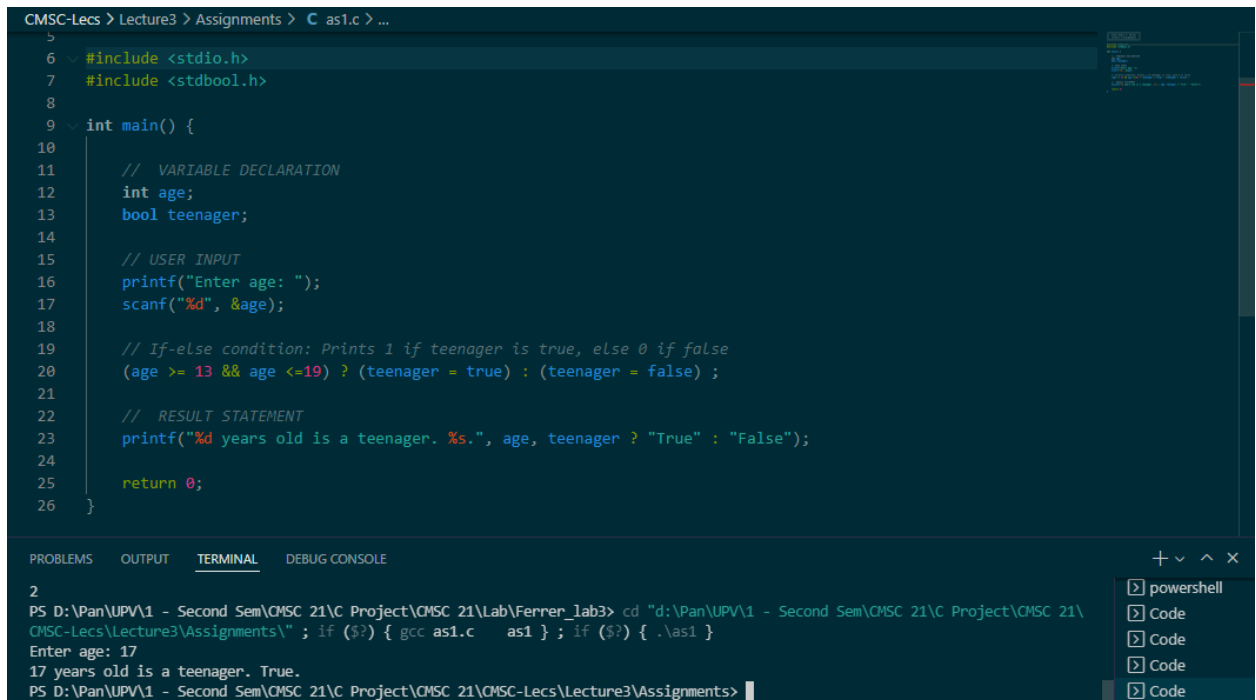


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## Operators in C

### Lecture 1 Assignments

1.



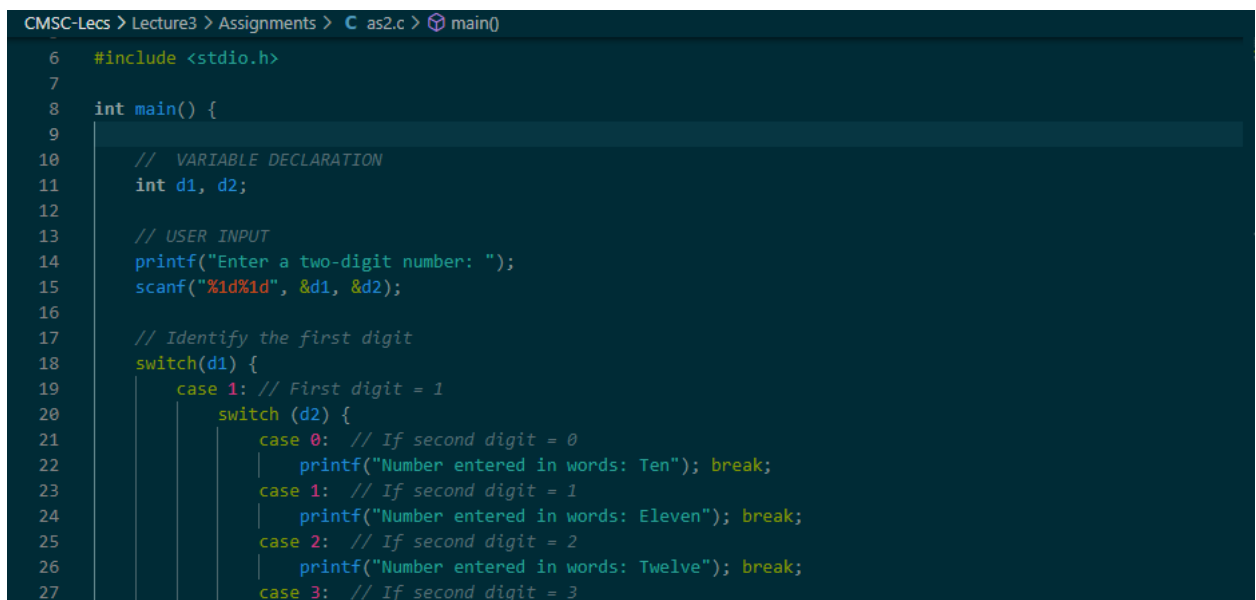
The screenshot shows a C program in a code editor. The program includes `<stdio.h>` and `<stdbool.h>`. It defines a `main` function that declares an `int` variable `age` and a `bool` variable `teenager`. It prompts the user to enter their age and reads it using `scanf`. Then, it uses a ternary operator to set `teenager` to `true` if the age is between 13 and 19, and `false` otherwise. Finally, it prints the result and returns 0. Below the code, the terminal output shows the program being compiled and executed, with the user entering '17' and the program outputting '17 years old is a teenager. True.'

```
CMSC-Lecs > Lecture3 > Assignments > C as1.c > ...
5
6 #include <stdio.h>
7 #include <stdbool.h>
8
9 int main() {
10
11     // VARIABLE DECLARATION
12     int age;
13     bool teenager;
14
15     // USER INPUT
16     printf("Enter age: ");
17     scanf("%d", &age);
18
19     // If-else condition: Prints 1 if teenager is true, else 0 if false
20     (age >= 13 && age <= 19) ? (teenager = true) : (teenager = false);
21
22     // RESULT STATEMENT
23     printf("%d years old is a teenager. %s.", age, teenager ? "True" : "False");
24
25     return 0;
26 }
```

PROBLEMS OUTPUT **TERMINAL** DEBUG CONSOLE

```
2
PS D:\Pan\UPV\1 - Second Sem\CMSC 21\C Project\CMSC 21\Lab\Ferrer_lab3> cd "d:\Pan\UPV\1 - Second Sem\CMSC 21\C Project\CMSC 21\
CMSC-Lecs\Lecture3\Assignments\" ; if ($?) { gcc as1.c as1 } ; if ($?) { .\as1 }
Enter age: 17
17 years old is a teenager. True.
PS D:\Pan\UPV\1 - Second Sem\CMSC 21\C Project\CMSC 21\CMSC-Lecs\Lecture3\Assignments>
```

2.



The screenshot shows a C program in a code editor. The program includes `<stdio.h>` and defines a `main` function that declares two `int` variables, `d1` and `d2`. It prompts the user to enter a two-digit number and reads it using `scanf`. Then, it uses a nested `switch` statement to identify the number in words. The first `switch` is for the first digit (`d1`), and the second `switch` is for the second digit (`d2`). The program prints the number in words and breaks out of the loops. The terminal output shows the program being compiled and executed, with the user entering '12' and the program outputting 'Number entered in words: Twelve'.

```
CMSC-Lecs > Lecture3 > Assignments > C as2.c > main()
6 #include <stdio.h>
7
8 int main() {
9
10     // VARIABLE DECLARATION
11     int d1, d2;
12
13     // USER INPUT
14     printf("Enter a two-digit number: ");
15     scanf("%d%d", &d1, &d2);
16
17     // Identify the first digit
18     switch(d1) {
19         case 1: // First digit = 1
20             switch (d2) {
21                 case 0: // If second digit = 0
22                     printf("Number entered in words: Ten"); break;
23                 case 1: // If second digit = 1
24                     printf("Number entered in words: Eleven"); break;
25                 case 2: // If second digit = 2
26                     printf("Number entered in words: Twelve"); break;
27                 case 3: // If second digit = 3
```

```

28         printf("Number entered in words: Thirteen"); break;
29     case 4: // If second digit = 4
30         printf("Number entered in words: Fourteen"); break;
31     case 5: // If second digit = 5
32         printf("Number entered in words: Fifteen"); break;
33     case 6: // If second digit = 6
34         printf("Number entered in words: Sixteen"); break;
35     case 7: // If second digit = 7
36         printf("Number entered in words: Seventeen"); break;
37     case 8: // If second digit = 8
38         printf("Number entered in words: Eighteen"); break;
39     case 9: // If second digit = 9
40         printf("Number entered in words: Nineteen"); break;
41     }
42     break;
43 case 2: // First digit = 2
44     printf("Number entered in words: Twenty"); break;
45 case 3: // First digit = 3
46     printf("Number entered in words: Thirty"); break;
47 case 4: // First digit = 4
48     printf("Number entered in words: Forty"); break;
49 case 5: // First digit = 5
50     printf("Number entered in words: Fifty"); break;
51 case 6: // First digit = 6
52     printf("Number entered in words: Sixty"); break;
53 case 7: // First digit = 7
54     printf("Number entered in words: Seventy"); break;
55 case 8: // First digit = 8
56     printf("Number entered in words: Eighty"); break;
57 case 9: // First digit = 9
58     printf("Number entered in words: Ninty"); break;
59 }
60 if (d1 != 1) { // In order to avoid printing if user-input is from ten to nineteen
61     switch (d2) { // Identify the first digit
62         case 1: printf("-one"); break;
63         case 2: printf("-two"); break;
64         case 3: printf("-three"); break;
65         case 4: printf("-four"); break;
66         case 5: printf("-five"); break;
67         case 6: printf("-six"); break;
68         case 7: printf("-seven"); break;
69         case 8: printf("-eight"); break;
70         case 9: printf("-nine"); break;
71     }
72 }
73 return 0;
74 }

```

```

project\CMSC 21\CMSC-Lecs\Lecture3\Assignments\" ; if ($?) { gcc as2.c as2 } ; if ($?) { .\as2 }
Enter a two-digit number: 25
Number entered in words: Twenty-five
PS D:\Pan\UPV\1 - Second Sem\CMSC 21\C Project\CMSC 21\CMSC-Lecs\Lecture3\Assignments> cd "d:\Pan\UPV\1 - Second Sem\CMSC 21\C P
roject\CMSC 21\CMSC-Lecs\Lecture3\Assignments\" ; if ($?) { gcc as2.c as2 } ; if ($?) { .\as2 }
Enter a two-digit number: 92
Number entered in words: Ninty-two
PS D:\Pan\UPV\1 - Second Sem\CMSC 21\C Project\CMSC 21\CMSC-Lecs\Lecture3\Assignments>

```