Design Document and Test Plan

Name of team members who collaborated on the design and test plan:

1. Name (*first last*): \_\_Reeves Farrell\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Name (*first last*): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Name (*first last*): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of programming challenge for which you submit this document: \_\_Retirement Calculator\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Pseudocode

*(See Ch. 1.6, p. 20 in our textbook for an example of how to write detailed pseudocode)*

* #include iostream and iomanip
* Use namespace std
* Denote variables for retirement savings (double), principal value (double), interest rate (double), and years (int)
* Create main in one file and a function called compoundCalc in another
* Create a header file for compoundCalc
* Create a struct in the .h file to make variables
* coumpoundCalc returns the calculation RS = P x (1 + r)^t
* output is “Your retirement savings will be $...”

# Test Plan

*(See Ch. 5.13, p. 306 in our textbook for an example of how to write a test plan)*

|  |  |  |  |
| --- | --- | --- | --- |
| **Test #** | **Purpose** | **Input** | **Expected Output** |
| 1 | To see if the proper savings comes out | 1000  .025  20 | Your retirement savings will be $1638.62 |
| 2 | To see if the proper savings comes out | 1000  .025  40 | Your retirement savings will be $2685.06 |
| 3 | To see if the proper savings comes out | 1000  .025  30 | Your retirement savings will be $2097.57 |
| 4 | To see if the proper savings comes out | 1000  .025  50 | Your retirement savings will be $3437.11 |
| 5 | To see if the proper savings comes out | 1000  .025  60 | Your retirement savings will be $4399.79 |
| … | *(Feel free to add more test cases)* |  |  |