CMSC 21 – Lecture 3 Assignment

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1.

```c
#include <stdio.h>
int main(void)
{
int age;
printf("Please type in your age. \n> ");
scanf("%d", &age);
    if (age >= 13 && age <= 19){
        printf("\nCongratulations! You are a teenager.\n");
        }
    else{
        printf("\nIt seems that you are not a teenager.\n");
        }
}
```

2.

```c
#include<stdlib.h>
#include<stdio.h>
void main() {
long num, div, n1;
int flag, digit, pos, tot_dig;

printf("Greetings! This program is designed to convert numbers into words.\nEnter a number.\n> ");
scanf("%ld", &num);

if(num == 0) {
printf("Zero\n");
exit(0);
}

if(num > 99999) {
printf("Please enter a number between 0 and 100000.\n");
exit(0);
}

tot_dig = 0;
div = 1;
n1 = num;

while ( n1 > 9 ) {
```

```c
n1 = n1 / 10;
div = div * 10;

tot_dig++;
}


tot_dig++;
pos = tot_dig;

while ( num != 0 ) {
digit = num / div;
num = num % div;
div = div / 10;
switch(pos) {
case 2:
case 5:
if ( digit == 1 )
flag = 1;
else {
flag = 0;
switch(digit) {
case 2: printf("Twenty ");break;
case 3: printf("Thirty ");break;
```

```c
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;
case 1:
case 4:
if (flag == 1) {
flag = 0;
switch(digit) {
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 ");
```

```c
}
} else {
switch(digit) {
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 ");
}
}

if (pos == 4)
printf("Thousand ");
break;

case 3:
if (digit > 0) {
switch(digit) {
case 1 : printf("One ");break;
case 2 : printf("Two ");break;
```

```c
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 ");
}
printf("hundred ");
}
break;
}
pos--;
}
if (pos == 4 && flag == 0)
printf("Thousand");
else if (pos == 4 && flag == 1)
printf("Ten Thousand");

if (pos == 1 && flag == 1)
printf("Ten ");
}
```

GitHub link: https://github.com/front-git/CMSC21/tree/main/Lecture%203/Assignments