

Create Rubric

100 points

List View

Grid View

Create your rubric now or come back to it later. You can also make edits to your rubric while grading.

Q1 WWPD

10 points

Q1.1 a

2 points

Rubric Settings

>>> tricky(f, 5)

1 +2.0

Correct: Function

2 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q1.2 b

2 points

Rubric Settings

>>> tricky(f, 5)(3)

1 +2.0

Correct: Error

2 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q1.3 c

2 points

Rubric Settings

>>> tricky(f, 5)(3, 20)

1 +2.0

Correct: 17

2 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q1.4 d

1 point

Rubric 9

(d) (1.0 pt)

```
def outer_function():  
    a = 5  
    def inner_function():  
        a = 10  
        return a  
    b = inner_function()  
    print(f"Inner: {b}, Outer: {a}")
```

- outer_function()
- Inner: 5, Outer: 10
 - Inner: 10, Outer: 5
 - Inner: 10, Outer: 10
 - The code will result in an error.

1 +1.0

Correct: Inner: 10, Outer: 5

2 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q1.5 e

1 point

Rubric 9

(e) (1.0 pt) Given a list of numbers, which code snippet uses filter to return a list with all neg removed? (Note: filter in Python returns an iterator that needs to be converted to a list)

```
numbers = [4, -1, -3, 2, 0, -5, 8]
```

- filter(lambda x: x < 0, numbers)
- filter(lambda x: x > 0, numbers)
- list(filter(lambda x: x < 0, numbers))
- list(filter(lambda x: x >= 0, numbers))

1 +1.0

Correct: list(filter(lambda x: x >= 0, numbers))

2 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q1.6 f

1 point

Rubric 9

(f) (1.0 pt)

```
def square(number):  
    try:  
        return number ** 2  
    except TypeError:  
        return "hello"
```

```
print(square("two"))
```

- It will print "two"
- It will print 4
- It will print "hello"
- It will display a TypeError

1 +1.0

Correct: It will print "hello"

2 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q1.7 g

1 point

(g) (1.0 pt)

```
def check_even(number):  
    return "Even" if number % 2 == 0 else "Odd"  
  
numbers = [1, 2, 3, 4]  
result = map(check_even, numbers)  
print(list(result))  
  
 [False, True, False, True]  
 [Odd, Even, Odd, Even]  
 [1, 2, 3, 4]  
 [None, None, None, None]
```

1 +1.0

Correct: [Odd, Even, Odd, Even]

2 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q2 Let's Explore

10 points

Q2.1 a

2 points

(a) (2.0 pt) What is value of box (a)?

- `func add_location(new_location) [parent=f1]`
- `func add_location(new_location) [parent=Global]`
- `func explore(places) [parent=f1]`
- `func explore(places) [parent=Global]`
- `["moffitt", "mlk"]`
- `["soda", "moffitt", "mlk"]`

1 +2.0

`func add_location(new_location) [parent=f1]`

2 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q2.2 b

2 points

(b) (2.0 pt) What is the second element in the list loc, item (b)?

1 +2.0

`["moffitt", "mlk"]`

2 +1.0

answer includes `moffitt` and `mlk` but not in the correct format

3 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...



Q2.3 c

2 points

 Rubric 5


(c) (2.0 pt) What is the parent of lambda function in frame 3, item (c)?

- Global
- f1
- f2
- f3

 1 +2.0 f2		
 2 +0.0 Incorrect		
+ Add Rubric Item	Create Group	Import...



Q2.4 d

2 points

 Rubric 5

(d) (2.0 pt) What is the return value of the lambda function in f3, item (d)?

- An arrow pointing to the list loc
- ["soda", ["moffitt", "mlk"]]
- ["soda", "moffitt", "mlk"]
- ["soda"]
- None

 1 +2.0 None		
 2 +0.0 Incorrect		
+ Add Rubric Item	Create Group	Import...



Q2.5 e

2 points

 Rubric 5

(e) (2.0 pt) What is value of result and the Return Value of add_location in f2, item (e)?

- None
- Error
- An arrow pointing to the box (a)
- An arrow pointing to the list loc
- "soda"

 1 +2.0 None		
 2 +0.0 Incorrect		
+ Add Rubric Item	Create Group	Import...

Q3 A Broken Phone Book

4 points

Q3.1 a

2 points

 Rubric 5

Select the option which describes the result of this code.

- The code errors and will return a key error
- The code errors and will return a syntax error
- The code is incorrect and will return a list of valid contacts
- The code is correct and will return a list of compromised contacts

 1 +2.0

Correct - will result in a key error

 2 +0.0

incorrect

 Add Rubric Item

 Create Group

 Import...

Q3.2 b

2 points

 Rubric 5

How will this code behave?

- The code block runs as expected, no changes needed.
- The code block errors and does not run.
- The code block runs but does not run as expected.

 1 +2.0

Correct - code block runs but not as expected.

 2 +0.0

Incorrect

 Add Rubric Item

 Create Group

 Import...

Q4 Your Mileage May Vary

6 points

Q4.1 a

1 point

 Rubric 5

```
def avg(lst):  
    return .....
```

1 +1.0

Correct: `sum(lst) / len(lst)`

2 +0.5

Correct, but with syntax error

3 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q4.2 b

2 points

Rubric S

```
mpgs = list(filter(.....,  
                  .....))
```

1 +2.0

Correct: `mpgs = list(filter(lambda x: x >= 20, mpgs))`

2 +1.0

Minor Error

3 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q4.3 c

2 points

Rubric S

```
squared_difference = list(map(.....,  
                             .....))
```

1 +2.0

Correct:

`squared_difference = list(map(lambda x: (x-mean)**2,`

2 +1.0

Minor Error

3 +0.0

Incorrect

Q4.4 d

1 point

Rubric 5

(1.0 pt) Finally, find the mean (average) of the squared_difference list, assigning it to variance.

```
variance = .....
```

1 +1.0
Correct: `avg(squared_difference)`

2 +1.0
Correct: An equivalent answer

3 +0.5
Small Error

4 +0.0
Incorrect: Anything Else

Q5 CineDict

10 points

Q5.1 a

2 points

Rubric 5

```
def create_movie(title, director, year):  
    return .....
```

1 +2.0
Correct
`return {"title": title, "director": director, "relea`

2 -0.5
Syntax error `ie 'year' instead of 'release_year'`

3 -0.5
Did not include quotes

4 -1.0
Missed one of the the three options

5 +0.0

Fully Correct

2 +1.0

First blank is `movie_catalog`

3 +1.0

Second blank is `director`

4 +1.0

Third blank is `[]`

5 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q6 Composing Trees with Trees

10 points

Q6.1 a

2 points

Rubric

(2.0 pt) Fill in blank (a).

1 +2.0

Correct: `tree.is_leaf()`

2 +1.0

Minor Error

3 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q6.2 b

2 points

Rubric

(2.0 pt) Fill in blank (b).

1 +2.0

Correct: `tree.fn(tree.value)`

Q6.3 c

2 points

(2.0 pt) Fill in blank (c).

⋮ 2 +1.0 Minor Error		
⋮ 3 +0.0 Incorrect		
+ Add Rubric Item	Create Group	Import...

[Rubric S](#)

⋮ 1 +2.0 Correct: <code>tree.branches</code>		
⋮ 2 +1.0 Minor Error		
⋮ 3 +0.0 Incorrecdt		
+ Add Rubric Item	Create Group	Import...

Q6.4 d

2 points

(2.0 pt) Fill in blank (d).

⋮ 1 +2.0 Correct: <code>branch.fn</code>		
⋮ 2 +1.0 Minor Error		
⋮ 3 +0.0 Incorrect		
+ Add Rubric Item	Create Group	Import...

[Rubric S](#)

Q6.5 e

2 points

Rubric 5

(2.0 pt) Fill in blank (e).

1 +2.0

Correct: `f(g(x))`

2 +1.0

Minor Error

3 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q7 Shopping List 2

8 points

Rubric 5

```
def lnk_aggregate(d):
    agg_lnk = None
    curr_lnk = None
    for item_name, total_price in d.items():

        node_lnk = -----
        if agg_lnk == None:

            agg_lnk = -----
            curr_lnk = -----
        else:
            -----

    return agg_lnk
```

1 +8.0

Fully correct

2 Creating `node_lnk`

3 Reassigning `agg_lnk`

4 Reassigning `curr_lnk`

5 `curr_lnk.rest = node_lnk`

6 `curr_lnk = curr_lnk.rest`

7 -0.5

Minor syntax errors, such as:

- Not capitalizing `Link`
- Not including the underscore in variable names
- Misspelling variable names

8 -1.0

Multiple minor syntax errors

9 +0.0

Incorrect/Blank

+ Add Rubric Item

Create Group

Import...

Q8 Mario Kart

14 points

Q8.1 a

2 points

Rubric 5

What should go in blank (a)?

- `self.items.append(item_weight)`
- `self.items.append(self.weight)`
- `self.speed += item_weight`
- `self.acceleration += item_weight`
- `self.weight += item_weight`

1 +0.0

```
self.items.append(item_weight)
```

2 +0.0

```
self.items.append(self.weight)
```

3 +0.0

```
self.speed += item_weight
```

4 +0.0

```
self.acceleration += item_weight
```

5 +2.0

```
self.weight += item_weight
```

+ Add Rubric Item

Create Group

Import...

Q8.2 b

2 points

Rubric 5

(b) (2.0 pt) What should go in blank (b)?

- `self.items.append(item_name)`
- `self.items.append(item_weight)`
- `self.items += item_name`
- `self.weight += item_name`

1 +2.0

```
self.items.append(item_name)
```

2 +0.0

○ self.items += [item_weight]

self.items.append(item_weight)

3 +0.0

self.items += item_name

4 +0.0

self.weight += item_name

5 +0.0

self.items += [item_weight]

6 +0.0

None

+ Add Rubric Item

Create Group

Import...

Q8.3 c

2 points

Rubric

What should fill in blank (c)?

1 +2.0

Any of the following:

- vehicles[i] == self
- vehicles[i] is self

2 +1.5

Minor syntax error, such as any of the following:

- Correct answer, but used parentheses instead of square brackets to index into `vehicles`
- `vehicles[i] = self`

3 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q8.4 d

2 points

Rubric

) (2.0 pt) What should fill in blank (d)?

1 +2.0

Any of the following:

- vehicles[next_location]
- vehicles[curr_location + 1]

2 +1.5

Correct answer, but minor syntax error, such as any of the following:

- vehicles(next_location)

3 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q8.5 e

2 points

Rubric 5

) (2.0 pt) What should fill in blank (e)?

1 +2.0

next_vehicle.speed -= 1 or equivalent

2 +1.0

Answer includes next_vehicle.speed - 1

3 +0.0

Incorrect

+ Add Rubric Item

Create Group

Import...

Q8.6 f

4 points

Rubric 5

```

**
>> b.items
['blue shell']
>> b.acceleration
8.0
****

```

1 Modifying the bike's acceleration

2 Picking up the item

[+ Add Rubric Item](#)[Create Group](#)[Import...](#)

Q9 Generate Factors

10 points

Q9.1 a

8 points

[Rubric](#)

```
def generate_factors(k):  
    i = 1  
    while i <= k:  
        if i % k == 0:  
            yield i  
        i += 1
```

1 Partial credit

2 +8.0
Full credit

3 +0.0
Incorrect

4 -0.5
Syntax error (e.g. using parentheses with `yield`) or minor mistake, such as `i=0` instead of `i=1`, `i >= k` instead of `i > k`, or `i % k` instead of `k % i`

[+ Add Rubric Item](#)[Create Group](#)[Import...](#)

Q9.2 b

2 points

[Rubric](#)

(2.0 pt) What would the output be if we called `list(generate_factors(10))`? Please note that we are not using `next`.

- `RecursionError: maximum recursion depth exceeded error.`
- `StopIteration error.`
- `[1, 2, 5, 10]`
- `[1, 2, 5, 10, 1, 2, ...]`
- An infinite loop

1 +2.0
Correct: infinite loop

2 +0.0
Incorrect

[+ Add Rubric Item](#)[Create Group](#)[Import...](#)

Q10 May I take your order?

4 points

Q10.1 a

1 point

[Rubric](#)

(a) (1.0 pt) What is the order of growth of `sum_nums_A`?

- $O(1)$
- $O(\log(n))$
- $O(n)$
- $O(n^2)$
- $O(2^n)$

1 +1.0

Correct `O(n^2)`

2 +0.0

Incorrect $O(n)$

3 +0.0

Incorrect $O(2^n)$

4 +0.0

Incorrect $O(1)$

5 +0.0

Incorrect $O(\log n)$

+ Add Rubric Item

Create Group

Import...

Q10.2 b

1 point

[Rubric](#)

(b) (1.0 pt) `sum_nums_A` will perform faster than `sum_nums_B` for large inputs

- True
- False

1 +1.0

Correct `False`

2 +0.0

Incorrect/Both bubbled

+ Add Rubric Item

Create Group

Import...

Q10.3 c

1 point

[Rubric](#)

(c) (1.0 pt) `sum_nums_B` will perform faster than `sum_nums_C` for large inputs

- True
- False

1 +1.0

Correct `True`

2 +0.0

Incorrect/Bubbled both

+ Add Rubric Item

Create Group

Import...

Q10.4 d

1 point

Rubric 5

(d) (1.0 pt) `sum_nums_C` will perform faster than `sum_nums_A` for large inputs

- True
- False

1 +1.0

Correct: True

2 +0.0

Incorrect/Bubbled both

+ Add Rubric Item

Create Group

Import...

Q11 NBA Networking

14 points

Q11.1 a

4 points

Rubric 5

```
SELECT .....  
FROM .....  
WHERE .....  
GROUP BY .....  
ORDER BY .....
```

1 +0.5

Correct: SELECT name

2 +0.5

Correct: FROM staff

3 +1.0

Correct: WHERE number > 23

4 +1.0

Correct: GROUP BY food_order

5 +1.0

Correct: ORDER BY food_order ASC or
ORDER BY food_order

6 +0.0

Incorrect/Blank

7 -0.25

Minor syntax errors (extra or missing characters/words, incorrect aliasing, spelling mistakes)

+ Add Rubric Item

Create Group

Import...

Q11.2 b

3 points

Rubric

```
SELECT .....  
FROM .....  
.....  
ORDER BY .....
```

1 +0.5

Correct: `SELECT staff.name, staff.fav_player`

2 +0.5

Correct: `FROM staff`

3 +1.0

Correct: `JOIN players ON staff.food_order = players.food_order`

4 +1.0

Correct: `ORDER BY staff.name ASC` OR `ORDER BY staff.name`

5 +0.0

Incorrect/Blank

6 -0.25

Minor syntax errors (extra or missing characters/words, incorrect aliasing, spelling mistakes)

+ Add Rubric Item

Create Group

Import...

Q11.3 c

3 points

Rubric

```
SELECT .....  
FROM .....  
WHERE .....  
.....;
```

1 +1.0

Correct: `SELECT name, food_order` or `SELECT s.name, s.food_order`

<p>⋮ 2 +0.5</p> <p>Partial Credit: <code>SELECT name, food_order</code> or <code>SELECT s.name, s.food_order</code> but includes additional unnecessary column(s)</p>
<p>⋮ 3 +1.0</p> <p>Correct: <code>FROM staff, players</code> or <code>FROM staff AS s, players AS p</code></p>
<p>⋮ 4 +0.5</p> <p>Partial Credit: <code>FROM staff</code> or <code>FROM players</code></p>
<p>⋮ 5 +1.0</p> <p>Correct: <code>WHERE staff.fav_player = players.name AND players.ju</code></p>
<p>⋮ 6 +0.5</p> <p>Partial Credit: <code>WHERE staff.fav_player = players.name</code> OR <code>WHERE players.juice = 'apple'</code></p>
<p>⋮ 7 +0.0</p> <p>Incorrect/Blank</p>
<p>⋮ 8 -0.25</p> <p>Minor syntax errors (extra or missing characters/words, incorrect aliasing, spelling mistakes, forgetting <code>AND</code>, extra <code>;</code>, using <code>==</code> instead of <code>=</code>, forgetting <code>'</code> around <code>apple</code>)</p>
<p>+ Add Rubric Item Create Group Import...</p>

Q11.4 d

4 points

[Rubric 5](#)

```

SELECT .....
FROM .....
WHERE .....
GROUP BY .....
ORDER BY .....;

```

<p>⋮ 1 +1.0</p> <p>Correct: <code>SELECT team, COUNT(*) AS total_staff</code></p>
<p>⋮ 2 +0.5</p> <p>Partial Credit: <code>SELECT team</code> or <code>SELECT COUNT(*) AS total_staff</code> and includes additional unnecessary column(s)</p>

⋮ +0.5

Correct: FROM staff, players or with correct aliasing

⋮ +0.25

Partial Credit: FROM staff or FROM players

⋮ +1.0

Correct: WHERE staff.fav_player = players.name

⋮ +0.5

Partial Credit: Includes fav_player or name

⋮ +1.0

Correct: GROUP BY team

⋮ +0.5

Partial Credit: Includes GROUP BY team but with extra words/characters

⋮ +0.5

Correct: ORDER BY total_staff DESC

⋮ +0.25

Partial Credit: ORDER BY total_staff or ORDER BY total_staff ASC or includes DESC

⋮ +0.0

Incorrect/Blank

⋮ -0.25

Minor syntax errors (extra or missing characters/words, incorrect aliasing, spelling mistakes, extra () around DESC, extra ;, , in ORDER BY statement, doesn't rename to total_staff)

⋮ -0.5

Major syntax errors

+ Add Rubric Item

📁 Create Group

📄 Import...

Q12 Bonus Questions

0 points

Q12.1 a

0 points

[Rubric 5](#)

(Any reasonable name counts for credit. :))

1 +1.0

Answered something :)

Antony / Antonio / Anthony /Andy /Anty were the most common group, followed by names from the Ants project.

2 +0.0

Blank

[+ Add Rubric Item](#)

[Create Group](#)

[Import...](#)

Q12.2 b

0 points

[Rubric 5](#)

This questions is extra credit. Do not attempt it until you are done! What is the order of growth of fib?

1 +1.0

Correct - Linear $O(n)$

In this case, the first time a number like fib(3) needs to be calculated, it must make two recursive calls, but on the 2nd (or Nth) times a number needs to be calculated, the result is looked up from the dictionary of results, so the overall order of growth is linear

2 +0.0

Incorrect - Constant $O(1)$

3 +0.0

Incorrect - Quadratic / N^2

4 +0.0

Incorrect - Logarithmic / $\log(n)$

5 +0.0

Incorrect - Exponential

6 +0.0

Incorrect - Blank, or not an order of growth

+ Add Rubric Item

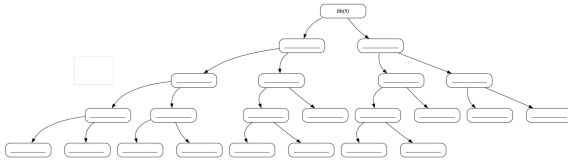
Create Group

Import...

Q12.3 c

0 points

Rubric

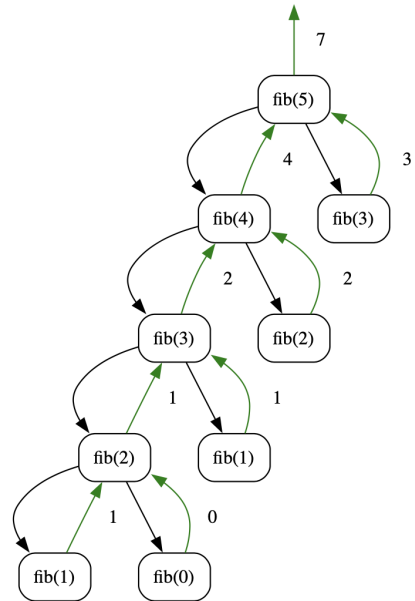


1 +2.0

Correct

The function calls $\text{fib}(n-1)$ first and calculates that result then stores it. The next time it tries to calculate a value, it can look up the result from the dictionary and doesn't make any additional function calls.

When $\text{fib}(3)$ is called a second time (the right hand side) it makes no function calls, because the result is already in the dictionary.



(note this is just the output from recursionvisualiser.com - there were no expectations to write the return values.)

2 +1.0

Pretty close, but misses something like the exact order of calls.

(A full call tree for a "regular" $\text{fib}(5)$ function does not count for this option, sorry!)

3 +0.0

Incorrect / Blank

+ Add Rubric Item

📁 Create Group

📄 Import...