

Midterm 1 Review Document Spring 2018

Coding Midterm: How to submit multiple times in Coursys

Once you've submitted, you can modify your submission by:

1. Click on Download submission at the bottom (this won't actually download it, it will open your code in Coursys)
2. Copy your code and press Back
3. Paste your code back into the text box, check/modify it and Submit again. The latest version that is not late will be marked.

Make a Submission

Question 1 Code

Text:

Description: Refer to question on midterm booklet. Use 2 spaces in place of a tab.
Max File Size: 100 KB

Submit

Current Submission

Question 1 Code

Latest Submission: 2019-02-01 13:08:20
File Size: 517 bytes
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Repl Examples

The repls containing examples pertaining to questions below can be found here:

<https://repl.it/repls/WornFrontBackslash>

<https://repl.it/repls/MixedMotionlessPresses>

String methods

How do you remove quotation marks from a string?

Use strip to take it off the front and back:

```
mystring= "\"amazing yoda quote\""
print(mystring) # This has quotation marks
mystring = mystring.strip("\"")
print(mystring) # Now no quotation marks
```

Booleans

More review on Boolean statements

Will the statements true or false print only if you set a variable to it?

Here are some hints to know if you're looking at a Boolean expression.

- Does the expression contain a comparison operator like `==` `<` `>=` etc? If so, probably a Boolean.
- Does the expression literally contain **True** or **False** (uppercase)? Probably a Boolean.
- Does the expression contain **and** / **or** ? Probably a Boolean.
- Does the expression contain **in**? Maybe, but this is not for sure, since you can also have **in** for the for loop statement.

What is the use of the **and** function on python instead of using or ?

- If the statements on both sides of the **and** are True, the whole expression is true. Otherwise, (True+False, False+True, False+False), the expression will be false.
- You can use it for example when you require two conditions, like a number being greater than something and less than something else.

How can we use "or" in lists, instead of making a list bank.

- Here is an example of two ways to write the same thing:

```
myyear = "1990"
years = ["1990", "1991", "1992"]
print(myyear in years)           # this is the same as below
print(myyear == "1990" or myyear == "1991" or myyear == "1992")
```

For loops and nested loops

For loops and nested ones

A nested loop: **one loop is contained within another.**

could you please go over loops with range, nested loops and working with files?

See the repl at the top of this file for more examples.

Also, when we use the for loop, and code out "for question in questions", how does python recognize the singular "question", is it a variable, but it won't be defined in the code,.

Here is the general schema for a **for** loop.

```
for <variable> in <list>:  
    # do stuff, usually with <variable>
```

When you create a **for** loop, <variable> is temporarily (and invisibly) created, initialized to the first element in <list>. The body of the loop (indented part) is run with variable set to that initial value. At the end of the body, the loop continues, setting variable to the next element in <list>, and so on, until <variable> has been set to all elements in <list>.

How to distinguish first score and second score that is in the for loop? I want to compare 2 scores but I don't know how, because in the loop I put score += 1 and outside of the loop I did score[0] and score[1] to try to distinguish but it didn't work. Help me please!

I'm not sure of your question, maybe post the code in Piazza?

Working with files

Working with Datasets, csv files.

how does the python know that the first "file.readline()" means it must remove the first sentence and the second "file.readline()" means actually it must read the data of the file?

linedata = file.readline() does two things:

- 1) it returns the value of the current line in the file, and stores it in linedata
- 2) AND it moves the "current location" pointer down one line to the next line.

How do you reference a single line from a file?

Unfortunately, Python doesn't have a way to directly reference a specific line in a file.

You need to loop over the lines to find it.

the coding example from Jan 30th class , please review it and explain the coding . i didn't understand why we added the slashes to data and will we be given a coding question regarding data files on the coding midterm ?Thx

Don't worry about it - the slashes to the data were to remove quotations
(see first question in this review) under String Methods.

Similarity algorithm

Can we go over the Similar People Finder in lecture 4.2?
i didnt understand how to upload a file and compare two similarities..

```
# Similarities between 2 lists
first_person = [21, 158, 19]
second_person = [20, 159, 19]

# To find the similarities, here is 4-step outline:
# 1. Initialize a similarity score
score = 0
# 2. Loop through ONE of the lists
for num in first_person:
    # 3. Check if the element from the first person is in the 2nd person's
    if num in second_person:
        # 4. Add to the similarity score if it is
        score += 1

print(score)
```

Question 1 of the mock exam Friday! I want clarification of the proper way of presenting the code if possible? (Different ways of doing it)

I'll be posting both the questions from last Friday's mock exam on Piazza.

lecture 4.1 page 18. why we assign a variable, answer? it should be a respond but there is no input function, how it works?

answer here is just the name of a variable. A better variable name could be **favourite_pizza_place**. Instead of getting input from the user, this data is read from the file. It's the 4th element (starting from 0) in the list of survey responses. If you are uncertain about this, add `print(datalist)` to Line 24 to see what's in it.

Admin Questions

Will we be able to test-run our program before submitting it during the midterm?
Can I use powershell or terminal to test my code on the exam?

NO

if I am able to create a more advanced and robust program then what you are asking for, but it doesn't use one of the features you asked for such `.split(" ")`. Could I still get 100% for marks?

If your program produces perfect output for all our test cases, you'll get 100%. If not, then we mark it by elements. So if we ask for it an element like `split()`, then we need to see it. This is because we want to see your mastery of fundamentals and ability to fulfill technical requirements.

No CSIL key fob...

Try and get one, or make sure you have a friend who can let you in.

Will the two coding questions be based of the two mock coding questions we did last Friday?

I can't answer that.

Specific Questions

How to know when to convert your input to float and integer?

It all depends on what you'll do with the input. Are you going to do some calculation like addition to it? Then you need to convert it to float or integer. If you're just going to output it as a string, then conversion is not necessary.

If a list contains the following:
singers = ["elsa", "anna", "snowman"]
Then who is in singers[2]?
why?

singers corresponds to:

["elsa", "anna", "snowman"]

0 1 2

So singers[2] is "snowman".

```
response = "I LOVE COFFEE!!"  
words = response.lower().strip("!").split(" ")  
if "coffee" in words or "starbucks" in words:  
    print("Caffeine junkie, eh?")  
else:  
    print("Hmm...")
```

In the above case, then just "Caffeine junkie, eh?" will be printed. If you want to understand the steps, try pasting the following into repl:

```
response = "I LOVE COFFEE!!"  
print(response.lower())  
print(response.lower().strip("!"))  
print(response.lower().strip("!").split(" "))
```