

**NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR**

**Cachar, Assam**

**B.Tech. VI<sup>th</sup> Sem**

**Subject Code:** CS-316

**Subject Name:** Compiler Design Lab

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Branch : CSE – B

## 1. Write an introduction on "lex".

- ➔ Lex is a program that generates lexical analyser. It is used with YACC parser generator. The lexical analyser is a program that transforms an input stream into a sequence of tokens. The lexical analyser is a program that transforms an input stream into a sequence of tokens.

Firstly, lexical analyser creates a program 'lex.l' in the Lex language. Then Lex compiler runs the 'lex.l' program and produces a C program 'lex.yy.c'. Finally, C compiler runs the 'lex.yy.c' program and produces an object program 'a.out'. 'a.out' is lexical analyser that transforms an input stream into a sequence of tokens.

## 2. Write a lex program to recognize an alphabet.

- ➔ **AIM:** TO WRITE A LEX PROGRAM TO RECOGNISE AN ALPHABET

### CODE:

```
%{
#include<stdio.h>
%}
%%
[a-zA-Z] {printf("alphabet ");}
[^a-zA-Z\n] {printf("not-alphabet ");}
%%
int yywrap(){
return 1;
}
main(){
printf ("write something \n");
yylex();
}
```

### OUTPUT:

```
D:\Documents\NITS\Semester VI\LAB CS316 Compiler Design\alpha.exe
ENTER A CHARACTER:
A
<ALPHABET RECOGNISED>
$
<NOT AN ALPHABET>
a
<ALPHABET RECOGNISED>
abcde
<ALPHABET RECOGNISED> <ALPHABET RECOGNISED> <ALPHABET RECOGNISED> <ALPHABET RECOGNISED> <ALPHABET RECOGNISED>
ab$!@
<ALPHABET RECOGNISED> <ALPHABET RECOGNISED> <NOT AN ALPHABET> <NOT AN ALPHABET> <NOT AN ALPHABET>
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<ALPHABET RECOGNISED> <NOT AN ALPHABET> <NOT AN ALPHABET> <NOT AN ALPHABET> <ALPHABET RECOGNISED>
```