p3.1
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>gcc lex.yy.c
D:\STUDIES\SEM 5\CD\LAB\CODE\LAB 5\SPOT>a.exe
```

input3.txt - Notepad

File Edit Format View Help

```
{
    while ( (c = input()) == '*' )
        ;
if ( c == '/' )
break;          /* found the end */
}
    while (c != eof)
{
if (c == 1)
    return "YES";          /* Returns YES */
else
    return "NO";           /* Returns NO */
}
```

*output3.txt - Notepad

File Edit Format View Help

```
{
    while ( (c = input()) == '*' )
        ;
if ( c == '/' )
---> The Below input line has a COMMENT: <---
break;          /* found the end */
}
    while (c != eof)
{
if (c == 1)
---> The Below input line has a COMMENT: <---
    return "YES";          /* Returns YES */
else
---> The Below input line has a COMMENT: <---
    return "NO";           /* Returns NO */
}
```