Exam 2 Review

Topics

- Logical operators
- If/else if/else
- Increment/decrement operator
- while
- do/while
- for

18.1 Logical Operators

- What are they?

- **`int x, y, z;`**
- Write logical statements for:
  - x is greater than z or y is greater than z
  - y is odd or z is even
  - x plus y is equal to z or z is equal to x minus y

Chained If/Else statements

```
if ( x > y )
{
        // do A
}
else if ( x == 9 )
{
        // do B
}
else if ( y > 1 )
{
        // do C
}
else
{
}
```

While Loop

```
while( expression )
{
    statement1;
    statement2;
    . . .
    statement3;
}
statement4;
```

General Format

```
for (initialize counter; test
 counter; update counter)

{

  statements;

}
```

When to use do while?

```
do
{
  statements;
} while (condition is true);
```

18.2 Practice

- Write as a do/while, while, and for loop.
  - o Print n
  - o increment n by 1 if n is odd
  - o Increment n by 3 if n is even
  - o Stop when n > 100 and n is odd

```
int n;
cin >> n;
```

18.3 Practice

- Write a code snippet that will implement a simple calculator. Prompt the user for a character (+, -, q) and two integers.

```
CALC> + 9 9
       18
CALC> - 42 5
       37
CALC> $ 9 8
       That is an invalid request
CALC> q 0 0
2 calculations performed
```

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18.4 Practice

- Write a snippet of code to draw the following square on the screen, given a height h:

```
****
****
****
****
```

18.5 Practice

- Modify that code to print the following:

```
*
**
***
****
```

18.6 Practice

- Modify that code to print the following:

```
   *
  **
 ***
****
```

18.7 Practice

- Write a program that allows the user to enter the rainfall for each of 30 days (integers), you should then print out the following:
  - Total rainfall
  - Average rainfall per day
  - Largest amount of rainfall on one day

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