

CS 1213-01 Program #2

Fall 2018

Due: September 19 at class time

Assignment

Suppose you invest \$1000 in a brokerage account that grows consistently at a rate of 6% per year. At the end of each of the next 5 years your investment will be worth:

```
Year 1: $1060.00
Year 2: $1123.60
Year 3: $1191.02
Year 4: $1262.48
Year 5: $1338.23
```

Write a program that computes and prints this table, but for an initial investment, growth rate, and number of years specified by the user.

Input

Prompt the user to enter each of these values. Use the prompts illustrated in the sample shown below.

- **Initial investment:** A floating-point number (dollars and cents) for the initial investment.
- **Growth rate:** A floating-point number that specifies the annual percentage growth rate. For example, the user will enter 10.0 for a ten percent annual growth.
- **Number of years:** An integer indicating how years of growth to include in the output.

Output

For each year of the investment, the program prints the year (beginning with Year 1) and the balance in the account at the end of that year. The balance should be rounded to two decimal places.

Sample Run

This sample shows how the screen must look when your program runs. You must strictly follow this format, wording, spacing, and alignment, including the number of decimal places on the numbers. The characters in **red** are typed by the user. The other characters are output by the program. See Section 3.2 of the Lambert textbook for instruction on how to control the number of decimal places when you print the numbers.

```
Initial investment -- 2500.00
Annual growth rate -- 7.5
Number of years ----- 8
```

```
Year 1: $2687.50
Year 2: $2889.06
Year 3: $3105.74
Year 4: $3338.67
Year 5: $3589.07
Year 6: $3858.25
Year 7: $4147.62
Year 8: $4458.69
```

Instructions for Turning in Your Project

I will not grade your project and you will receive a score of 0 if you do not comply with these instructions. You must turn in all materials by class time on the due date for them to be counted on time. Your submission is not complete—and I will not grade it—until you have turned in all the required materials. Anything that is not turned in by class time will be marked at least one day late and will receive a grading penalty as specified in the syllabus.

Turn in these things:

- Upload your Python program to Canvas.
- Turn in a hardcopy of your Python program at class time on the due date. Your hardcopy must match the electronic copy that you upload to Canvas.
- Turn in a printed, completed copy of the project form along with your hardcopy on the due date. There is a blank project form in *Handouts* on Canvas.