

CONTROL FLOW (CONTD.)

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;
}
```



Announcements

- Lab 01 should be done individually
- Please read the lab thoroughly before Wednesday section!
- Homeworks should be submitted in the provided template

Clickers out – frequency AB

Review: for loops

```
for( int x = 0; x < 50; x++ ) {  
    callFunctionOne();  
    callFunctionTwoTwo();  
}
```

Loops: Which of the following code is not equivalent to the other two?

Assume 'n' is an integer that has already been declared

A.

```
for( int x = 0; x < n; x++ ) {  
    statementOne();  
    statementTwo();  
}
```

B.

```
int x = 0;  
while(x < n) {  
    statementOne();  
    statementTwo();  
    x++;  
}
```

C.

```
int x = 0;  
do{  
    statementOne();  
    statementTwo();  
    x++;  
} while(x < n);
```

D. They are ALL equivalent

Infinite loops

```
for(int y=0;y<10;y--)  
    cout<<"Print forever\n";
```

```
int y=0;  
for(;;y++)  
    cout<<"Print forever\n";
```

```
int y=0;  
for(;y<10;);  
    y++;
```

```
int y=0;  
while(y<10)  
    cout<<"Print forever\n";
```

```
int y=0;  
while(y=2)  
    y++;
```

Fizzbuzz

Fizzbuzz(1)	1
Fizzbuzz(2)	2
Fizzbuzz(3)	fizz
Fizzbuzz(4)	4
Fizzbuzz(5)	buzz
Fizzbuzz(6)	fizz
Fizzbuzz(7)	7
Fizzbuzz(8)	8
Fizzbuzz(9)	fizz
Fizzbuzz(10)	buzz
Fizzbuzz(15)	fizzbuzz

Let's code Fizzbuzz!

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 cause a run-time error, causing it to crash?

- A. **`$. /fizzbuzz 1000`**
- B. **`$. /fizzbuzz 1 2 3`**
- C. **`$. /fizzbuzz abc`**
- D. **B and C**
- E. **A, B and C**

FILE IO:

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

Which of the following is TRUE?

- A. The usage of the 'open' function shown above is incorrect
- B. `getline(ifs, line)` repeatedly reads a line from file until all lines have been read
- 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));  
}
```

B.

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

C. Both A and B are correct

D. Neither is correct

Next time

- Number and data representation