

File Reading



One: Open
the file

1) Open the file

```
#include <fstream>
```

```
ifstream infile("filename.txt");
```

...OR...

```
ifstream infile;  
infile.open("filename.txt");
```

Replace this string
with the real name
of your file (don't
forget the quotes!)

an ifstream is an "input file stream."

1a) Check for errors

```
if (!infile.is_open())  
{  
    cout << "Could not open file." << endl;  
  
    // exit program?    return from function?  
    // ask for file again?  
  
    // use exit(1) from #include <cstdlib>  
    // to quit program immediately.  
}
```

If the file
could not be
opened...



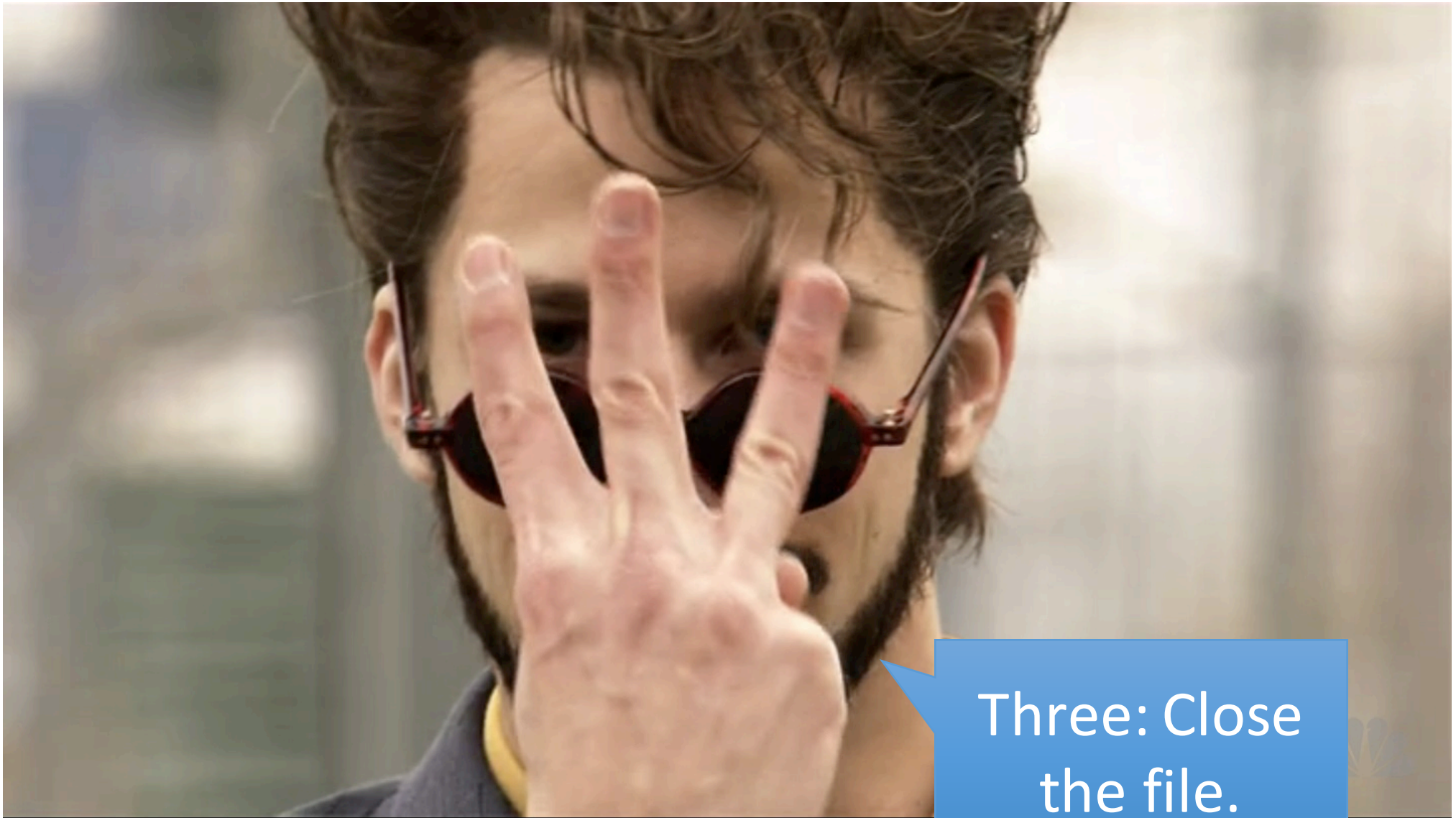
Two: loop
over the file.

Step 2: Loop over the file

```
while (!infile.eof())
```

While we haven't
reached the End
Of the File...

```
{  
    // use infile >> variable or  
    // getline(infile, var) to read  
    // from the file  
  
    // Example:  
    int number;  
    infile >> number;  
}
```



Three: Close
the file.

Step 3: Close the file

```
infile.close();
```


- Make a file with some integers in it, and write a program to read all the integers and find & print the smallest positive integer (ignore negatives).
- Copy the presidents.txt file. Write a program to read all the names inside and find the president with the longest name.
- Create a program that reads in pairs of ints from a text file (interpreted as points in the x-y plane) and prints the cumulative distance between the points. (As in if point 1 were connected to point 2, then 2 to 3, and 3 to 4...., what would the total distance between them be?)