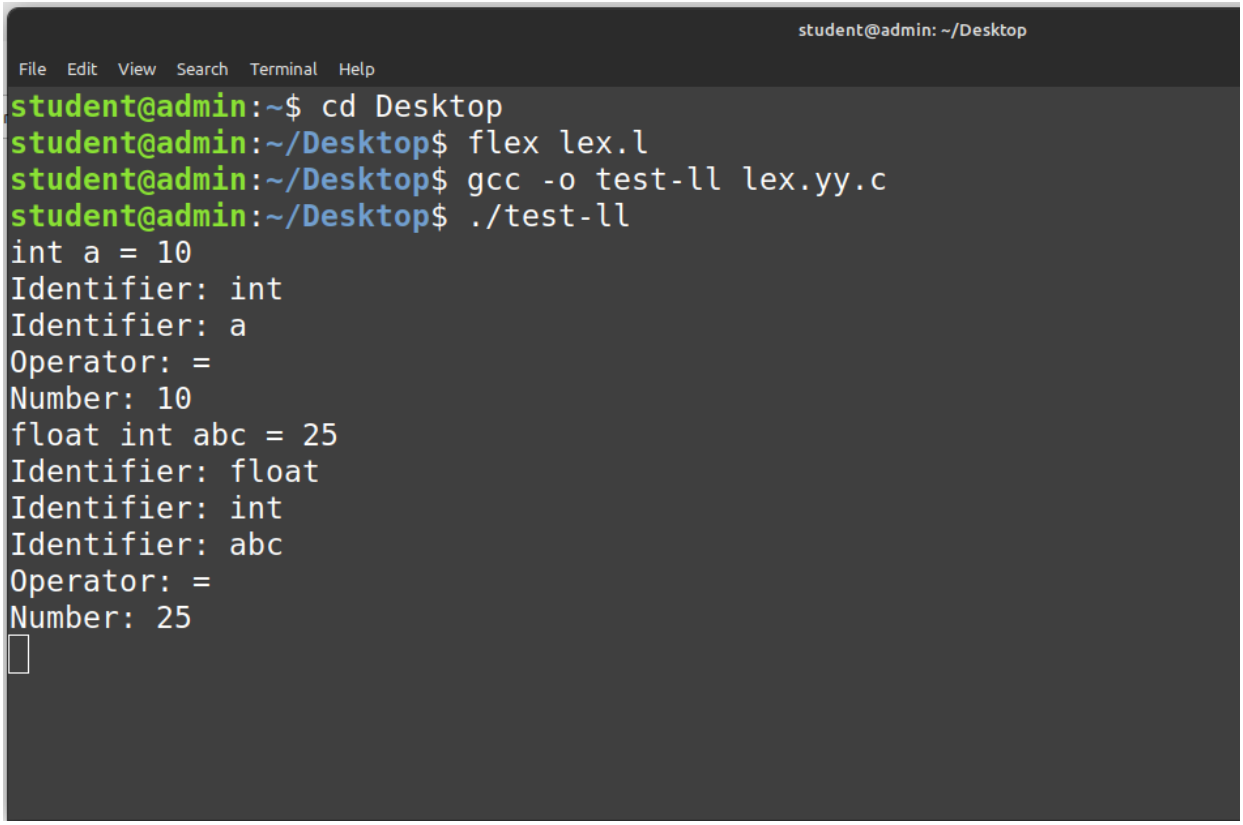
Register Number – 21BPS1045
Name – SAJAL BRAHMA

AIM : Design a LEX program to identify numbers , keyword (more than 10) identifiers , header files , parenthesis.

PROGRAM CODE -

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

DIGIT [0-9]
LETTER [a-zA-Z]
IDENTIFIER {LETTER}({LETTER}|{DIGIT})*
NUMBER {DIGIT}+(\.{DIGIT}+)?(E[+\-]?{DIGIT}+)?
WHITESPACE [ \t\n]

%%
{WHITESPACE} ; // Ignore whitespace
{IDENTIFIER} { printf("Identifier: %s\n", yytext); }
{NUMBER} { printf("Number: %s\n", yytext); }
"+" { printf("Operator: %s\n", yytext); }
"-" { printf("Operator: %s\n", yytext); }
"*" { printf("Operator: %s\n", yytext); }
"/" { printf("Operator: %s\n", yytext); }
"=" { printf("Operator: %s\n", yytext); }
"(" { printf("Left Parenthesis: %s\n", yytext); }
")" { printf("Right Parenthesis: %s\n", yytext); }
";" { printf("Semicolon: %s\n", yytext); }
.   { printf("Unknown token: %s\n", yytext); }
%%

int main()
{
   yylex();
   return 0;
}

int yywrap()
{
  return 1;
}
```

OUTPUT -



INFERENCE -

The code is successfully implemented and verified in the lab.