
Nested if statements

9/27/06 CS150 Introduction to Computer Science 1 1

12.1 Examples

- Write the C++ expressions for each of the following
 - x and y are greater than z
 - x is equal to 1.0 or 3.0
 - x is the range z to y inclusive
 - x is outside the range z to y

9/27/06 CS150 Introduction to Computer Science 1 2

12.2 Program

- Write a program segment that allows the user to input two integer values into variables num1 and num2. Your program is to then exchange the values in the variables num1 and num2 only if num1 is greater than num2

9/27/06 CS150 Introduction to Computer Science 1 3

if/else/if statements (4.4)

- What if there are more than two alternatives?

```
if (expression1)
{
    statement1;
}
else if (expression2)
{
    statement2;
}
else
{
    default statement;
}
```

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4

12.3 Problem

- Write a C++ program segment that allows the user the ability to input an integer from the keyboard. If the integer is positive, increment a variable poscount by 1. If the integer is negative, increment a variable negcount by 1. If neither, increment zerocount by 1

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5

12.4 Problem

- Write a program that displays a letter grade corresponding to an exam score

90 - 100 A

80 - 89 B

70 - 79 C

60 - 69 D

0-59 F

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6

Nested if Statements (4.6)

- The second if is only executed if the first if conditional is false
- Note the indentation of the inner if
- There may be code between the { with the first else and the second if

```
if ( x > y )  
{  
}  
else  
{  
    if ( x == 9 )  
    {  
    }  
    else  
    {  
    }  
}
```

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7

12.5 Example

- Write nested if statements that perform the following test:
 - If amount1 is greater than 10 and amount2 is less than 100, display the greater of the two
- Can you write the solution to the above problem without nested if statements

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8

Using nested ifs...

- Write a snippet of code that will do the following:
 - add y to x if x == y
 - add x to y if y > x
 - add 1 to x if (2 * y) == x

```
int x, y;  
if (
```

9/27/06

CS150 Introduction to Computer Science 1

9
