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Roll No: 71

Experiment No. 10

Aim: To implement Lexical Analyzer using Flex Tool

Code:

```
%{
#define Header 3
#define Number 1
#define Key 2
#define ID 7
#define NewLine 4
#define Punc 6
#define Comment 5
%}
%%
[0-9]+|[0-9]+\.[0-9]+ {return Number;}
main|int|char|int|void {return Key;}
[a-zA-z]+[a-zA-Z0-9]* {return ID;}
\"[^\"\n]*\"  {return NewLine;}
\<[a-z]\.h\> {return Header;}
[!@#$^&*(){}:;",./<>?+=-] {return Punc;}
\/\/|\/\*+[a-zA-z]+[a-zA-Z0-9]* {return Comment;}
%%

#include<stdio.h>
int main(int arg,char *argv[]) {
int val;
while(val=yylex()) {
switch(val) {
case 1:
printf("\n%s - Number",yytext);
break;
case 2:
printf("\n%s - Keyword",yytext);
break;
case 3:
printf("\n%s - Header File",yytext);
break;
case 4:
printf("\nNew Line");
break;
case 5:
```

```
printf("\n%s - Comment",yytext);
break;
case 6:
printf("\n%s - Symbol",yytext);
break;
case 7:
printf("\n%s - Identifier",yytext);
break;
default:
printf("Invalid choice");
break;
}
}
}
```

Output:

```
tcet@tcet-OptiPlex-3020:~$ lex lex.l
tcet@tcet-OptiPlex-3020:~$ cc lex.yy.c -o abc -ll
tcet@tcet-OptiPlex-3020:~$ ./abc
#include<stdio.h>

# - Symbol
include – Identifier
< - Symbol
stdio.h – Header
> - Symbol
^C
```