Discussion 10.11.19

Compilation Error

#include <iostream>

using namespace std;

int main () {

cout << “How old are you? ”;

int age;

cin >> age;

if (age >= 18) {

cout << “In the US, you can vote!” << endl;

if (age > 62)

cout << “In the US, you can receive Social Security!\n”;

} else {

cout << “In the US, you can’t do anything!” << endl;

}

}

* # and <> for iostream
* namespace
* cout <<
* Python – no need for parenthesis
* Compilation vs Logic Errors (be careful) + readability (style)
* Boolean (bool) – store true or false
  + bool r = true;
  + if(r)
    - {statement}
* true -> any nonzero
* false -> zero

int x = 5;

if (x) {  
 [statement]

} -> nonzero value -> true

CARE:

if (x = 0) -> assign 0 to x -> false

Note: << for output and >> for input

Precision

* Control the number of decimals

double fuo = 2/3;

**cout.setf(ios::fixed);**

**cout.precision(3)**

cout << fuo; -> output: 0.666

Undefined Behavior

* Examples
  + Dividing by 0 -> inf
  + Using uninitialized variables
    - int main () {
      * int age:
      * int age2 = age + 1;
    - }
      * + No preset int
  + Overflow
    - int range -> -2^31 to 2^31

Scope

double var = 5;

int main() {

int foo = 5;

if (foo > 4) {

foo ++;

int bar = 5;

}

if (bar > 4) {

bar ++;

}

cout << var;

}

Local scope has precedent over larger scope.

Larger scope – memory allocation -> inefficient