

FILE IO

Problem Solving with Computers-I

<https://ucsb-cs16-wi17.github.io/>

C++

```
#include <iostream>
using namespace std;

int main(){
    cout<<"Hola Facebook\n";
    return 0;
}
```



How far along are you with lab01?

- A. Haven't started yet
- B. Working on myProg01 (simple loop exercise)
- C. Completed myProg01, working on myProg02
- D. Almost done
- E. Done!

Review: Passing parameters to a C++ program

```
int main( int argc, char *argv[] ) { ... }
```

What are the values of argc and the elements of argv in each of the following cases?

	argc	argv
<code>\$/fizzbuzz</code>	1	<code>argv[0] = "/fizzbuzz"</code>
<code>\$/fizzbuzz 1</code>	2	<code>argv[0] = "/"</code> <code>argv[1] = "1"</code>
<code>\$/fizzbuzz abc</code>	2	<code>argv[0] = "/"</code> <code>argv[1] = "abc"</code>
<code>\$/fizzbuzz 1 2 3</code>	4	<code>argv[0] = "/"</code> <code>argv[1] = "1"</code> <code>argv[2] = "2"</code> <code>argv[3] = "3"</code>

Let's continue with the fizzbuzz coding example

New concepts: Standard error, files, strings

Passing arguments to main: ./fizzbuzz number

```
int main(int argc, char* argv[] ) {  
    if (argc != 2)  
        cerr<<"Usage: "<<argv[0]<<" <number>\n";  
  
    //stoi is only available in C++11  
    fizzbuzz(stoi(argv[1]));  
    return 0;  
}
```

Which of the following will result in a run-time error, causing the program to crash?

A. `./fizzbuzz 1000`

B. `./fizzbuzz 1 2 3`

C. `./fizzbuzz abc`

D. B and C

E. A, B and C

This will not cause a run-time error because we never used `exit()` in the if statement

This is because `abc` is an invalid input to `stoi`

FILE IO:

```
ifstream ifs;  
ifs.open("numbers.txt");  
ifs.fail();  
getline(ifs, line);  
ifs.eof();
```

Which of the following statements is TRUE?

- A. The usage of the 'open' function shown above is incorrect
- B. A single call to `getline(ifs, line)` reads all lines from file until the end of file is reached
- C. If the file "numbers.txt" does not exist, the following statement will result in a run-time error: `ifs.open("numbers.txt");`
- ☒ D. Each time `getline(ifs, line)` is called, the program reads the next line in the file
- E. All the above statements are true

FILE IO: Which of the following is correct?

A.

```
while (1) {  
    getline(ifs, line);  
    if (ifs.eof())  
        break;  
    fizzbuzz(stoi(line));  
}
```

C. Both A and B are correct

breaks out of the while loop

B.

```
while (!ifs.eof()) {  
    getline(ifs, line);  
    fizzbuzz(stoi(line));  
}
```

D. Neither is correct

shouldn't call eof() if it not preceded by a read from file eg. with getline()

Next time

- Number and data representation