Objectives:

* Using float
* Using the Round function
* **There are 5 challenge exercises, each worth 20%**

Please submit this document for grading when completed… Please work in groups.

1. The float returns a floating-point number from a number to a string. Float allows decimal points to be entered.

Text

Description automatically generated

Sample output

Text

Description automatically generated

1. Getting the remainder operator

Text

Description automatically generated

Sample output

Graphical user interface, text

Description automatically generated with medium confidence

1. Delete the extra / and run the program again, notice that the results give us a fractional output.

Text

Description automatically generated

1. Getting the future value

Graphical user interface, text

Description automatically generated

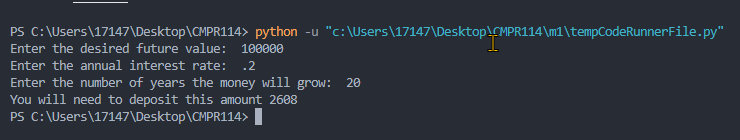
Sample output

Text

Description automatically generated

1. **Challenge** **Exercise** **#1**: modify #4 (the future value program) so it does NOT display any fractional output.

**#1 print screen the code with the output below here.**

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Code:

future\_value = float(input("Enter the desired future value: "))

rate = float(input("Enter the annual interest rate: "))

years = int(input("Enter the number of years the money will grow: "))

present\_value = future\_value / (1.0 + rate) \*\* years

print("You will need to deposit this amount", int(present\_value))

1. Rounding floating point numbers.

Graphical user interface, text, application

Description automatically generated

Sample output

Text

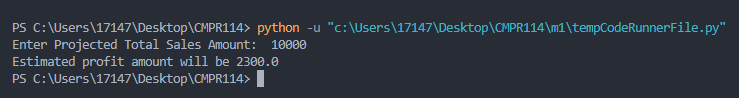
Description automatically generated

1. **Challenge** **Exercise** **#2:** Turn to page 114 and complete the Sales Prediction program

Graphical user interface, text

Description automatically generated

**#2 print screen the code with the output below here.**



Code:

totalsales = float(input("Enter Projected Total Sales Amount: "))

profitpct = .23

profit = totalsales \* profitpct

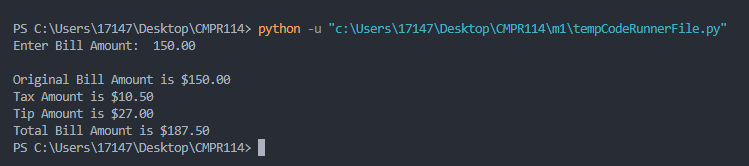
print("Estimated profit amount will be", profit)

1. **Challenge** **Exercise** **#3:** Turn to page 115 and complete the Tip, Tax and Total program

Text

Description automatically generated

**#3 print screen the code with the output below here.**



Code:

billamt = float(input("Enter Bill Amount: "))

taxamt = billamt \* .07

tip = billamt \* .18

totalbill = billamt + taxamt + tip

print("\nOriginal Bill Amount is ${:,.2f}".format(billamt))

print("Tax Amount is ${:,.2f}".format(taxamt))

print("Tip Amount is ${:,.2f}".format(tip))

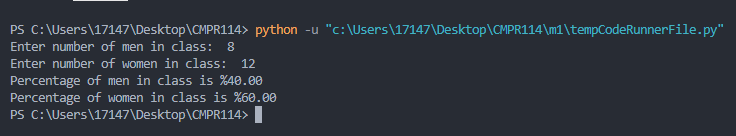
print("Total Bill Amount is ${:,.2f}".format(totalbill))

1. **Challenge** **Exercise** **#4:** Turn to page 115 and complete the Male and Female Percentages program.

Text

Description automatically generated

**#4 print screen the code with the output below here.**



Code:

mencnt = float(input("Enter number of men in class: "))

womencnt = float(input("Enter number of women in class: "))

total = mencnt + womencnt

menpct = (mencnt / total) \* 100

womenpct = (womencnt / total) \* 100

print("Percentage of men in class is %{:,.2f}".format(menpct))

print("Percentage of women in class is %{:,.2f}".format(womenpct))

1. **Challenge** **Exercise** **#5:** The Stock Transaction program.

Write a program that will print the amount of money paid for the stock, the amount paid to the broker, and the amount profited from the sales of the stock.

The number of shares is 2000

The Per Share price when purchased is 40.00

Commission to the broker is 3%

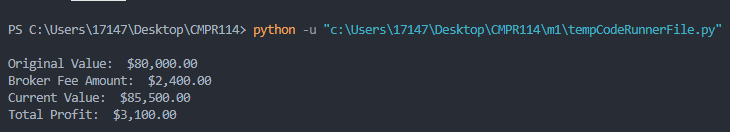
The Per Share price when sold is 42.75

Sample output

Text

Description automatically generated

**#5 print screen the code with the output below here.**



Code:

sharesheld = 2000

purchase\_shareprice = 40.00

sold\_shareprice = 42.75

commpct = .03

origvalue = sharesheld \* purchase\_shareprice

currvalue = sharesheld \* sold\_shareprice

commission = origvalue \* commpct

profit = currvalue - origvalue - commission

print("\nOriginal Value: ${:,.2f}".format(origvalue))

print("Broker Fee Amount: ${:,.2f}".format(commission))

print("Current Value: ${:,.2f}".format(currvalue))

print("Total Profit: ${:,.2f}".format(profit) + "\n")

**Submit this document to Module 1 Class Exercise**