

# CS150 Intro to CS I

Fall 2016

# Chapter 5

## Loops & Files

---

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

# Nested Loops

---

- What is the output?

```
for (int i = 1; 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

---

- What is the output?

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

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

# Practice

---

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

**1**

**22**

**333**

**4444**

**...**

**nnnnnnnnnn**

# Practice

---

- 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

---

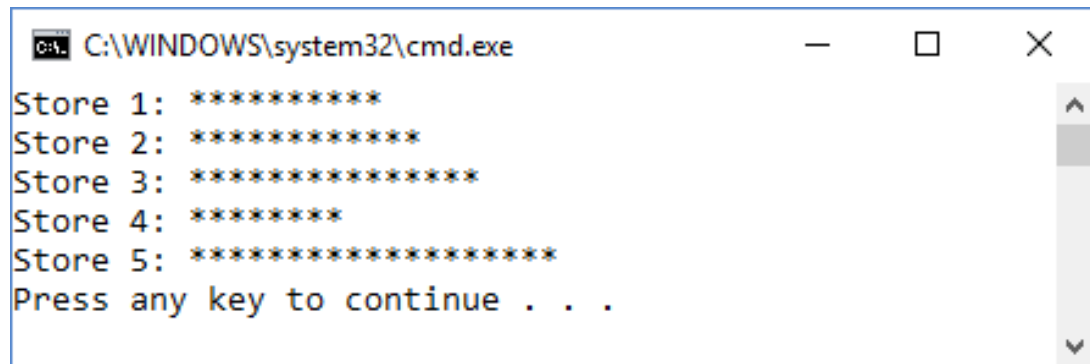
- An input file contains data on a day's sales for a number of stores. The first line of the file contains the number of stores. This is followed by the sales amounts for each store. Write a program to display a bar graph of asterisks comparing each store's sales. Each asterisk represents \$100 in sales.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

# Practice

## 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 . . .
```