

# CS150 Intro to CS I

Fall 2015

## Chapter 5 Loops & Files

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- Reading: pp. 262-264 (Section 5.10)
- Good Problems to Work: p. 297 [18]

# Nested Loops

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- What is the output?

```
for (int i = 0; i < 3; i++)
{
    // how many times will this run?
    cout << i << ": ";

    for (int j = 0; j < 2; j++)
    {
        // how many times will this run?
        cout << "*";
    }
    cout << endl;
}
```

# Practice

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- What is the output?

```
for (int i = 1; i < 4; i++)
{
    cout << i << ": ";

    for (int j = 0; j < i; j++)
    {
        cout << "*";
    }
    cout << endl;
}
```

## Practice

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- Write C++ statements that will read in an integer from the user,  $n$ , and produce the following output:

```
1
22
333
4444
...
nnnnnnnnnn
```

## Practice

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- Consider the following program segment:

```
cout << setw(3) << "i" << setw(3) << "j" << endl;
for (int i = 0; i <= 3; i += 2)
{
    for (int j = i; j <= 3; j++)
    {
        cout << setw(3) << i << setw(3) << j << endl;
    }
}
```

1. What is the output?
2. Rewrite the above nested loop as a nested while loop.

## Practice

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- An input file contains data on a day's sales for a number of stores. The first line of the file contains the number of stores. This is followed by the sales amounts for each store. Write a program to display a bar graph of asterisks comparing each store's sales. Each asterisk represents \$100 in sales.
- Sample input and output are on the next slide

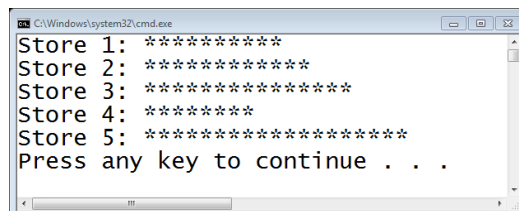
## Practice

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### Input File

|   |      |
|---|------|
| 1 | 5    |
| 2 | 1000 |
| 3 | 1200 |
| 4 | 1500 |
| 5 | 800  |
| 6 | 1900 |

### Output



```
C:\Windows\system32\cmd.exe
Store 1: *****
Store 2: *****
Store 3: *****
Store 4: *****
Store 5: *****
Press any key to continue . . .
```