

## Screen Capture #1

```
def calculate_future_value(monthly_investment, yearly_interest, years):
    # convert yearly values to monthly values
    monthly_interest_rate = yearly_interest / 12 / 100
    months = years * 12

    # calculate future value
    future_value = 0.0
    for i in range(1, months):
        future_value += monthly_investment
        monthly_interest = future_value * monthly_interest_rate
        future_value += monthly_interest

    return future_value
```

## Screen Capture #2

```
def calculate_future_value(monthly_investment, yearly_interest, years):
    # convert yearly values to monthly values
    monthly_interest_rate = yearly_interest / 11 / 100
    months = years * 12

    # calculate future value
    future_value = 0.0
    for i in range(0, months):
        future_value += monthly_investment
        monthly_interest = future_value * monthly_interest_rate
        future_value += monthly_interest

    return future_value
```

### Screen Capture #3

```
def calculate_future_value(monthly_investment, yearly_interest, years):
    print("Entering calculate_future_value")
    # convert yearly values to monthly values
    monthly_interest_rate = yearly_interest / 12 / 100
    months = years * 12

    # calculate future value
    future_value = 0.0
    for i in range(0, months):
        future_value += monthly_investment
        monthly_interest = future_value * monthly_interest_rate
        future_value += monthly_interest
        print("i =", i, "future_value =", future_value)

    return future_value
```

### Screen Capture #4

```
zmeyer@syn0095:~/Documents/projects/CIMP8A$ /usr/bin/env /usr/local/bin/python3
.9 /Users/zmeyer/.vscode/extensions/ms-python.python-2022.0.1814523869/pythonFil
es/lib/python/debugpy/launcher 58653 -- "/Users/zmeyer/Documents/projects/CIMP8A
/Week 4/future_value_2.py"
Welcome to the Future Value Calculator

Future Value = 8004.716457434104
```

### Screen Capture #5

```
11
12 def calculate_future_value(monthly_investment, yearly_interest, years):
13     # convert yearly values to monthly values
14     monthly_interest_rate = yearly_interest / 12 / 100
15     months = years * 12
16
17     # calculate future value
18     future_value = 0.0
19     for i in range(0, months):
20         future_value += monthly_investment
21         monthly_interest = future_value * monthly_interest_rate
22         future_value += monthly_interest
23
24     return future_value
25
26
```

## Screen Capture #6

```
Week 4 > future_value_2.py > calculate_future_value
7 def print_welcome(message):
8     print(message)
9     print()
10
11
12 def calculate_future_value(monthly_investment, yearly_interest, years):
13     # convert yearly values to monthly values
14     monthly_interest_rate = yearly_interest / 12 / 100
15     months = years * 12
16
17     # calculate future value
18     future_value = 0.0
19     for i in range(0, months):
```

## Screen Capture #7

```
Week 4 > future_value_2.py > calculate_future_value
7 def print_welcome(message):
8     print(message)
9     print()
10
11
12 def calculate_future_value(monthly_investment, yearly_interest, years):
13     # convert yearly values to monthly values
14     monthly_interest_rate = yearly_interest / 12 / 100
15     months = years * 12
16
17     # calculate future value
18     future_value = 0.0
19     for i in range(0, months):
20         future_value += monthly_investment
21         monthly_interest = future_value * monthly_interest_rate
22         future_value += monthly_interest
23
24     return future_value
25
26
```

## Extra Credit #1

```
Continue? (y/n): zmeyer@syn0095:~/Documents/projects/CIMP8A$ cd /Users/zmeyer/D
/CIMP8A ; /usr/bin/env /usr/local/bin/python3.9 /Users/zmeyer/.vscode/extensions
/ms-python.python-2022.0.1814523869/pythonFiles/lib/python/debugpy/launcher 5090
3 -- "/Users/zmeyer/Documents/projects/CIMP8A/Week 4/tax.py"
Sales Tax Calculator

Enter total: 99.99
Total after tax: 105.99
zmeyer@syn0095:~/Documents/projects/CIMP8A$
```

## Extra Credit #2

```
/ms-python.python-2022.0.1814523869/pythonFiles/lib/python/debugpy/launcher 4921
7 -- "/Users/zmeyer/Documents/projects/CIMP8A/Week 4/guess_game.py"
Guess the number!

Enter the upper limit for the range of numbers: 100
I'm thinking of a number from 1 to 100

Your guess: 50
Too high.
Your guess: 25
Too low.
Your guess: 37
Too high.
Your guess: 30
Too low.
Your guess: 34
Too high.
Your guess: 32
Too high.
Your guess: 31
You guessed it in 7 tries.

Play again? (y/n): y

Enter the upper limit for the range of numbers: 10
I'm thinking of a number from 1 to 10

Your guess: 5
Too low.
Your guess: 7
You guessed it in 2 tries.

Play again? (y/n): n

Bye!
```