02321 Hardware/Software Programmering (E10)

Home assignment 7

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Group 2

Problem 11.10

(a)

The line will printout the char value of counter plus the char value of 'A' (65)

(b)

The line will printout the decimal value of counter, a new line and decimal value of counter + startPoint.

(c)

This line prints the hexadecimal value of counter.

Problem 11.12

The first line prints out the char 'a'

The second line prints out the hexadecimal value of 12288 - x3000

The last line will printout $123.10

Problem 12.18

```
1  #include <stdio.h>
2  #define STOP 32 //Last printable ascii char
3  int main() {
4      char counter;
5      char startpoint;
6      printf("=====Countdown program=====\n");
7           printf("Enter a character: ");
8            scanf("%c",&startpoint);
9
10     for(counter = startpoint;counter >= STOP; counter--) {
11       printf("char #%d: %c\n",counter,counter);
12     }
13 }
```

Problem 13.4

(a)

The condition of the if is an assingment which returns the value of the assignment - which is always 0. This gives the resut of false - the else, not matter the value of initial x;

(b)

This one print out "x equal 0" if it is x is 0 and "x does not equal 0" if it is not.

(c)

This one prints "A" if x is 0 and "D" if x is not 1, on other values it will print "B"

(d)

The value of y is assgned to 4 if x is 0 or 1 (due to the missing break statement).

(e)

On other values of x in (d), y is assigned to 5.

Problem 13.8

(a)

If the condition is initially true, the while loop will execute. If it is not, then loopBody will never execute.

(b)

If the condition is initially true, the while loop will execute. If it is not, then loopBody will execute once.

(c)

The for loop executes reinit and evaluates condition on entry, and only enters if loopBody condition is true.

(d)

The loopBody only enters, if condition1, at least once, is true. And then if condition2 is true.

(e)

The loopBody reenters as long as condition2 is true. When condtion1 is false, it still enters loopBody. When both values are false, the loopBody enters once. When condition2 is false, and condition1 is true loopBody reenters as long as condition1 is true.

Problem 13.18

(a)

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The loop exits when y becomes 16, due to 16 & 15 = 0.

(b)

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The loop exits when x becomes 0.

(c)

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The loop runs 10 times, but only prints out a * if x is not a multiple of 2.

(d)

Prints out nothing, as the first while loop condition evaluates to false ($0 > 10$)