

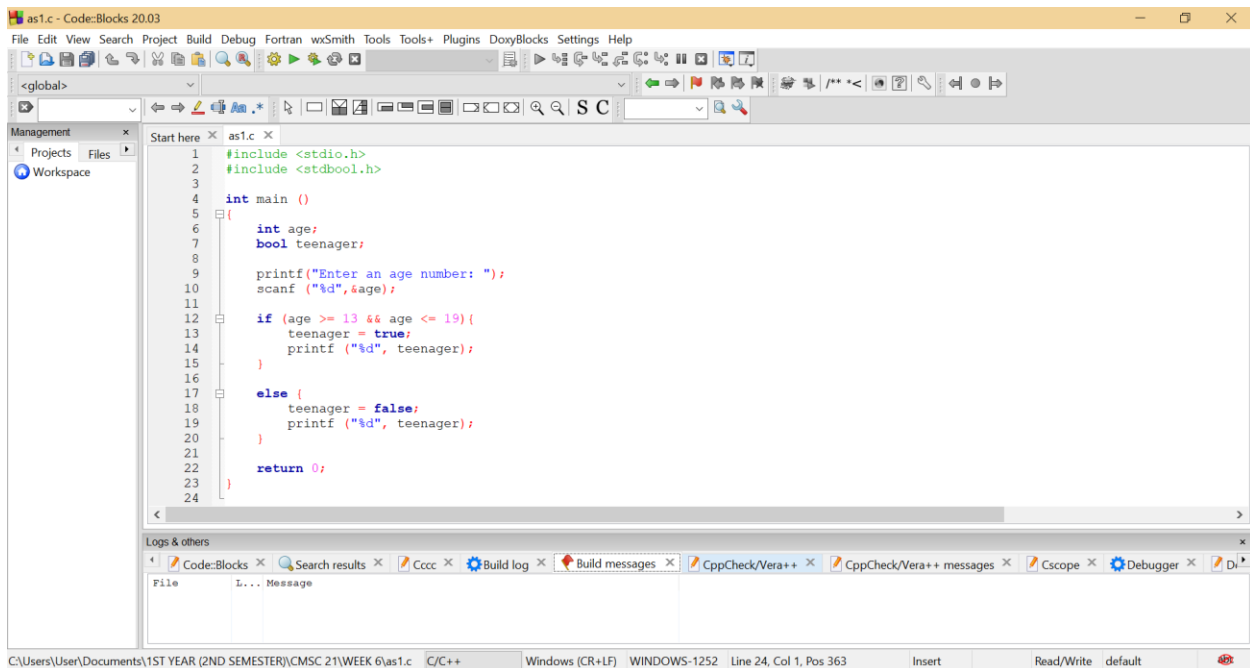
NAME: Karielle Faith T. Cirunay

Selection Statements Lecture 3 Assignments

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.)

```
if (age >= 13)
    if (age <= 19)
        teenager = true;
    else
        teenager = false;
else if (age < 13)
    teenager = false;
```

CODE:



The screenshot shows the Code::Blocks IDE with a C program named 'as1.c'. The program includes `<stdio.h>` and `<stdbool.h>`. In the `main` function, it declares `int age;` and `bool teenager;`. It prompts the user to enter an age number and reads it using `scanf`. The program then uses a single `if` statement to assign the value of `teenager` based on the age: `if (age >= 13 && age <= 19) { teenager = true; printf ("%d", teenager); }` followed by an `else` block: `else { teenager = false; printf ("%d", teenager); }`. Finally, it returns 0.

```
1 #include <stdio.h>
2 #include <stdbool.h>
3
4 int main ()
5 {
6     int age;
7     bool teenager;
8
9     printf("Enter an age number: ");
10    scanf ("%d", &age);
11
12    if (age >= 13 && age <= 19) {
13        teenager = true;
14        printf ("%d", teenager);
15    }
16
17    else {
18        teenager = false;
19        printf ("%d", teenager);
20    }
21
22    return 0;
23 }
24
```

OUTPUT:

```
"C:\Users\User\Documents\1ST YEAR (2ND SEMESTER)\CMSC 21\WEEK 6\as1.exe"
Enter an age number: 18
Process returned 0 (0x0)   execution time : 20.075 s
Press any key to continue.
```

2. Write a C program that does the following:

Enter a two-digit number: 25

Number entered in words: twenty-five

Hint:

- Break the number into two digits.
- Note: 11 and 19 require special treatment.

CODE

```
as2.c - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global>
Management
  Projects
  Files
  Workspace
Start here
1  #include <stdio.h>
2  int main(void)
3  {
4      int digit1, digit2;
5      printf("Enter a two-digit number: ");
6      scanf("%d%d", &digit1, &digit2);
7      printf("Number entered in words: ");
8
9      switch (digit1)
10     {
11     case 1:
12
13         switch (digit2)
14         {
15         case 0:
16             printf("ten");
17             return 0;
18         case 1:
19             printf("eleven");
20             return 0;
21         case 2:
22             printf("twelve");
23             return 0;
24         case 3:
25
26         }
27     }
28 }
```

as2.c - Code::Blocks 20.03

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

<global>

Management

Projects Files

Workspace

```
27
28     case 4:
29         printf("fourteen");
30         return 0;
31     case 5:
32         printf("fifteen");
33         return 0;
34     case 6:
35         printf("sixteen");
36         return 0;
37     case 7:
38         printf("seventeen");
39         return 0;
40     case 8:
41         printf("eighteen");
42         return 0;
43     case 9:
44         printf("nineteen");
45         return 0;
46     }
47     case 2:
48         printf("twenty");
49         break;
50     case 3:
51         printf("thirty");
52         break;
53     case 4:
54         printf("forty");
55         break;
56     case 5:
57         printf("fifty");
58         break;
59     case 6:
```

C:\Users\User\Documents\1ST YEAR (2ND SEMESTER)\CMSC 21\WEEK 6\as2.c C/C++ Windows (CR+LF) WINDOWS-1252 Line 1, Col 1, Pos 0 Insert Read/Write default

as2.c - Code::Blocks 20.03

File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

<global>

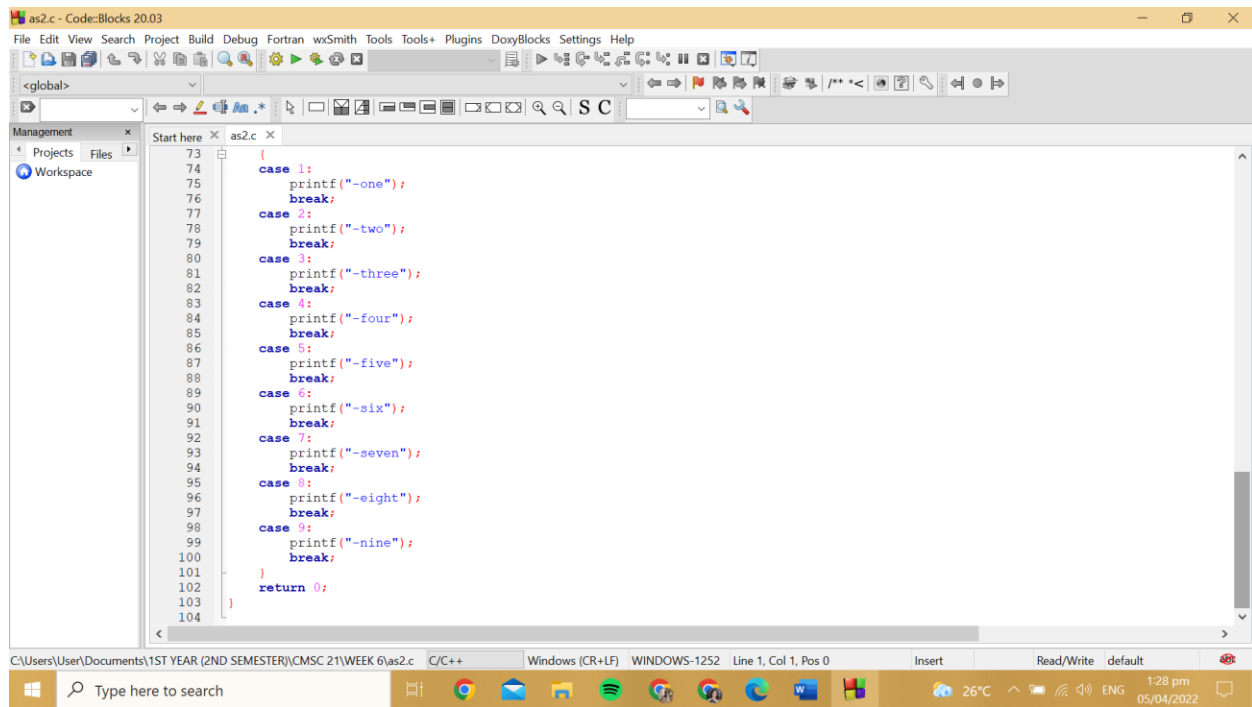
Management

Projects Files

Workspace

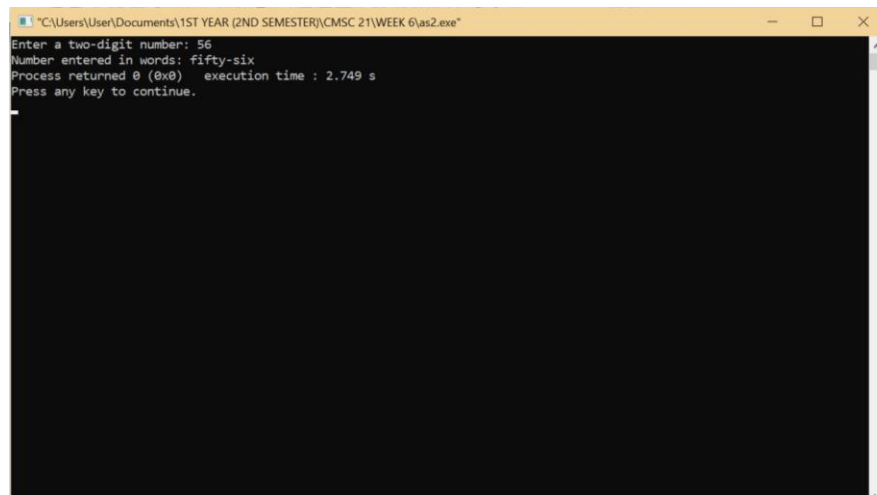
```
58     case 6:
59         printf("sixty");
60         break;
61     case 7:
62         printf("seventy");
63         break;
64     case 8:
65         printf("eighty");
66         break;
67     case 9:
68         printf("ninety");
69         break;
70     }
71
72     switch (digit2)
73     {
74     case 1:
75         printf("-one");
76         break;
77     case 2:
78         printf("-two");
79         break;
80     case 3:
81         printf("-three");
82         break;
83     case 4:
84         printf("-four");
85         break;
86     case 5:
87         printf("-five");
88         break;
89     case 6:
```

C:\Users\User\Documents\1ST YEAR (2ND SEMESTER)\CMSC 21\WEEK 6\as2.c C/C++ Windows (CR+LF) WINDOWS-1252 Line 1, Col 1, Pos 0 Insert Read/Write default



```
73 {
74     case 1:
75         printf("-one");
76         break;
77     case 2:
78         printf("-two");
79         break;
80     case 3:
81         printf("-three");
82         break;
83     case 4:
84         printf("-four");
85         break;
86     case 5:
87         printf("-five");
88         break;
89     case 6:
90         printf("-six");
91         break;
92     case 7:
93         printf("-seven");
94         break;
95     case 8:
96         printf("-eight");
97         break;
98     case 9:
99         printf("-nine");
100        break;
101    }
102    return 0;
103 }
104 }
```

OUTPUT



```
"C:\Users\User\Documents\1ST YEAR (2ND SEMESTER)\CMSC 21\WEEK 6\as2.exe"
Enter a two-digit number: 56
Number entered in words: fifty-six
Process returned 0 (0x0)   execution time : 2.749 s
Press any key to continue.
```

GITHUB LINK: <https://github.com/Kariellecirunay/CMSC21>