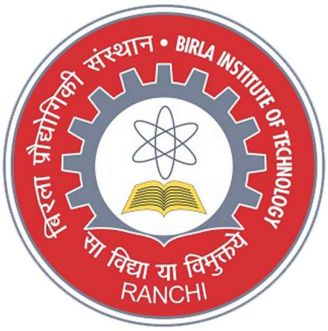
Birla Institute of Technology,Mesra,

Patna Campus



CD-Assignment

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#Assignment-7

1. write the steps to execute lex programs.

Compilation & Execution of LEX Program:

1. Open Command prompt and switch to your working directory where you have stored your lex file (“`.l`“) and yacc file (“`.y`“)

2. Let your lex and yacc files be “`hello.l`” and “`hello.y`“. Now, follow the preceding steps to compile and run your program.
   A. For Compiling **`Lex`** file only:
      i. `flex hello.l`
      ii. `gcc lex.yy.c`
   B. For Compiling **`Lex & Yacc`** file both:
      i. `flex hello.l`
      ii. `bison -dy hello.y`
      iii. `gcc lex.yy.c y.tab.c`
   C. For **Executing** the Program
      i. `a.exe`

2.Write a program in lex to count number of vowel from text file.

CODE:-

```
%{
    int v=0,co=0,n=0;
```

```
%}
%%
    [aeiou] v++;
    [0-9] co++;
    n++;
%%
int main()
{
    FILE *f;
    char file[10];
    printf("Enter File Name : ");
    scanf("%s",file);
    f=fopen(file,"r");
    yyin=f;
    yylex();
    printf("\nNumber of Vowels : %d",v);
    printf("\nNumber of Constants : %d",co);
    return 0;
}
int yywrap()
{
    return 1;
}
```

Output:-

```
C:\Flex Windows\EditPlusPortable>flex cd6_2.l

C:\Flex Windows\EditPlusPortable>gcc lex.yy.c

C:\Flex Windows\EditPlusPortable>a.exe
Enter File Name : cd6_2.txt
hrdk ghl
Number of Vowels : 4
Number of Constants : 3
```

3.Write a programin lexto count number of keywords from text file.

CODE:-

```
/*lex program to count number of Keywords*/
%{
#include<stdio.h>
#include<string.h>
int i = 0;
%}

/* Rules Section*/
%%
([a-zA-Z0-9])* {i++;} /* Rule for counting
                                        number of words*/
```

```
"\n" {printf("%d\n", i); i = 0;}
%%

int yywrap(void){}

int main()
{
        FILE *f;
    char file[10];
    printf("Enter File Name : ");
    scanf("%s",file);
    f=fopen(file,"r");
    yyin=f;
        yylex();

        return 0;
}
```

Output:-

```
shubham@gfg-desktop:~$ lex words.l
shubham@gfg-desktop:~$ cc lex.yy.c -lfl
shubham@gfg-desktop:~$ ./a.out
Hello Everyone
 2
This is GeeksforGeeks
  3
```

4.Write a programin lex to count number of linesfrom text file.

CODE:-

```
%{
int nlines,nwords,nchars;
%}

%%
\n {
            nlines++;
            }

[^ \n\t]+ {nwords
;}
%%
int yywrap(void)
{
 return 1;
}
int main(int argc, char*argv[])
{
            yyin=fopen(argv[1],"r");
 yylex();
 printf("Lines = %d\ ",nlines);

 return 0;
}
```

Output:-

```
root@kali:~/SPOS/B2# cd ../B3
root@kali:~/SPOS/B3# ls
a.out  input  lex.yy.c  word_count.l
root@kali:~/SPOS/B3# lex
a.out          input          lex.yy.c       word_count.l
root@kali:~/SPOS/B3# lex word_count.l
root@kali:~/SPOS/B3# gcc lex.yy.c
root@kali:~/SPOS/B3# ./a.out input
Lines = 3
```