Purpose: The purpose of our project is to test each student’s ability to put together a functional program with a real-world application. The program should serve a practical need. The program should be able to deal with any user input without giving an error message or terminating the program without giving the user clear indication on how the program is functioning.

Grade: The Project grade is based upon the overall functioning of the code as well as a presentation each student will give about their project. Visual aspects of the program such as “pop up boxes” and GUI’s are nice touches but the most important factor in grading is the functioning of the code. Team Work: Students can work alone or in groups of 2 members. Group projects will be held to a higher standard because there are 2 minds collaborating to solve the problem.

Write Up / Source Code: Each Project must have a 1 paragraph write up explaining the project. Each project must also include internal documentation (explaining the functioning of the source code using JavaDocs). Team Work: Group projects must include a section on what each individual member contributed to the project.

The Presentation: Each student/group will give a brief 10 minute presentation about their project, detailing the purpose/goal of the program. Also explaining the coding strategy used to complete the programming task. For your presentation you will show your programming code as well as give a brief demonstration of the program. 10 minutes at the most.

Tools: You are free to use any tolls in the greater java toll box. Warning: Using methods and resources not covered to this point in class may take you down a path that is difficult to debug as well as complete. I recommend using the techniques practiced to this point in class as well as your text book.

Due: Projects are due and we will begin student presentations on **May 17th** and continue until **May 19th** the final day of class before finals. **NO PROJECTS WILL BE ACCEPTED AFTER May17th.**

There are sample projects explained below, please tell me your project plan on April 14th.

POINTS: **90 for Functioning of Source Code and Program**

**15 Write up**

**15 for Presentation**

SAMPLE PROJECTS

Currency Conversion: Create a program that can calculate the currency conversion rates for foreign currencies into dollars (6 Currencies for Example). Prompt the user to enter the currency she wants to convert and the amount of money she needs converted. This project must be accompanied by a creative GUI design.

Education: Create a program that allows the user to input educational goals from HS diploma, AA Degree, BA or BS degree, MA, or Doctorate. Allow the user start anywhere on their educational path from K through completion of their educational goal, and be told the amount of years remaining in school.

Compute Tax: In previous assignments we created a program that calculated the income tax for a single filer. For the project you can expand the program. Prompt the user to enter filing status as single (Possible dependants), married filing together (which would have for example a tax credit of 5,000$ given to the couple once income tax was calculated), married (with dependants, giving 2,500 tax credit per kid + the marriage tax credit.). The program does not have to expand to the entire tax code, but make sure to have different take brackets based upon income level. The program should also eliminate tax credits for individuals that make above a certain amount of $. Explain clearly in program write-up.