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Course: CSL5404

Assignment – 4

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1. Write a Lex program to accept your Roll Number.

```
%{
#include<stdio.h>
int no=0;
int oh=0;
%}

%%
[0-9] {no++;}
[-0-9a-zA-Z] {oh++;}
"\n" {return 0;}
%%

int yywrap(){
return(1);
}

int main() {
    printf("\nEnter valid roll number of length equal to 7 : \n
");
yylex();
if(oh>0){
 printf("\nEnter valid roll number of length equal to 7");
        }
```

```
else if(no==7){
printf("Accepted");
              }
else{
 printf("\nEnter valid roll number of length equal to 7");
    }
return 0;
}
```

```
PS F:\Compiler Design\Lab\LakhanKumawat> flex main.lex
PS F:\Compiler Design\Lab\LakhanKumawat> gcc lex.yy.c
PS F:\Compiler Design\Lab\LakhanKumawat> .\a.exe

Enter valid roll number of length equal to 7 :
1906055
Accepted
PS F:\Compiler Design\Lab\LakhanKumawat>
```

2. A story has been written and saved in file, later you have given a task to search a given word in the story. Write a Lex program to accomplish this task.

```
%{
#include<stdio.h>
#include<string.h>
char replace [10];
int flag=0;
%}
%%
[a-zA-Z]+ { if(strcmp(yytext, replace)==0){
    flag=1;}
    }
.
%%
int yywrap()
{
 return 1;
```

```
}
int main()
{
 printf("Enter the word to find : ");
 scanf("%[^\n]%*c", replace);
 extern FILE *yyin;
 yyin=fopen("input.txt", "r");
 yylex();
 if(flag)
 printf("Word is present the FILE input.txt");
 else
 printf("Word is not present the FILE input.txt");

 return 0;
}
```

```
PS F:\Compiler Design\Lab\LakhanKumawat> flex main.lex
PS F:\Compiler Design\Lab\LakhanKumawat> gcc lex.yy.c
PS F:\Compiler Design\Lab\LakhanKumawat> .\a.exe
Enter the word to find : Lakhan
Word is present the FILE input.txt
PS F:\Compiler Design\Lab\LakhanKumawat> more .\input.txt
Hello Lakhan!  hope you are doing well?

PS F:\Compiler Design\Lab\LakhanKumawat>
```

3. Write a Lex program that accept a string start with 'b’ and end with 'a' over input alphabet a, b.

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

%%
(b)[a-b]*(a) {printf("matching");}
```

```
.* {printf(" not matching");}
%%

int yywrap(){
return 1;
}

int main(){
yylex();

return 0;
}
```

```
PS F:\Compiler Design\Lab\LakhanKumawat> flex main.lex
PS F:\Compiler Design\Lab\LakhanKumawat> gcc lex.yy.c
PS F:\Compiler Design\Lab\LakhanKumawat> .\a.exe
ab
 not matching
ba
matching
baaa
matching
bababbba
matching
bbbbbb
 not matching
```

4. Write a Lex program accept 'baba' as a substring over input alphabet a, b.

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

```
%%
[ab]* {
c=0;
if(yyleng<3){
  printf("Enter character length greater then 4");}
else{
 for(int i=0;i<yyleng-3;i++){
    if((yytext[i]=='b') && (yytext[i+1]=='a') && (yytext[i+2]==
'b') && (yytext[i+3]=='a') ){
        c++;
        printf("matching");
        break; }}
        if(c==0){
        printf(" not matching");
        }
        }
  }
.* {printf(" not matching");}
%%

int yywrap(){
return 1;
}

int main(){
yylex();

return 0;
}
```

```
PS F:\Compiler Design\Lab\LakhanKumawat> flex main.lex
PS F:\Compiler Design\Lab\LakhanKumawat> gcc lex.yy.c
PS F:\Compiler Design\Lab\LakhanKumawat> .\a.exe
babab
matching
bbaabbaababab
matching
bbbb
 not matching
aaaa
 not matching
```

End Of Assignment