

Java Homework

Due:

Description: Investment calculator

Your task is to write a java program that produces information about a financial investment.

Inputs to the program

The interest rate (expressed as a percentage), the initial principal(in \$) and the number of years.

Outputs of the program

A table whose outputs include;
the year number, the principal at the beginning of the year, the interest earned, the principal at the end of the year.

Data Validation

$0 \leq \text{interest rate} \leq 200$, $0 \leq \text{initial investment} \leq 10,000$, $0 < \text{number of years} \leq 40$

PROVIDE AN ERROR MESSAGE IF THE ANY OF THE INPUTS IS OUT OF RANGE!!!

See below for example or run example from mr Hanley's web site

Please enter the starting investment:(0-10000)

Please enter value:->

100

Please enter the rate (0-200)%

Please enter value:->

10

Please enter the number of years

Please enter value:->

20

NOTE: I round off all values to nearest dollar after each calculation

NOTE: How do I make the columns line up?

As long as they don't differ by too much, use a `\t` between each column

```
System.out.println("Year\tStart\tEarned\tEnd");
```

And later on...

```
System.out.println(i+"\t"+start+...);
```

If the numbers differ a lot, see `System.out.format` for EXACT field widths for variables, not necessary in this course, we do use this in AP Computer Science)

```
-----  
$$$INVESTMENT CALCULATOR$$$|
```

```
-----  
Year      Start      Earned      End  
----      -  
1          100.0      10.0        110.0  
2          110.0      11.0        121.0  
3          121.0      12.0        133.0  
4          133.0      13.0        146.0  
5          146.0      15.0        161.0  
6          161.0      16.0        177.0  
7          177.0      18.0        195.0  
8          195.0      20.0        215.0  
9          215.0      22.0        237.0  
10         237.0      24.0        261.0  
11         261.0      26.0        287.0  
12         287.0      29.0        316.0  
13         316.0      32.0        348.0  
14         348.0      35.0        383.0  
15         383.0      38.0        421.0  
16         421.0      42.0        463.0  
17         463.0      46.0        509.0  
18         509.0      51.0        560.0  
19         560.0      56.0        616.0  
20         616.0      62.0        678.0
```