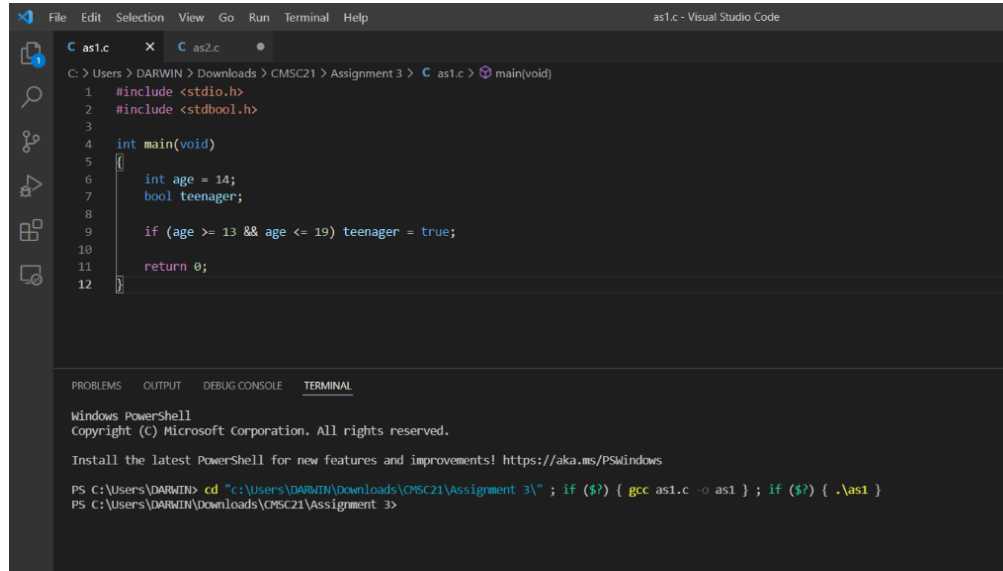


Carl Darwin B. Cortes

CMSC-21 | Section: 1

- 1.) The following if statement is unnecessarily complicated. Simplify it as much as possible.
(Hint: The entire statement can be replaced by a single assignment.)



```
File Edit Selection View Go Run Terminal Help
as1.c - Visual Studio Code

C as1.c x C as2.c
C: > Users > DARWIN > Downloads > CMSC21 > Assignment 3 > C as1.c > main(void)
1 #include <stdio.h>
2 #include <stdbool.h>
3
4 int main(void)
5 {
6     int age = 14;
7     bool teenager;
8
9     if (age >= 13 && age <= 19) teenager = true;
10
11     return 0;
12 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Windows PowerShell
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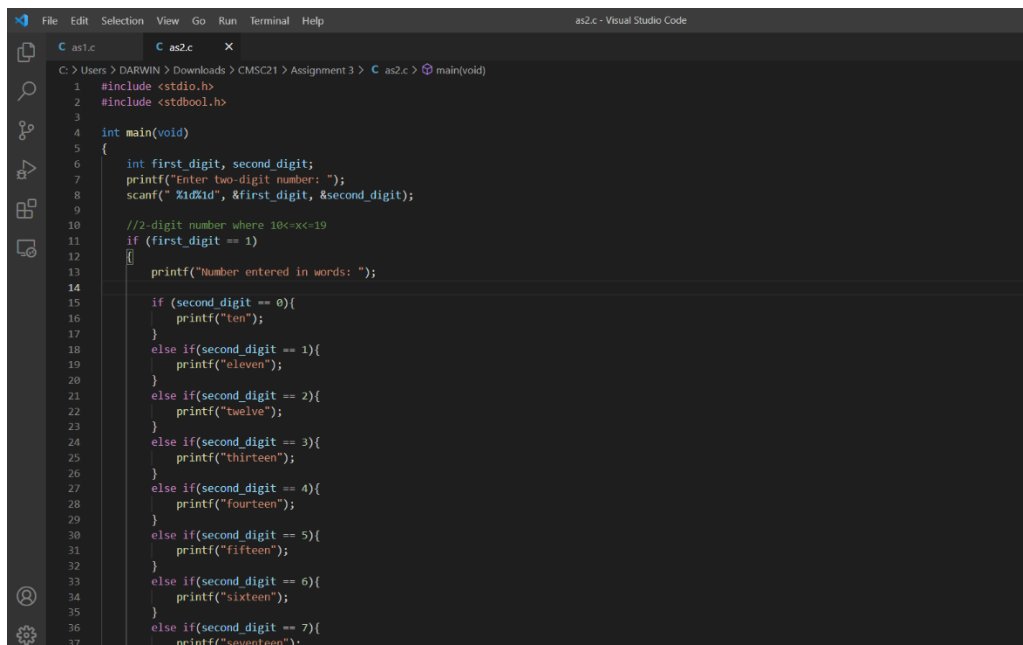
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\DARWIN> cd "c:\Users\DARWIN\Downloads\CMSC21\Assignment 3\" ; if ($?) { gcc as1.c -o as1 } ; if ($?) { .\as1 }
PS C:\Users\DARWIN\Downloads\CMSC21\Assignment 3>
```

- 2.) Write a C program that does the following:

Enter a two-digit number: 25

Number entered in words: twenty-five



```
File Edit Selection View Go Run Terminal Help
as2.c - Visual Studio Code

C as1.c x C as2.c
C: > Users > DARWIN > Downloads > CMSC21 > Assignment 3 > C as2.c > main(void)
1 #include <stdio.h>
2 #include <stdbool.h>
3
4 int main(void)
5 {
6     int first_digit, second_digit;
7     printf("Enter two-digit number: ");
8     scanf("%1d%1d", &first_digit, &second_digit);
9
10    //2-digit number where 10<=x<=19
11    if (first_digit == 1)
12    {
13        printf("Number entered in words: ");
14
15        if (second_digit == 0){
16            printf("ten");
17        }
18        else if(second_digit == 1){
19            printf("eleven");
20        }
21        else if(second_digit == 2){
22            printf("twelve");
23        }
24        else if(second_digit == 3){
25            printf("thirteen");
26        }
27        else if(second_digit == 4){
28            printf("fourteen");
29        }
30        else if(second_digit == 5){
31            printf("fifteen");
32        }
33        else if(second_digit == 6){
34            printf("sixteen");
35        }
36        else if(second_digit == 7){
37            printf("seventeen");
38        }
39    }
40 }
```

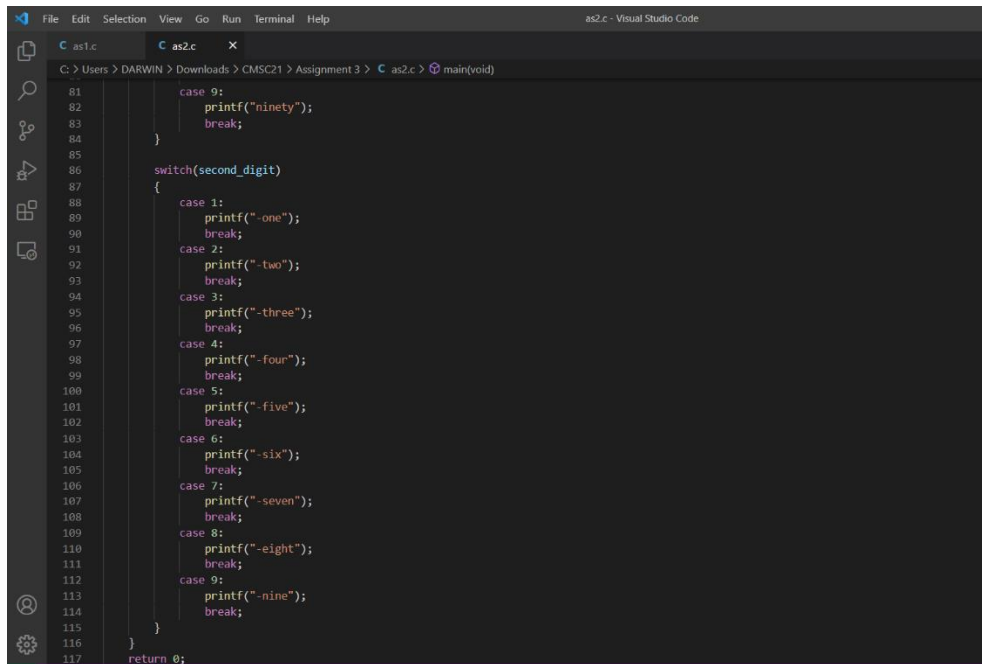
The image displays two screenshots of a Visual Studio Code editor window, showing C code for a number-to-words converter. The editor is titled "as2.c - Visual Studio Code".

Top Screenshot (Lines 34-70):

```
34     printf("sixteen");
35 }
36 else if(second_digit == 7){
37     printf("seventeen");
38 }
39 else if(second_digit == 8){
40     printf("eighteen");
41 }
42 else{
43     printf("nineteen");
44 }
45 }
46
47 //2-digit where 20<=x<=99
48 else
49 {
50     printf("Number entered in words: ");
51     switch(first_digit)
52     {
53     case 2:
54         printf("twenty");
55         break;
56     case 3:
57         printf("thirty");
58         break;
59     case 4:
60         printf("fourty");
61         break;
62     case 5:
63         printf("fifty");
64         break;
65     case 6:
66         printf("sixty");
67     }
```

Bottom Screenshot (Lines 47-83):

```
47 //2-digit where 20<=x<=99
48 else
49 {
50     printf("Number entered in words: ");
51     switch(first_digit)
52     {
53     case 2:
54         printf("twenty");
55         break;
56     case 3:
57         printf("thirty");
58         break;
59     case 4:
60         printf("fourty");
61         break;
62     case 5:
63         printf("fifty");
64         break;
65     case 6:
66         printf("sixty");
67         break;
68     case 7:
69         printf("seventy");
70         break;
71     case 8:
72         printf("eighty");
73         break;
74     case 9:
75         printf("ninety");
76         break;
77     }
```



```
File Edit Selection View Go Run Terminal Help
as2.c - Visual Studio Code

C: as1.c C: as2.c X
C: > Users > DARWIN > Downloads > CMSC21 > Assignment 3 > as2.c > main(void)

81         case 9:
82             printf("ninety");
83             break;
84     }
85
86     switch(second_digit)
87     {
88         case 1:
89             printf("-one");
90             break;
91         case 2:
92             printf("-two");
93             break;
94         case 3:
95             printf("-three");
96             break;
97         case 4:
98             printf("-four");
99             break;
100        case 5:
101            printf("-five");
102            break;
103        case 6:
104            printf("-six");
105            break;
106        case 7:
107            printf("-seven");
108            break;
109        case 8:
110            printf("-eight");
111            break;
112        case 9:
113            printf("-nine");
114            break;
115    }
116    }
117    return 0;
```

EXAMPLE OUTPUT:

2.)



```
7     printf("Enter two-digit number: ");
8     scanf("%d%d", &first_digit, &second_digit);
9
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\ DARWIN> cd "c:\Users\ DARWIN\Downloads\CMSC21\Assignment 3\" ; if ($?) { gcc as2.c -o as2 } ; if ($?) { .\as2 }
Enter two-digit number: 23
Number entered in words: twenty-three
PS C:\Users\ DARWIN\Downloads\CMSC21\Assignment 3> cd "c:\Users\ DARWIN\Downloads\CMSC21\Assignment 3\" ; if ($?) { gcc as2.c -o as2 } ; if ($?) { .\as2 }
Enter two-digit number: 10
Number entered in words: ten
PS C:\Users\ DARWIN\Downloads\CMSC21\Assignment 3> cd "c:\Users\ DARWIN\Downloads\CMSC21\Assignment 3\" ; if ($?) { gcc as2.c -o as2 } ; if ($?) { .\as2 }
Enter two-digit number: 89
Number entered in words: eighty-nine
PS C:\Users\ DARWIN\Downloads\CMSC21\Assignment 3> |
```

GITHUB LINK:

<https://github.com/CarlDarwinCortes/CMSC21/tree/main/Lecture3/Assignments>