Bookmarks

Welcome to the edX Platform

Entrance Survey

Download Python and Get Motivated!

Week 1: Python Basics

Week 2: Simple Programs

3. Simple Algorithms (TIME: 41:06)
Finger Exercises

4. Functions (TIME: 1:08:06)
Finger Exercises

Complete Programming Experience: polysum

Problem Set 2
Problem Set due Feb 2, 2017 15:30 PST

Week 3: Structured

Week 2: Simple Programs > Problem Set 2 > Problem 1

Problem 1

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Problem 1 - Paying Debt off in a Year

10.0 points possible (graded)

Write a program to calculate the credit card balance after one year if a person only pays the minimum monthly payment required by the credit card company each month.

The following variables contain values as described below:

1. `balance` - the outstanding balance on the credit card
2. `annualInterestRate` - annual interest rate as a decimal
3. `monthlyPaymentRate` - minimum monthly payment rate as a decimal

For each month, calculate statements on the monthly payment and remaining balance. At the end of 12 months, print out the remaining balance. Be sure to print out no more than two decimal digits of accuracy - so print

```
Remaining balance: 813.41
```

instead of

```
Remaining balance: 813.4141998135
```

So your program only prints out one thing: the remaining balance at the end of the year in the format:

```
Remaining balance: 4784.0
```

A summary of the required math is found below:

Types

- Week 4: Good Programming Practices
- Midterm Exam
- Sandbox

Monthly interest rate= (Annual interest rate) / 12.0
Minimum monthly payment = (Minimum monthly payment rate) x (Previous balance)
Monthly unpaid balance = (Previous balance) - (Minimum monthly payment)
Updated balance each month = (Monthly unpaid balance) + (Monthly interest rate x Monthly unpaid balance)

We provide sample test cases below. We suggest you develop your code on your own machine, and make sure your code passes the sample test cases, before you paste it into the box below.

Test Cases to Test Your Code With. Be sure to test these on your own machine - and that you get the same output! - before running your code on this webpage!

Click to See Problem 1 Test Cases

```
# Paste your code into this box

```

Press ESC then TAB or click outside of the code editor to exit

Unanswered

Hints

Only two decimal digits of accuracy?

How to think about this problem?

Important

Only hit "Check" once per submission. You only get 30 checks per problem.

If you believe you have correct code but it is marked incorrect after clicking "Check"...

"Staff Debug: L397 Error" means your code has an infinite loop...

Do not define your own values

Submit You have used 0 of 30 attempts

Problem 1 - Paying Debt off in a Year

Show Discussion

Topic: Problem Set 2 / Problem 1