Const Correctness

- Const after function states that this function does not change the object.
- Mark all functions that should not change the state of the object as const.
- Ensure that we can pass objects by const reference and still call their functions.

Typical const error

```
1  #include <iostream>
2  #include <string>
3  using namespace std;
4  class Student {
5   public:
6     Student(string name) : name_{name} {}
7     // This function *might* change the object
8     const string& name() { return name_;
9   private:
10    string name_;
11 };
12 void Print(const Student& student) {
13    cout << "Student: " << student.name() << endl;
14 }
```

```
1  error: passing "const Student" as "this" argument
       discards qualifiers [-fpermissive]
2      cout << "Student: " << student.name() << endl;
3                                              ^
```

CODING HORROR

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