

Forum:[Hack Forums](#)

Thread: [new to python. Into class question](#)

Truhmp - August 22, 2017, 6:32 pm

So my first day of intro to programming we are going to be learning python which im glad. I was able to easily do the first two assignments with breeze since my instructor was there to teach me about what was needed in those.

My first day was durring the eclipse and everyone wanted to go outside so class was called early and I was not taught anything about how to do this next Exercise.

If someone can simply just show me what they would do using python 3 I can easily understand why you did it and that will be enough for me.

Write a program that prints the balance of an account after the first, second and third year. The account has an initial balance of \$1000 and earns 5 percent interest.

Please can someone help me out, Ive spent 6 hours going through my textbook and they do not show me this either. Online has a few option for using java but im using python 3. Thank you for your time.

EDIT: This is what ive came up with so far but still failing at figuring out how to calculate after Year One: and so on.

```
#####Account Balance#####
```

```
print(" Account Balance after 3 years and earning 5 percent interest");
print()
print()
print("Year One:")+ (1000*1.05)
print(1000*1.05*1.05);
print(1000*1.05*1.05*1.05);
print()
print()

input()
```

How do I make it look like Year One: 1050, then I can do the rest.

B?ker - August 22, 2017, 6:35 pm

Why not do something like this, (Quick throw together on mobile)

```
A = $1000
B = A .05
C = B .05
```

- - -

Obviously you'd need to actually code it up but maybe this would help. (FYI I am not a python guy, im a front dev type guy so this is just a basic example)

Lukos1234 - August 22, 2017, 8:56 pm

I'm new to python but try this :

```
PHP Code
<?php
def calculbalance():
    years = int(input(
        "Please precise how much years you will stay with our bank so we can calculate your balance\n"))

    currentbalance1 = int(input("Please what's your current balance ?\n"))

    Interest=int(input("Please what's your interest rate: \n"))

    for i in range(years):
        newbalance = currentbalance1*Interest
        print("For year " + str(i+1) + " here's your account balance : $" + str(newbalance
    ) )
        #I think you're looking for this only
        currentbalance1=newbalance

calculbalance()
```

Here's a much simpler one :

```
PHP Code
<?php
def calculbalance(years,balance,interest):
    # interest in %
    print("with an interest of " + str(interest)+ " % and an initial balance of $" + str(balance))
    interest = interest / 100

    for i in range(years):
        balance = balance*(1+interest)
        print("for year " + str(i+1) + " your balance is $" + str(balance))
```

```
calculbalance(3,1000,5)
```

which could give us:

with an interest of 5 % and an initial balance of \$1000

```
for year 1 your balance is $1050.0
for year 2 your balance is $1102.5
for year 3 your balance is $1157.625
```

```
# Just a simple function that asks for years , interest and beginning balance in account.
# interest accumulates each year , if each month I can rewrite the function.
```

#if anyone got the solution for converting input result into integer directly please help.

Vana - August 22, 2017, 9:03 pm

I'd write a function:

PHP Code

```
<?php
```

```
def calc(balance, year):  
    while year > 0:  
        balance *= 1.05  
        year -= 1  
    return balance
```

And just call it for each print:

PHP Code

```
<?php
```

```
initial = 1000  
print("First year: {0}".format(calc(initial, 1)))  
print("Second year: {0}".format(calc(initial, 2)))  
print("Third year: {0}".format(calc(initial, 3)))
```

You need to use the "format" function to add it to the strings as you can't directly concatenate numbers and strings in Python.

And if you need a variable number of years...

PHP Code

```
<?php
```

```
years = int(input("Years to show: "))  
for year in range(1, years + 1):  
    print("Year {0}: {1}".format(year, calc(initial, year)))
```

Lukos1234 - August 22, 2017, 9:15 pm

(Aug 22, 2017 09:03 PM)Vana Wrote: [\[CITE\]](#) years = input("Years to show: ")

```
for year in range(1, years + 1):  
    print("Year {0}: {1}".format(year, calc(initial, year)))  
[/php]
```

Does this work even without converting the variable "years" to int ? because I read that input function gives you a string.

Vana - August 22, 2017, 9:17 pm

(Aug 22, 2017 09:15 PM)Lukos1234 Wrote: [\[CITE\]](#) Does this work even without converting the variable "years" to int ? because I read that input function gives you a string.

You're right, in Python 2.x `input()` will interpret it as an int but not in Python 3. Fixed my code.

Retribute - August 23, 2017, 1:47 am

Using OOP is much cleaner and easy to read.

PHP Code

```
<?php
```

```
class Account():  
    init_balance = 1000  
  
    def increase(self,num_years):  
        self.balance = Account.init_balance*1.05**num_years
```

```
return self.balance
```

```
a = Account()
```

```
[a.increase(i) and print("Year {}: ${:.3f}".format(str(i), a.balance)) for i in range(1,4)]
```

Output:

PHP Code

```
<?php
```

```
Year 1: $1050.000
```

```
Year 2: $1102.500
```

```
Year 3: $1157.625
```

datguy.dev - August 23, 2017, 5:01 am

I think you have enough here to complete this task. But consider what data type would best fit the role for USD and how it should be rounded. When multiplying, if you round fractions of a penny off an interest rate, then that could be considered fraud.

You may want to try and not overthink assignments. Consider the code expected for you is beginner-level. Save yourself the time. I over complicated my code in school trying to impress, but it really did nothing for me except for being investigated for plagiarism. No one was ever impressed. Instead, just do what the assignment asks perfectly.

Truhmp - August 23, 2017, 7:42 pm

Wow thank you everyone for the responses. I was able to complete the exercise with this information. This is alot of fun, although im not doing anything too complex yet im having alot of fun with the basics.

Lukos1234 - August 24, 2017, 12:48 am

(Aug 23, 2017 07:42 PM).bLunts Wrote: [\[CITE\]](#) Wow thank you everyone for the responses. I was able to complete the exercise with this information. This is alot of fun, although im not doing anything too complex yet im having alot of fun with the basics.
wait till you get to files handling :D

vorticalbox - August 25, 2017, 11:34 am

(Aug 24, 2017 12:48 AM)Lukos1234 Wrote: [\[CITE\]](#) wait till you get to files handling :D
Files are easy

PHP Code

```
<?php
```

```
with open('file','r') as f:
```

```
For line in f:
```

```
Print (f)
```

Wrote on my phone so spacing will be wrong.

Allelujah - August 25, 2017, 2:44 pm

Simple solution:

PHP Code

```
<?php
```

```
import time
```

```
###Variables###
```

```
Principle = 1000
```

```
YearOne = Principle * 1.05
```

```
YearTwo = YearOne * 1.05
```

```
YearThree = YearTwo * 1.05
```

```
#YearFour
```

```
#YearFive
```

```
###Print strings###
```

```
print('The account has an initial balance of $1,000.00 and earns 5 percent interest.')
```

```
print()
```

```
print('The account after the first year will have a balance of: $' + str(float(YearOne)) + ' after interest.'
)
```

```
print()
```

```
print('The account after the second year will have a balance of: $' + str(float(YearTwo)) +
' after interest.')
```

```
print()
```

```
print('The account after the third year will havea balance of: $' + str(float(YearThree)) +
' after interest.')
```

```
print()
```

```
print('This is the final balance: $' + str(float(YearThree)))
```

```
print()
```

```
time.sleep(5)
```

vorticalbox - August 25, 2017, 3:17 pm

(Aug 25, 2017 02:44 PM)Allelujah Wrote: [\[CITE\]](#) Simple solution:

PHP Code

```
<?php
```

```
import time
```

```
###Variables###
```

```
Principle = 1000
```

```
YearOne = Principle * 1.05
```

```
YearTwo = YearOne * 1.05
```

```
YearThree = YearTwo * 1.05
#YearFour
#YearFive
```

```
###Print strings###
```

```
print('The account has an initial balance of $1,000.00 and earns 5 percent interest.')
print()
```

```
print('The account after the first year will have a balance of: $' + str(float(YearOne)) + ' after interest.')
print()
```

```
print('The account after the second year will have a balance of: $' + str(float(YearTwo)) +
' after interest.')
print()
```

```
print('The account after the third year will havea balance of: $' + str(float(YearThree)) +
' after interest.')
print()
```

```
print('This is the final balance: $' + str(float(YearThree)))
print()
```

```
time.sleep(5)
```

Why didn't you just do this in a for loop updating a variable? Would say you writing it out three times. Also why are you making it a float then converting to a string? It's already a float.

(???)?(???? - August 25, 2017, 3:41 pm

```
Code def future_value(principle, interest, years = 1):
    return principle * (1 + interest) ** years
```

Allelujah - August 25, 2017, 3:47 pm

(Aug 25, 2017 03:17 PM)vorticalbox Wrote: [\[CITE\]](#) Why didn't you just do this in a for loop updating a variable? Would say you writing it out three times. Also why are you making it a float then converting to a string? It's already a float.

Because I'm still learning and I figure he is too from his post. Thanks for your input. I actually thought about a loop after I had posted.

OliFlaw - August 25, 2017, 4:30 pm

(Aug 23, 2017 07:42 PM).bLunts Wrote: [\[CITE\]](#) Wow thank you everyone for the responses. I was able to complete the exercise with this information. This is alot of fun, although im not doing anything too complex yet im having alot of fun with the basics.

Hey man, I am new to Python too and although you are new to python like me I have been using the youtube video playlist that is linked below called "Automate the Boring Stuff - Python" that literally teaches you the basics and the foundations of Python that you need to know.

From what I have learnt from the videos I would be glad to tell you that I would be able to make this program without having to request help on here which is what I believe you should aim to do in order to progress in learning the language!

https://www.youtube.com/playlist?list=PL0-84-yl1fUnRuXGFe_F7qSH1LEnn9LkW

Enjoy and I hope you can benefit from this as I did :)

-Oli

nOrr - August 26, 2017, 5:30 am

(Aug 24, 2017 12:48 AM)Lukos1234 Wrote: [\[CITE\]](#) wait till you get to files handling :D

In Python, file I/O is simply speaking just some object you can do loops with, or - if that suits your needs - read and write everything in one go. General file management beyond rename, copy, delete and create that works on both unix and windows systems can be entertaining to puzzle around with from time to time, but it's still fairly simple. It's one of those things that are fairly simple to learn, but slightly trickier to master (say you want to create symbolic links and preserve only some of the meta data of files - hint: Windows doesn't love symlinks).

Python is usually picked as the introductory language because it's simple, forgiving and requires less thinking to get the job done. It, along with Java for example, are good introductory languages to know before starting on a low-level language such as C, or a functional language such as haskell or F#.

The reason is you would then know the basics of simple programming, and are ready to focus on what makes a low-level language special (pointers, address references, memory management, ...) or what makes a functional language special (don't ask, I hate them).

...that said, you're not "better" if you know C and Haskell in addition to Java, vs. if you're an expert in Java or Python. What is important is knowing when to use which language and why. Learning new languages is fairly simple once you know one.

OliFlaw - August 26, 2017, 8:32 am

Could anyone tell me if any of these keywords are hard to learn and understand what they are? I need to learn them before I start my college course: list, push, pop, element, top, array, linked list, integers, function, argument, index, global variable, local variable, pseudo code, indices, operations, overflow, dynamic array, string.

Thank you, your help is appreciated ! :)

-Oli

Allelujah - August 26, 2017, 8:33 am

(Aug 26, 2017 08:32 AM)OliFlaw Wrote: [\[CITE\]](#) Could anyone tell me if any of these keywords are hard to learn and understand what they are? I need to learn them before I start my college course: list, push, pop, element, top, array, linked list, integers, function, argument, index, global variable, local variable, pseudo code, indices, operations, overflow, dynamic array, string.

Thank you, your help is appreciated ! :)

-Oli

If you make your own thread you would get more replies.

OliFlaw - August 26, 2017, 8:40 am

(Aug 26, 2017 08:33 AM)Allelujah Wrote: [\[CITE\]](#) If you make your own thread you would get more replies.

Alright, I will make the same post in a separate thread now :)