Cis 111B

Dr. Kendall E. Martin

Rubric for Final Project Evaluation

Please read the below rubric from right to left ! That is all of the requirements for a C project, are requirements for a B project and so forth.

Component	A quality	B quality	C quality
Use of Java API	Also includes other classes from Java API	Also includes Collections like ArrayList, LinkedLIst, etc	Minimal use of Java API beyond basic classes covered in cis 111
Use of external API framework	Must be included (unless you have specific instructor signoff)	Must be included (unless you have specific instructor signoff)	Must be included (unless you have specific instructor signoff)
GUI elements	Not required	Not required	Not required
Inheritance	Well documented (UML) and designed inheritance structure before coding begins Codes inherited classes that optimize reuse	Student writes classes that inherit from other classes	No explicit use of inheritance by student Project does highlight use of inheritance in pre-written code
Mobile app support	Not required – often included and coded/designed by hand	Not required – sometimes included and created with tools like App Inventor	Not required

Polymorphism	Methods are designed which use polymorphism for enhanced generality	Polymorphic references are used when appropriate in student code	Student recognizes use of polymorphism in code they are adapting
Encapsulation	Classes are structured to allow only protected access. Exception handling and data verification used to guarantee proper behavior in methods.	Code designed and written with clearly articulated attention to security and encapsulation	Little design attention given to proper encapsulation of data and methods
Documentation	Also includes UML diagram of related classes and brief (1 page) discussion of design decisions	Also includes Javadoc pages	Comments in code are thorough and clear
Video presentation	Also includes discussion of future features and design changes that would enhance the project	Also gives tour of code with highlights on design decisions	Outlines User experience of final product

This rubric leaves room for great customization to your own areas of interest. Currently projects in progress include:

- **Using a Java wrapper API for Google Translate, one for bit.ly and one for Twitter4J to write an application that takes an input text field , translates it to a randomly selected language and posts it to Twitter.**
- **Using Flash Actionscript to code specific movie clip behaviors**
- **Working with an API named Slick that wraps the lightweight java gaming platform API to create a 2d platformer game**
- **Using the Java API from Wolfram Research to create a GUI interfaced project that can perform calculus computations**

All of these are strong candidates for A grade projects.