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MITx: 6.00.1x Introduction to Computer Science and Programming Using Python

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Help

PROBLEM 1: PAYING THE MINIMUM (10 points possible)

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, and print to screen something of the format:

```
Month: 1
Minimum monthly payment: 96.0
Remaining balance: 4784.0
```

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
```

Finally, print out the total amount paid that year and the remaining balance at the end of the year in the format:

```
Total paid: 96.0
Remaining balance: 4784.0
```

A summary of the required math is found below:

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)

Note that the grading script looks for the order in which each value is printed out. 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

The code you paste into the following box **should not** specify the values for the variables `balance`, `annualInterestRate`, or `monthlyPaymentRate` - our test code will define those values before testing your submission.

```
1 # Paste your code into this box
2
```

Unanswered

Hints
Only two decimal digits of accuracy??
How to think about this problem?

Important
Only hit "Check" once per submission. We are unable to give you more than 30 checks.

Check   Save   *You have used 0 of 30 submissions*

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