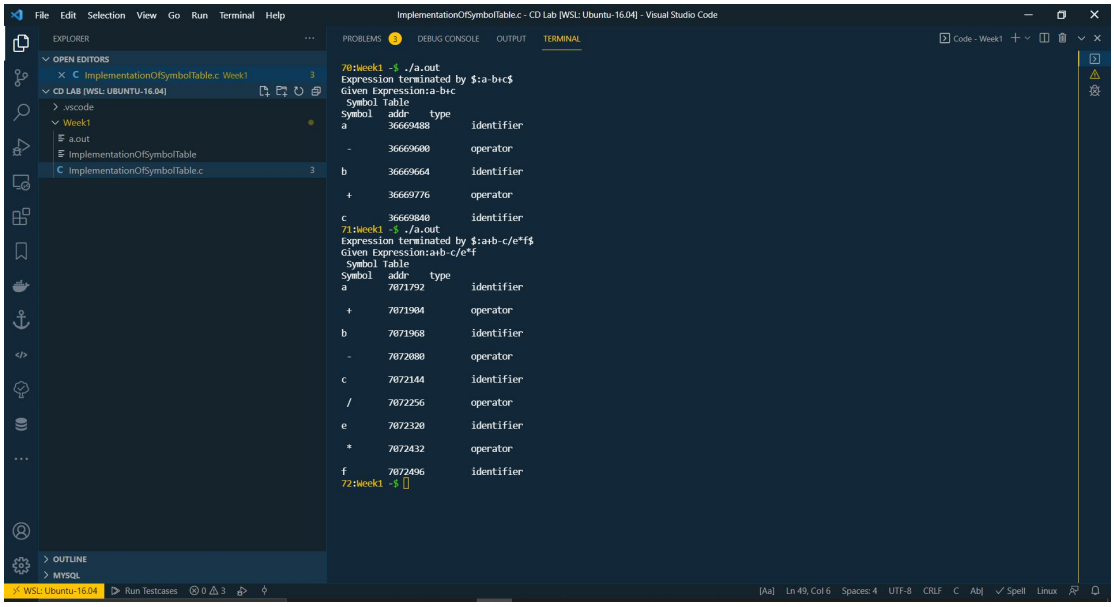
Compiler Design
Week 1

IMPLEMENTATION OF SYMBOL TABLE

Code :

```c
#include<stdio.h>
#include<ctype.h>
#include<stdlib.h>
#include<string.h>

int main()
{
    int i=0,j=0,n;
    void *p;
    char ch, b[15],c;
    printf("Expression terminated by $:");
    while((c=getchar())!='$')
    {
        b[i]=c;
        i++;
    }
    n=i-1;
    printf("Given Expression:");
    i=0;
    while(i<=n)
    {
        printf("%c",b[i]);
        i++;
    }
    printf("\n Symbol Table\n");
    printf("Symbol \t addr \t type");
    while(j<=n)
    {
        c=b[j];
        if(isalpha(c))
        {
            p=malloc(c);
            printf("\n%c \t %d \t identifier\n",c,p);

            j++;
        }
        else
        {
            ch=c;
            if(ch=='+'||ch=='-'||ch=='*'||ch=='/')
            {
                p=malloc(ch);
                printf("\n %c \t %d \t operator\n",ch,p);
                j++;
            }

        }

    }
  return 0;
}
```

Output


File Edit Selection View Go Run Terminal Help
ImplementationOfSymbolTable.c - CD Lab [WSL: Ubuntu-16.04] - Visual Studio Code
EXPLORER
OPEN EDITORS
ImplementationOfSymbolTable.c Week1 3
CD LAB [WSL: UBUNTU-16.04]
.vscode
Week1
a.out
ImplementationOfSymbolTable
ImplementationOfSymbolTable.c 3
OUTLINE
MYSQL
PROBLEMS 3
DEBUG CONSOLE
OUTPUT
TERMINAL
Code - Week1
70:week1 -$ ./a.out
Expression terminated by $:a-b+c$
Given Expression:a-b+c
Symbol Table
Symbol addr type
a 36669488 identifier
- 36669600 operator
b 36669664 identifier
+ 36669776 operator
c 36669840 identifier
71:week1 -$ ./a.out
Expression terminated by $:a+b-c/e*f$
Given Expression:a+b-c/e*f
Symbol Table
Symbol addr type
a 7071792 identifier
+ 7071904 operator
b 7071968 identifier
- 7072080 operator
c 7072144 identifier
/ 7072256 operator
e 7072320 identifier
* 7072432 operator
f 7072496 identifier
72:week1 -$
WSL: Ubuntu-16.04
Run Testcases
Ln 49, Col 6
Spaces: 4
UTF-8
CRLF
C
Linux