CSI 33 Lecture 2

We will review:

- Functions in Python and C++

Functions in Python

- can return as many values as needed
- their parameters/arguments are passed by value only,

  however mutable objects can be modified inside a function
- parameters with default values must be at the end of the list of parameters

```
def it(myInt1, myFloat1, myList, myString)
```

Functions in C++

- can return only one value
- have declaration and definition
- their parameters/arguments can be passed by value or by reference; in addition we can declare parameters as `const`

  not to allow modification inside a function
- arrays are automatically passed by reference (no & is used)
- parameters with default values must be at the end of the list of parameters

Functions in C++

```
void f(const int a, const int &b, int &c, int d=3)
{
  a = 2; // will generate a compiler error
  b = 5; // will generate a compiler error
  c = 12; // the change affects actual parameter
  d = 13; // will not affect the actual parameter
}
```

Statistics program (Section 1.2.3, Chapter 1)

- Let’s implement a program that takes a set of exam scores as input and prints out a report that summarizes student performance, in Python and in C++

  see the handout