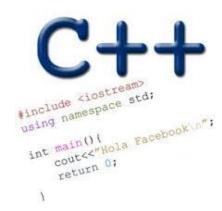# CONTROL FLOW (CONTD.)

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: for loops

loop → *variable* *initialization (done once)*

→ *update*

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

body of the for-loop

Boolean expression :
if true => execute body of the loop
if false => break out of the loop

Identify the code that is not equivalent to the other two?

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

Different for $n \leq 0$
otherwise same as A & B

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

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

← update

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

D. They are ALL equivalent

Infinite loops

1.
```
for(int y=0;y<10;y--)
    cout<<"Print forever\n";
```

2.
```
int y=0;
for(;;y++)
    cout<<"Print forever\n";
```

3.
```
int y=0;
for(;y<10;);
    y++;
```

4.
```
int y=0;
while(y<10)
    cout<<"Print forever\n";
```

y was not updated in the body of the while

5.
```
int y=0;
while(y=2)
    y++;
```

y == 2

y ≠ 2

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!

Next time

- File IO
- Number and data representation