

## Practical : 6

**Aim: Write a program to implement calculator using lex and YACC.**

**Code: Lex file: p6.l**

```
#include <stdio.h>
#include <ctype.h>
#include <stdbool.h>

bool valid_var_name(const char* str)
{
    if (!str) return false;
    const char* s = str;
    while (*s != '\0')
    {
        if ((s == str && isdigit(*s)) || (!(*s == '_' && (!isascii(*s) || iscntrl(*s) || ispunct(*s))))
        {
            return false;
        }
        ++s;
    }
    return true;
}

int main(void)
{
    const char* var[] =
{"foo", "_1test", "foo_42", "5bar", "ab$f", "!f", "f~o", "abc", "210", "ab212", "ab"};
    for (int i = 0; i < sizeof(var) / sizeof(const char*); ++i)
    {
        printf("\n%s\ variable name is valid ? %s\n", var[i], (valid_var_name(var[i]) ? "Yesvalid" :
"Not valid"));
    }
    return 0;
}
```

**Output:**

```
~$ gcc pra6.c
~$ ls
a.out pra6.c
~$ ./a.out
"foo" variable name is valid ? Yesvalid
"_1test" variable name is valid ? Yesvalid
"foo_42" variable name is valid ? Yesvalid
"5bar" variable name is valid ? Not valid
"ab$f" variable name is valid ? Not valid
"!f" variable name is valid ? Not valid
"f~o" variable name is valid ? Not valid
"abc" variable name is valid ? Yesvalid
"210" variable name is valid ? Not valid
"ab212" variable name is valid ? Yesvalid
"ab" variable name is valid ? Yesvalid
~$ █
```