**Stat 36-650 Code Design Checklist**

The checklists below are intended to give you some guidance in designing effective, maintainable, and reusable software. Review these items throughout your development process.

√ My code is DRY (Don’t Repeat Yourself) - each piece of embodied in the code has one unambiguous and authoritative representation.

 I have attempted to approximate Orthogonality by minimizing coupling between different components of my system.

√ My classes and functions encapsulate the knowledge they need - and only the knowledge they need - to fulfill their purpose.

√ I have been as explicit as possible about the contract that my functions and classes satisfy.

√ I have avoided hidden side effects in my functions.

√ My functions and classes are each designed to serve one purpose well.

√ My code appropriately handles errors and other exceptional circumstances.

√ My system’s interface presents a clean and consistent abstraction to the outside world.

√I have sought to maintain generalizability and reuse.

√ Conditionals, loops, and other changes in the ow of control are made as clear and salient as possible.

√ I have returned early from a function when it is clearer.

√ Variables are defined as closely as possible to where they are used.

√ Variables are made visible for as few lines of code as possible.

 I have minimized nesting level of complex constructs.

√ I have broken down complex expressions and statements into more digestible pieces.

I have preferred immutable objects.



√Each of my classes has a central purpose and is well named to describe that purpose.

√ The interface of each class presents a consistent abstraction.

 My classes hide their implementation details as much as possible.

 I have avoided exposing classes’ member data.

√ My classes avoid making assumptions about its users, including its derived classes.

 I use inheritance to capture “is a" relationships and containment to capture "has a" relationships.