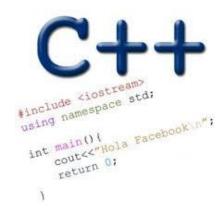# CONTROL FLOW (CONTD.) FILE IO

Problem Solving with Computers-I

`https://ucsb-cs16-wi17.github.io/`

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 of 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. All three are 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