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BSCS CMSC 21-1

1.

C: > Users > mjpar > Documents > UP > SEM 2 > CMSC 21-1 > Lecture3 > C as1.c > ...

```c
#include <stdio.h>
#include <stdbool.h>

int main(void) {

    /* Initializing data types for variables.
       age is a test variable.*/
    int age = 13; bool teenager;

    /* Sets range for variable teenager. */
    teenager = (age >= 13 && age <= 19);

    /* Uses a ternary operator to determine if variable age is within the set range of variable teenager.
       expressionOne = TRUE
       expressionTwo = FALSE*/
    printf("%s", teenager ? "You are a teenager." : "You are not a teenager.");
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
PS C:\Users\mjpar\Documents\UP\SEM 2\CMSC 21-1\Lecture3> cd "c:\Users\mjpar\Documents\UP\SEM 2\CMSC 21-1\Lecture3\" ; if ($?) { gcc as1.
c -o as1 } ; if ($?) { .\as1 }
You are a teenager.
PS C:\Users\mjpar\Documents\UP\SEM 2\CMSC 21-1\Lecture3>
```

C: > Users > mjpar > Documents > UP > SEM 2 > CMSC 21-1 > Lecture3 > C as1.c > ...

```c
#include <stdio.h>
#include <stdbool.h>

int main(void) {

    /* Initializing data types for variables.
       age is a test variable.*/
    int age = 5; bool teenager;

    /* Sets range for variable teenager. */
    teenager = (age >= 13 && age <= 19);

    /* Uses a ternary operator to determine if variable age is within the set range of variable teenager.
       expressionOne = TRUE
       expressionTwo = FALSE*/
    printf("%s", teenager ? "You are a teenager." : "You are not a teenager.");
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
PS C:\Users\mjpar\Documents\UP\SEM 2\CMSC 21-1\Lecture3> cd "c:\Users\mjpar\Documents\UP\SEM 2\CMSC 21-1\Lecture3\" ; if ($?) {
c -o as1 } ; if ($?) { .\as1 }
You are not a teenager.
PS C:\Users\mjpar\Documents\UP\SEM 2\CMSC 21-1\Lecture3>
```

2.

C: > Users > mjpar > Documents > UP > SEM 2 > CMSC 21-1 > Lecture3 > C as2.c > ...

```c
#include <stdio.h>

int main(void) {

    /* Initializing data type for varaible. */
    int number;

    while (1) {
        printf("\nEnter a two-digit number: ");
        scanf("%d", &number);

        if (number < 10 || number > 99) { // Input validation that checks if number is < 10 or > 99.
            printf("Input must be a positive two-digit integer. Try again.\n");
        }
        else { // If valid, break.
            break;
        }
    }

    /* Printing output. */
    printf("%d in written form: ", number);

    switch (number / 10) { // Switch-cases for tenths digit.
        case 1:
            switch (number % 10) {
                case 0:
                    printf("ten");
                    break;

                case 1:
                    printf("eleven");
                    break;

                case 2:
                    printf("twelve");
                    break;

                case 3:
                    printf("thirteen");
                    break;

```

```
42                  case 4:
43                      printf("fourteen");
44                      break;
45
46                  case 5:
47                      printf("fifteen");
48                      break;
49
50                  case 6:
51                      printf("sixteen");
52                      break;
53
54                  case 7:
55                      printf("seventeen");
56                      break;
57
58                  case 8:
59                      printf("eighteen");
60                      break;
61
62                  case 9:
63                      printf("nineteen");
64                      break;
65              }
66              return 0;
67
68          case 2:
69              printf("twenty");
70              break;
71
72          case 3:
73              printf("thirty");
74              break;
75
76          case 4:
77              printf("forty");
78              break;
79
80          case 5:
81              printf("fifty");
82              break;
```

```
84          case 6:
85              printf("sixty");
86              break;
87
88          case 7:
89              printf("seventy");
90              break;
91
92          case 8:
93              printf("eighty");
94              break;
95
96          case 9:
97              printf("ninety");
98              break;
99      }
100
101     switch (number % 10) { // Switch-cases for ones digit.
102         case 1:
103             printf("-one");
104             break;
105
106         case 2:
107             printf("-two");
108             break;
109
110         case 3:
111             printf("-three");
112             break;
113
114         case 4:
115             printf("-four");
116             break;
117
118         case 5:
119             printf("-five");
120             break;
121
122         case 6:
123             printf("-six");
124             break;
```

```
125
126             case 7:
127                 printf("-seven");
128                 break;
129
130             case 8:
131                 printf("-eight");
132                 break;
133
134             case 9:
135                 printf("-nine");
136                 break;
137         }
138         return 0;
139     }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
PS C:\Users\mjpar\Documents\UP\SEM 2\CMSC 21-1\Lecture3> cd "c:\Users\mjpar\Documents
c -o as2 } ; if ($?) { .\as2 }

Enter a two-digit number: 69
69 in written form: sixty-nine
PS C:\Users\mjpar\Documents\UP\SEM 2\CMSC 21-1\Lecture3>
```