Name: Nathaniel Enrique Catalan Eulin

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;
```

Source code file: `as1.c`

```c
/*Item 1, Lecture 3 Assignments*/

#include <stdio.h>
#include <stdbool.h>
#include <stdlib.h>

int main(){
    // declare variables
    int age;
    bool teenager;

    printf("Enter age:\n");
    scanf("%d", &age);

    // test whether age is of a teen or not
    teenager = ( (age >= 13) && (age <= 19) );

    // if variable 'teenager' is true, then execute body of 'if'
    if(teenager){
        printf("Your'e a teenager.\n");
    }
    // otherwise, execute this
    else{
        printf("Your'e NOT a teenager.\n");
    }

    system("PAUSE");
    return 0;
}
```

Example Output:

```
C:\Users\Admin\Documents\BS COMSCI AKO\CMSC-21\exercises\lecture3\as1.exe
Enter age:
14
Your'e a teenager.
Press any key to continue . . .
```

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1. Write a C program that does the following:

Source code file: as2.c

```c

int main(){
    int first_dig, second_dig;
    printf("Enter a two digit number: ");
    scanf("%1d%1d", &first_dig, &second_dig);

    printf("Numbers entered in words: ");
    if(first_dig == 1){
        switch(second_dig % 10){
            case 0: printf("Ten"); break;
            case 1: printf("Eleven"); break;
            case 2: printf("Twelve"); break;
            case 3: printf("Thirteen"); break;
            case 4: printf("Fourteen"); break;
            case 5: printf("Fifteen"); break;
            case 6: printf("Sixteen"); break;
            case 7: printf("Seventeen"); break;
            case 8: printf("Eighteen"); break;
            case 9: printf("Nineteen"); break;
        }
        printf("\n");
        system("PAUSE");
        return 0;
    }
    switch(first_dig % 10){
        case 1: printf("Ten"); break;
        case 2: printf("Twenty"); break;
        case 3: printf("Thirty"); break;
        case 4: printf("Forty"); break;
        case 5: printf("Fifty"); break;
        case 6: printf("Sixty"); break;
        case 7: printf("Seventy"); break;
        case 8: printf("Eighty"); break;
        case 9: printf("Ninety"); break;
    }
    switch(second_dig % 10){
        case 0: break;
        case 1: printf("-one"); break;
        case 2: printf("-two"); break;
        case 3: printf("-three"); break;
        case 4: printf("-four"); break;
        case 5: printf("-five"); break;
        case 6: printf("-six"); break;
        case 7: printf("-seven"); break;
        case 8: printf("-eight"); break;
        case 9: printf("-nine"); break;
    }
    printf("\n");
    system("PAUSE");
    return 0;
}
```

Example Output:

```
C:\Users\Admin\Documents\BS COMSCI AKO\CMSC-21\exercises\lecture3\as2.exe
Enter a two digit number: 76
Numbers entered in words: Seventy-six
Press any key to continue . . .
```