Final Project Validation Testing

# Test 1

*Test to ensure “Next” button:*

1. *Does nothing when no CD option is selected*
2. *Activates when a CD option is selected.*

*A screenshot of a computer

Description automatically generated*

Here, clicking the next button does not proceed to the next window. This is because a CD term must be selected in order to calculate the end earning. Since the drop-down only admits the default values and the pre-selected dictionary entries, this is the only invalid input.

A screenshot of a computer

Description automatically generated

A padlock on a stack of money

Description automatically generated

As desired, when the next button is pressed after each of the CD terms is selected (only one is pictured for brevity, but all three were tried), the first window is withdrawn (i.e. hidden but still running in the background so no data is lost) and the other window is displayed.

# Test 2

*Test to ensure:*

1. *After entering text into “Principal to be invested” input box, “Back” button returns to first window.*
2. *Data entered on the first window is still there (not destroyed.)*
3. *Clicking “Next” again returns to the second winder where the data entered in the input box is also still there.*
4. *Clicking “Exit” closes both windows and terminates the code with exit 0 (no errors).*

A screenshot of a computer

Description automatically generated

First, the 8 month term is selected as an example.

*A padlock on a stack of money

Description automatically generated*

Data is entered in the second window in order to ensure that both the first window’s and second window’s data is saved when navigating between them.

A screenshot of a computer

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After clicking “Back,” the 8-month term remains selected.

A padlock on a stack of money

Description automatically generated

After clicking “Next” again, the 100 value remains. All data is appropriately saved when navigating between windows.

A padlock on a stack of money

Description automatically generated



After pressing “Exit,” the program gracefully ends without error.

# Test 3

*Test to ensure data entered into the “Principal to be invested” input box successfully calculates for:*

1. *A whole number*
2. *A number with a decimal point*
3. *A number in exponential format*

*And to ensure the default display returns for the invalid inputs:*

1. *Blank entry*
2. *Text entry*
3. *Mixed text/numbers*

The intended input validation is to run the CD calculation for any text put in the “Principal to be invested” entry that is convertible into a float. Text not convertible into a float is caught as a “ValueError” exception, in which case the calculation simply returns to its default value.

A screenshot of a computer

Description automatically generated

The 15-month term is selected as an example.

A padlock on a stack of money

Description automatically generated

A screenshot of a calculator

Description automatically generated

The whole number $5,000 returns an end-of-term value of $5,330.44. This is validated against Purdue Federal Credit Union’s (PFCU’s) calculator, which returns the same number.[[1]](#footnote-1) Validating the formula was the most difficult part of the logic of this program, since the interest is calculated at a monthly rate but applied daily. However, after some trial and error and verifying the formula online, the results of this final project match PFCU’s calculations.

A padlock on a stack of money

Description automatically generated

Adding the decimal point to make it $5,000.50 returns and end-of-term value of $5330.97. PFCU’s calculator does not allow decimals, and therefore does not provide validation.

A padlock on a stack of money

Description automatically generated

A screenshot of a calculator

Description automatically generated

Inputting 5.5e3 ($5,500) returns a value of $5,863.48, which matches PFCU.

A padlock on a stack of money

Description automatically generated

As expected, a blank input returns the default value because the ValueError raised when trying to convert it to a float is caught and handled.

A padlock on a stack of money

Description automatically generated

As expected, a combination of text and numbers returns the default value because the ValueError raised when trying to convert it to a float is caught and handled.

1. <https://www.purduefed.com/Resources/Education/Calculators/Savings-Calculators/Certificate-of-Deposit-Calculator> [↑](#footnote-ref-1)