Design Document and Test Plan

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Name of programming challenge for which you submit this document: Retirement Calculator

# Pseudocode

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

1. Define variables and function prototype in header file

2. Create function to calculate compound interest in compoundCalc.cpp

3. In main function, prompt user to enter present value, interest rate, and years to be left in account

4. Calculate interest using function compoundCalc() and return value

5. Output retirement savings in dollar value

# Test Plan

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Test #** | **Purpose** | **Input** | **Expected Output** |
| 1 | Zero for present value | 0, 0.025, 50 | 0 |
| 2 | Zero for interest rate | 1000, 0, 50 | 1000 |
| 3 | Zero for years in account | 1000, 0.025, 0 | 1000 |
| 4 | Zero for all three | 0, 0, 0 | 0 |
| 5 | Negative for years in account | 1000, 0.025, -50 | err |
| … | *(Feel free to add more test cases)* |  |  |