**Practical – 4 C**

**Aim:**

**(c) Write a FLEX program that accepts language of all strings of the form anbn.**

**Code (a):**

%{

int a\_counter=0;

int b\_counter=0;

void result();

%}

%s A B

%s DEAD

%%

<INITIAL>a {

// start symbol is a so move to next state

BEGIN A;

a\_counter++;

}

<INITIAL>[^a\n] {

// Start symbol is not 'a'

BEGIN DEAD;

}

<A>a {

// printf("detected a after a\n");

// accept all 'a' followed by 'a'

a\_counter++;

}

<A>b {

// printf("detected b after a\n");

// 'b' detected after an 'a' so move to next state

BEGIN B;

b\_counter++;

}

<A>[^ab\n] {

// invalid input symbol detected

BEGIN DEAD;

}

<A>\n {

// print the result and move back to initial state

BEGIN INITIAL;

result();

}

<B>b {

// printf("detected b after b\n");

// 'b' detected after a previous 'b'

b\_counter++;

}

<B>[^b\n] {

// invalid input symbol detected

BEGIN DEAD;

}

<B>\n {

// print the result and move back to initial state

BEGIN INITIAL;

result();

}

<DEAD>[^\n] {

// accept anything in dead state until newline character

BEGIN DEAD;

}

<DEAD>\n {

// invalid string detected, move back to initial state

BEGIN INITIAL;

printf("Invalid String\n\n");

}

%%

void result() {

// printf("a\_counter=%d, b\_counter=%d\n", a\_counter, b\_counter);

if (a\_counter == b\_counter)

printf("String accepted\n");

else

printf("String not accepted\n");

a\_counter=0;

b\_counter=0;

printf("\n");

}

void main()

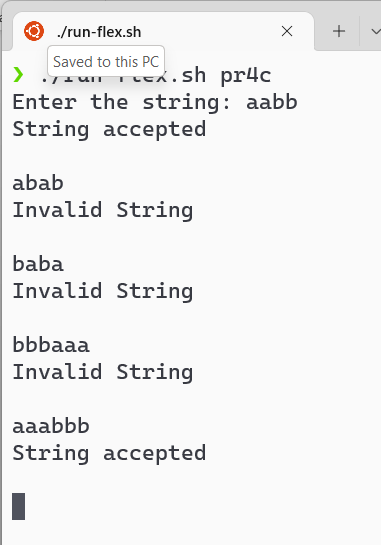
{

printf("Enter the string: ");

yylex();

}

**Output:**

****