

% Compiler Design Lab %

Assignment-5

- Objective: Our objective is to write a C program to check whether an operator is valid or not.
- Resources: I took help from online resources like geeks-for-geeks for the concepts needed in this assignment.
- Program Logic:
 - ci) Read the given input.
 - cii) If the given input matches with any operator symbol, then display in terms of words of the particular symbol.
 - ciii) Else print not a operator.

Code:

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

```
void main() {
```

```
    char S[5];
```

```
    printf("\nEnter any operator:");
```

```
    gets(S);
```

```
    switch (S[0]) {
```

```
        case '=':
```

```
            if (S[1] == '=')
```

```
                printf("\nGreater than or equal to\n");
```

```
            else
```

```
                printf("\nGreater than\n");
```

```
            break;
```

```
        case '<':
```

```
            if (S[1] == '=')
```

```
                printf("\nLess than or equal to\n");
```

```
            else
```

```
                printf("\nLess than\n");
```

```
            break;
```

case '=':

if (S[1] == '=')

printf("n Equal to n");

else

printf("n Assignment n");

break;

case '!':

if (S[1] == '!')

printf("n Not equal n");

else

printf("n Bitwise Not n");

break;

case '&': if (S[1] == '&')

printf("n Logical AND n");

else

printf("n Bitwise AND n");

break;

case '|':

if (S[1] == '|')

printf("n Logical OR n");

else

printf("n Bitwise OR n");

break;

case '+': printf("Addition Operator n");

break;

case '-': printf("Subtraction Operator n");

break;

case '*': printf("Multiplication Operator n");

break;

case '/': printf("Division Operator n");

break;

```
case '%': printf("Modulus Operator\n");
          break;
```

```
default: printf("Not an operator\n");
```

```
}
```

```
}.
```

Input / Output :

Input Window	Output Window.
Enter any Operator: %	Modulus Operator.
Enter any Operator: >=	Greater than or equal to
Enter any Operator: +-	Not an Operator.

Discussion : In this assignment, we wrote a C program to simulate lexical analyzer for validating Operators. The operators recognized by the program are >=, >, <=, <, =, !=, !~, &&, &, ||, |, +, -, *, / and %. However, it is not able to detect the Operators like ++, +=, --, -=.

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26/4/22