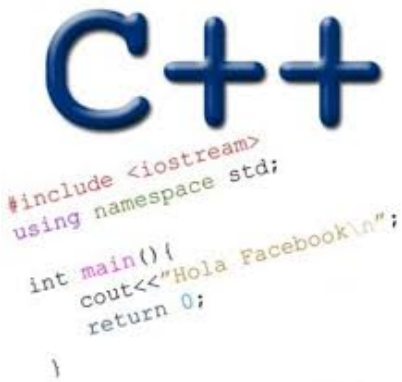
FLOATS, MORE LOOPS

Problem Solving with Computers-I



Checking in

- Have you met your mentor? A. Yes B. No
- Pair programming – how is that going?

Clickers out – frequency AB

How is the pace of the class?

A. Too fast
B. Fast, but I am able to catch up once I do the labs
C. Slow
D. Too slow
E. Its fine for me

Which of the following mediums work best for you

A. Live coding concrete examples and games
B. Chalk board illustrations
C. Slides
D. A&B
E. A&C

Anonymous feedback

You may provide anonymous feedback to us by completing this form:

https://goo.gl/forms/pFbdMS1GWMd1og433

C++ types in expressions

```
int i =10;
double sum = 1/i;
```

What is printed by the above code?

A. 0
B. 0.1
C. 1
D. None of the above

Setting up output when printing doubles

```
See pages 91 and 190 of textbook
int i =10;
double j = 1/static_cast<double>(i);
cout.setf(ios::fixed);     // Using a fixed point representation
cout.setf(ios::showpoint); //Show the decimal point
cout.precision(3);
cout<<j;
```

What is printed by the above code?

A. 0
B. 0.1
C. 0.10
D. 0.100
E. None of the above

Write a program that calculates the series: 1+ 1/2+ 1/3+ ….1/n, where `n` is specified by the user

Sample run of the program:

```
./sumSeries 2
Sum of the first 2 terms is: 1.500
```

Nested for loops – ASCII art!

Write a program that draws a square of a given width

```
./drawSquare
Enter the width of the square: 5

* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
```

Draw a triangle

Which line of the drawSquare code (show on the right) would you modify to draw a right angled triangle

```
 ./drawTriangle
Enter the width of the triangle: 5

*
* *
* * *
* * * *
* * * * *
```

```
5 void drawTriangle(n){
6     for(int j = 0;  j < n;  j++){ //A
7         for(int i=0; i < n; i++){ //B
8             cout<<"* ";   //C
9         }
10        cout<<endl;    //D
11    }
12    cout<<endl;     //E
13
14 }
```

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++;
```

Next time

- C++ functions and function call mechanics
- Passing parameters to programs