Week 1 Quiz

Your last recorded submission was on 2020-01-28, 21:09 IST

All questions carry equal weightage. All Python code is assumed to be executed using Python3. You may submit as many times as you
final submission will be graded.

1) What is the value of `f(4000)` for the function below?

```
def f(x):
    d=0
    while x >= 1:
        (x,d) = (x/5,d+1)
    return(d)
```

6

2) What is `h(36)-h(34)`, given the definition of h below?

```
def h(n):
    s = 0
    for i in range(2,n):
        if n%i == 0:
            s = s+i
    return(s)
```

6

2) What is h(36)-h(34), given the definition of h below?

```
def h(n):
    s = 0
    for i in range(2,n):
        if n%i == 0:
            s = s+i
    return(s)
```

35

3) For what value of n would g(637,n) return 4? If there are multiple possibilities, write any one

```
def g(m,n):
    res = 0
    while m >= n:
        (res,m) = (res+1,m/n)
    return(res)
```

5

35

3) For what value of n would g(637,n) return 4? If there are multiple possibilities, write any one

```
def g(m,n):
    res = 0
    while m >= n:
        (res,m) = (res+1,m/n)
    return(res)
```

5

4) Consider the following function f:

```
def mys(m):
  if m == 1:
    return(1)
  else:
    return(m+mys(m-1))
```

5

4) Consider the following function f:

```
def mys(m):
  if m == 1:
    return(1)
  else:
    return(m+mys(m-1))
```

Which of the following is correct?

- The function always terminates with mys(n) = factorial of n
- The function always terminates with mys(n) = 1+2+...+n
- The function terminates for positive n with mys(n) = factorial of n
- * The function terminates for positive n with mys(n) = 1+2+...+n

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers

- If the question asks about a value of type `string`, remember to enclose your answer in single or double quotes.
- If the question asks about a value of type `list`, remember to enclose your answer in square brackets and use commas to separate list items.

1) One of the following 10 statements generates an error. Which one? (Your answer should be a number between 1 and 10.)

```
x = [1,"abcd",3,"efgh",[3,4]]   # Statement 1
y = x[0:6]                      # Statement 2
z = x                           # Statement 3
w = y                           # Statement 4
x[1] = x[1][0:3] + 'd'          # Statement 5
y[2] = 4                        # Statement 6
z[1][1:3] = 'yzw'               # Statement 7
z[0] = 0                        # Statement 8
w[4][0] = 1000                  # Statement 9
a = (x[4][1] == 4)              # Statement 10
```

7

2.5 po

2) Consider the following lines of Python code

2.5 poi

```
x = [423,'b',37,'f']
u = x[1:]
y = u
w = x
u = u[0:]
```

```
z[0] = 0                    # Statement 8
w[4][0] = 1000              # Statement 9
a = (x[4][1] == 4)          # Statement 10
```

7

2) Consider the following lines of Python code

```
x = [423,'b',37,'f']
u = x[1:]
y = u
w = x
u = u[0:]
u[1] = 53
x[2] = 47
```

After these execute, which of the following is correct?

- x[2] == 47, y[1] == 37, w[2] == 47, u[1] == 53
- x[2] == 47, y[1] == 53, w[2] == 47, u[1] == 53
- x[2] == 47, y[1] == 37, w[2] == 37, u[1] == 53
- x[2] == 47, y[1] == 53, w[2] == 37, u[1] == 53

3) What is the value of second after executing the following lines?

After these execute, which of the following is correct?

- x[2] == 47, y[1] == 37, w[2] == 47, u[1] == 53
- x[2] == 47, y[1] == 53, w[2] == 47, u[1] == 53
- x[2] == 47, y[1] == 37, w[2] == 37, u[1] == 53
- x[2] == 47, y[1] == 53, w[2] == 37, u[1] == 53

3) What is the value of `second` after executing the following lines?

```
first = "tarantula"
second = ""
for i in range(len(first)-1,-1,-1):
  second = first[i] + second
```

tarantula

4) What is the value of `list1` after the following lines are executed?

```
def mystery(l):
  l = l[0:5]
  return()
```

```
second =
for i in range(len(first)-1,-1,-1):
  second = first[i] + second
```

tarantula

4) What is the value of `list1` after the following lines are executed?

```
def mystery(l):
  l = l[0:5]
  return()

list1 = [44,71,12,8,23,17,16]
mystery(list1)
```

[44,71,12,8,23,17,16]

2.5

You may submit any number of times before the due date. The final submission will be considered for grading

Submit Answers

Course outline

How does an NPTEL online course work?

Week 1 : Introduction

Week 1 Quiz

Week 2: Basics of Python

Week 2 Quiz

Week 2 Programming Assignment

Week 3: Lists, inductive function definitions, sorting

Week 3

All questions carry equal weightage. All Python code is assumed to be executed using Python3. You may submit as many times as you like within the deadline. Your final submission will be graded.

Note:

- If the question asks about a value of type `string`, remember to enclose your answer in single or double quotes.
- If the question asks about a value of type `list`, remember to enclose your answer in square brackets and use commas to separate list items.

1)Consider the following Python function.

```
def mystery(l,v):
    if len(l) == 0:
        return (v)
    else:
        return (mystery(l[:-1],l[-1]+v))
```

What does `mystery([22,14,19,65,82,55],1)` return?

2.5 points

2)What is the value of `triples` after the following assignment?

```
triples = [ (x,y,z) for x in range(2,4) for y in range(2,5) for z
in range(5,7) if 2*x*y > 3*z ]
```

2.5 points

3)Consider the following dictionary

2.5 points

Course outline

How does an NPTEL online course work?

Week 1 : Introduction

Week 1 Quiz

Week 2: Basics of Python

Week 2 Quiz

Week 2 Programming Assignment

Week 3: Lists, inductive function definitions, sorting

Week 3 Assignment

Assignment not submitted Due date: 2020-02-26, 23:59 IST.

All questions carry equal weightage. All Python code is assumed to be executed using Python3. You may submit as many times as you like within the deadline. Your final submission will be graded.

Note

- If the question asks about a value of type `string`, remember to enclose your answer in single or double quotes.
- If the question asks about a value of type `list`, remember to enclose your answer in square brackets and use commas to separate list items.

1)Consider the following Python function.

```
def mystery(l,v):
  if len(l) == 0:
    return (v)
  else:
    return (mystery(l[:-1],l[-1]+v))
```

What does `mystery([22,14,19,65,82,55],1)` return?

258

2.5 points

2)What is the value of `triples` after the following assignment?

```
triples = [ (x,y,z) for x in range(2,4) for y in range(2,5) for z
in range(5,7) if 2*x*y > 3*z ]
```

2.5 points

3)Consider the following dictionary **2.5 points**

```
Python 3.8.1 (tags/v3.8.1:1b293b6, Dec 18 2019, 22:39:24) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> def mystery(l,v):
...   if len(l) == 0:
...     return (v)
...   else:
...     return (mystery(l[:-1],l[-1]+v))
...
>>>  mystery([22,14,19,65,82,55],1)
  File "<stdin>", line 1
    mystery([22,14,19,65,82,55],1)
    ^
IndentationError: unexpected indent
>>> mystery([22,14,19,65,82,55],1)
258
>>>
```

Week 1 Quiz
Week 2: Basics of Python
Week 2 Quiz
Week 2 Programming Assignment
Week 3: Lists, inductive function definitions, sorting
Week 3 Programming Assignment
Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension
Week 4 Quiz

```
def mystery(l,v):
  if len(l) == 0:
    return (v)
  else:
    return (mystery(l[:-1],l[-1]+v))
```

What does `mystery([22,14,19,65,82,55],1)` return?

258

2.5 points

2)What is the value of `triples` after the following assignment?

```
triples = [ (x,y,z) for x in range(2,4) for y in range(2,5) for z
in range(5,7) if 2*x*y > 3*z ]
```

(3, 3, 5), (3, 4, 5), (3, 4, 6)

2.5 points

3)Consider the following dictionary *2.5 points*

```
runs = {"Test":{"Rahul":[90,14,35],"Kohli":[3,103,73,42],"Pujar
a":[53,15,133,8]},"ODI":{"Sharma":[37,99],"Kohli":[63,47]}}
```

Which of the following statements does *not* generate an error?

- `runs["ODI"]["Rahul"].append([74])`
- `runs["ODI"]["Rahul"].extend([74])`
- `runs["ODI"]["Rahul"][0]=74`
- `runs["ODI"]["Rahul"]=[74]`

2.5 points

```
Python 3.8.1 (tags/v3.8.1:1b293b6, Dec 18 2019, 22:39:24) [MSC v.1916 32 bit (Intel)] on win32

Type "help", "copyright", "credits" or "license" for more information.
>>> def mystery(l,v):
...   if len(l) == 0:
...     return (v)
...   else:
...     return (mystery(l[:-1],l[-1]+v))
...
>>>  mystery([22,14,19,65,82,55],1)
  File "<stdin>", line 1
    mystery([22,14,19,65,82,55],1)
    ^
IndentationError: unexpected indent
>>> mystery([22,14,19,65,82,55],1)
258
>>> triples = [ (x,y,z) for x in range(2,4) for y in range(2,5) for z in range(5,7) if 2*x*y >
 3*z ]
>>> triples
[(2, 4, 5), (3, 3, 5), (3, 4, 5), (3, 4, 6)]
>>>
```

Week 3
Programming Assignment

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension

Week 4 Quiz

Quiz : Week 4 Quiz

Week 4 Programming Assignment

Text Transcripts

Books

Download Videos

2.5 points

3)Consider the following dictionary **2.5 points**

```
runs = {"Test":{"Rahul":[90,14,35],"Kohli":[3,103,73,42],"Pujara":[53,15,133,8]},"ODI":{"Sharma":[37,99],"Kohli":[63,47]}}
```

Which of the following statements does ***not*** generate an error?

- `runs["ODI"]["Rahul"].append([74])`
- `runs["ODI"]["Rahul"].extend([74])`
- `runs["ODI"]["Rahul"][0]=74`
- `runs["ODI"]["Rahul"]=[74]`

4)Assume that actor has been initialized as an empty dictionary **2.5 points**

```
actor = {}
```

Which of the following generates an error?

- `actor["Star Wars"] = ["Rey","Ridley"]`
- `actor["Star Wars, Rey"] = "Ridley"`
- `actor[["Star Wars", "Rey"]] = "Ridley"`
- `actor[("Star Wars", "Rey")] = "Ridley"`

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers

```
Python 3.8.1 (tags/v3.8.1:1b293b6, Dec 18 2019, 22:39:24) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> def mystery(l,v):
...   if len(l) == 0:
...     return (v)
...   else:
...     return (mystery(l[:-1],l[-1]+v))
...
>>>  mystery([22,14,19,65,82,55],1)
  File "<stdin>", line 1
    mystery([22,14,19,65,82,55],1)
    ^
IndentationError: unexpected indent
>>> mystery([22,14,19,65,82,55],1)
258
>>> triples = [ (x,y,z) for x in range(2,4) for y in range(2,5) for z in range(5,7) if 2*x*y > 3*z ]
>>> triples
[(2, 4, 5), (3, 3, 5), (3, 4, 5), (3, 4, 6)]
>>> runs = {"Test":{"Rahul":[90,14,35],"Kohli":[3,103,73,42],"Pujara":[53,15,133,8]},"ODI":{"Sharma":[37,99],"Kohli":[63,47]}}
>>> runs["ODI"]["Rahul"].append([74])
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
KeyError: 'Rahul'
>>> runs["ODI"]["Rahul"].extend([74])
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
KeyError: 'Rahul'
>>> runs["ODI"]["Rahul"][0]=74
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
KeyError: 'Rahul'
>>> runs["ODI"]["Rahul"]=[74]
>>>
```

Week 3 Programming Assignment
Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension
Week 4 Quiz
Quiz : Week 4 Quiz
Week 4 Programming Assignment
Text Transcripts
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2.5 points

3)Consider the following dictionary. **2.5 points**

```
runs = {"Test":{"Rahul":[90,14,35],"Kohli":[3,103,73,42],"Pujar
a":[53,15,133,8]},"ODI":{"Sharma":[37,99],"Kohli":[63,47]}}
```

Which of the following statements does ***not*** generate an error?

- `runs["ODI"]["Rahul"].append([74])`
- `runs["ODI"]["Rahul"].extend([74])`
- `runs["ODI"]["Rahul"][0]=74`
- `runs["ODI"]["Rahul"]=[74]`

4)Assume that `actor` has been initialized as an empty dictionary. **2.5 points**

```
actor = {}
```

Which of the following generates an error?

- `actor["Star Wars"] = ["Rey","Ridley"]`
- `actor["Star Wars, Rey"] = "Ridley"`
- `actor[["Star Wars", "Rey"]] = "Ridley"`
- `actor[("Star Wars", "Rey")] = "Ridley"`

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers


```
Python 3.8.1 (tags/v3.8.1:1b293b6, Dec 18 2019, 22:39:24) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> def mystery(l,v):
...   if len(l) == 0:
...     return (v)
...   else:
...     return (mystery(l[:-1],l[-1]+v))
...
>>>  mystery([22,14,19,65,82,55],1)
  File "<stdin>", line 1
    mystery([22,14,19,65,82,55],1)
    ^
IndentationError: unexpected indent
>>> mystery([22,14,19,65,82,55],1)
258
>>> triples = [ (x,y,z) for x in range(2,4) for y in range(2,5) for z in range(5,7) if 2*x*y > 3*z ]
>>> triples
[(2, 4, 5), (3, 3, 5), (3, 4, 5), (3, 4, 6)]
>>> runs = {"Test":{"Rahul":[90,14,35],"Kohli":[3,103,73,42],"Pujara":[53,15,133,8]},"ODI":{"Sharma":[37,99],"Kohli":[63,47]}}
>>> runs["ODI"]["Rahul"].append([74])
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
KeyError: 'Rahul'
>>> runs["ODI"]["Rahul"].extend([74])
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
KeyError: 'Rahul'
>>> runs["ODI"]["Rahul"][0]=74
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
KeyError: 'Rahul'
>>> runs["ODI"]["Rahul"]=[74]
>>> actor = {}
>>> actor["Star Wars"] = ["Rey","Ridley"]
>>> actor["Star Wars, Rey"] = "Ridley"
>>> actor[["Star Wars", "Rey"]] = "Ridley"
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: unhashable type: 'list'
>>> actor[("Star Wars", "Rey")] = "Ridley"
>>>
```

Unit 15 - Week 6 Quiz

Course outline

How does an NPTEL online course work?

Week 1 : Introduction

Week 1 Quiz

Week 2: Basics of Python

Week 2 Quiz

Week 2 Programming Assignment

Week 3: Lists, inductive function definitions, sorting

Week 6 Quiz

Your last recorded submission was on 2020-03-10, 08:35 IST **Due date: 2020-03-11, 23:59 IST.**

All questions carry equal weightage. All Python code is assumed to be executed using Python3. You may submit as many times as you like within the deadline. Your final submission will be graded.

Note:

- If the question asks about a value of type `string`, remember to enclose your answer in single or double quotes.
- If the question asks about a value of type `list`, remember to enclose your answer in square brackets and use commas to separate list items.

1) Suppose u and v both denote sets in Python. Under what condition can we guarantee that `u-(v-u) == u`? ***2.5 point***

- ○ The sets u and v should be disjoint.
- ○ The set u should be a subset of the set v
- ○ The set v should be a subset of the set u
- ◉ This is true for any u and v.

2) Suppose u and v both denote sets in Python. and `u|v != u^v`. What can we conclude about u and v? ***2.5 point***

Week 1 : Introduction

Week 1 Quiz

Week 2: Basics of Python

Week 2 Quiz

Week 2 Programming Assignment

Week 3: Lists, inductive function definitions, sorting

Week 3 Programming Assignment

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension

Week 4 Quiz

Week 4 Programming

Your final submission will be graded.

Note:

- If the question asks about a value of type `string`, remember to enclose your answer in single or double quotes.
- If the question asks about a value of type `list`, remember to enclose your answer in square brackets and use commas to separate list items.

1) Suppose u and v both denote sets in Python. Under what condition can we guarantee that `u-(v-u) == u`? ***2.5 points***

- ○ The sets u and v should be disjoint.
- ○ The set u should be a subset of the set v
- ○ The set v should be a subset of the set u
- ◉ This is true for any u and v.

2) Suppose u and v both denote sets in Python. and `u|v != u^v`. What can we conclude about u and v? ***2.5 points***

- ◉ The sets u and v should overlap.
- ○ The set v should be a subset of the set u.
- ○ The set u should be a subset of the set v.
- ○ This is true for any u and v.

3) Which of the following *does not* correspond to a min-heap on the list of values [19,97,83,45,72,55,31,28,31,29]. ***2.5 points***

- ○ [19, 28, 72, 31, 29, 83, 97, 55, 45, 31]
- ○ [19, 31, 28, 45, 31, 97, 29, 72, 55, 83]
- ○ [19, 28, 29, 31, 31, 45, 55, 72, 83, 97]
- ◉ [19, 28, 29, 31, 45, 83, 97, 55, 72, 31]

Week 2 Programming Assignment

Week 3: Lists, inductive function definitions, sorting

Week 3 Programming Assignment

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension

Week 4 Quiz

Week 4 Programming Assignment

Week 5: Exception handling, input/output, file handling, string processing

Week 5 Programming Assignment

- The set v should be a subset of the set u
- (•) This is true for any u and v.

2) Suppose u and v both denote sets in Python, and u & v != u^v. What can we conclude about u and v? **2.5 point**

- (•) The sets u and v should overlap.
- The set v should be a subset of the set u.
- The set u should be a subset of the set v.
- This is true for any u and v.

3) Which of the following *does not* correspond to a min-heap on the list of values [19,97,83,45,72,55,31,28,31,29]. **2.5 point**

- [19, 28, 72, 31, 29, 83, 97, 55, 45, 31]
- [19, 31, 28, 45, 31, 97, 29, 72, 55, 83]
- [19, 28, 29, 31, 31, 45, 55, 72, 83, 97]
- (•) [19, 28, 29, 31, 45, 83, 97, 55, 72, 31]

4) Consider the min-heap [19, 28, 31, 31, 29, 83, 55, 97, 45, 72]. Suppose we apply the operation `delete_min()` to this min-heap. The resulting min-heap is: **2.5 point**

- [28, 29, 31, 31, 97, 83, 55, 72, 45]
- (•) [28, 29, 31, 31, 72, 83, 55, 97, 45]
- [28, 29, 31, 31, 83, 72, 55, 97, 45]
- [28, 29, 31, 31, 55, 83, 72, 97, 45]

You may submit any number of times before the due date. The final submission will be considered for grading.

Week 2 Quiz

Week 2 Programming Assignment

Week 3: Lists, inductive function definitions, sorting

Week 3 Programming Assignment

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension

Week 4 Quiz

Week 4 Programming Assignment

Week 5: Exception handling, input/output, file handling, string processing

Week 5 Programming

1) Given the following permutation of a,b,c,d,e,f,g,h,i,j, what is the ***previous*** permutation in lexicographic (dictionary) order? Write your answer without any blank spaces between letters.

```
fjadchbegi
```

fjadcgiheb

2.5 points

2) Assume we have defined a class Node that implements user defined lists of numbers. Each object node of type Node has two attributes node.value and node.next with the usual interpretation. We want to add a function sum() to the class Node which will compute the sum of values in the list. An incomplete implementation of sum() given below. What should be put in place of XXX and YYY? ***2.5 points***

```
def sum(self):
  if self.value == None:
    return(0)
  elif self.next == None:
    return(XXX)
  else:
    return(YYY)
```

- ○ Replace XXX by 1 and YYY by 1 + self.next.sum()
- ○ Replace XXX by 1 and YYY by self.value + self.next.sum()
- ○ Replace XXX by self.value and YYY by 1 + self.next.sum()
- ◉ Replace XXX by self.value and YYY by self.value + self.next.sum()

course work?

Week 1 : Introduction

Week 1 Quiz

Week 2: Basics of Python

Week 2 Quiz

Week 2 Programming Assignment

Week 3: Lists, inductive function definitions, sorting

Week 3 Programming Assignment

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension

Week 4 Quiz

Week 4 Programming

Week 7 Quiz

Your last recorded submission was on 2020-03-18, 13:37 IST **Due date: 2020-03-18, 23:59 IST.**

All questions carry equal weightage. All Python code is assumed to be executed using Python3. You may submit as many times as you like within the deadline. Your final submission will be graded.

Note:

- If the question asks about a value of type `string`, remember to enclose your answer in single or double quotes.
- If the question asks about a value of type `list`, remember to enclose your answer in square brackets and use commas to separate list items.

1) Given the following permutation of a,b,c,d,e,f,g,h,i,j, what is the ***previous*** permutation in lexicographic (dictionary) order? Write your answer without any blank spaces between letters.

```
fjadchbegi
```

fjadcgiheb

2.5 point

2) Assume we have defined a class Node that implements user defined lists of numbers. Each object node of type Node has two attributes node.value and node.next with the usual interpretation. We want to add a function sum() to the class Node which will compute the sum of values in the list. An incomplete implementation of sum() given below. What should be put in place of XXX and YYY?

2.5 point

```
def sum(self):
  if self.value == None:
    return(0)
  elif self.next == None:
    return(XXX)
```

Week 3 Programming Assignment

Week 4: Sorting, Tuples, Dictionaries, Passing Functions, List Comprehension

Week 4 Quiz

Week 4 Programming Assignment

Week 5: Exception handling, input/output, file handling, string processing

Week 5 Programming Assignment

Week 6: Backtracking, scope, data structures; stacks, queues and heaps

fjadcgiheb

2.5 point

2) Assume we have defined a class Node that implements user defined lists of numbers. Each object node of type Node has two attributes node.value and node.next with the usual interpretation. We want to add a function sum() to the class Node which will compute the sum of values in the list. An incomplete implementation of sum() given below. What should be put in place of XXX and YYY? *2.5 point*

```
def sum(self):
  if self.value == None:
    return(0)
  elif self.next == None:
    return(XXX)
  else:
    return(YYY)
```

- ○ Replace XXX by 1 and YYY by 1 + self.next.sum()
- ○ Replace XXX by 1 and YYY by self.value + self.next.sum()
- ○ Replace XXX by self.value and YYY by 1 + self.next.sum()
- ◉ Replace XXX by self.value and YYY by self.value + self.next.sum()

3) Suppose we add this function `foo()` to the class `Tree` that implements search trees. For a name mytree with a value of type `Tree`, what would `mytree.foo()` compute? *2.5 point*

```
def foo(self):
        if self.isempty():
            return(0)
```

string processing

Week 5 Programming Assignment

Week 6: Backtracking, scope, data structures; stacks, queues and heaps

Week 6 Quiz

Week 7: Classes, objects and user defined datatypes

Week 7 Quiz

- Quiz : Week 7 Quiz

Week 8: Dynamic programming, wrap-up

Week 8 Programming Assignment

Text Transcripts

Replace XXX by 1 and YYY by self.value + self.next.sum()

Replace XXX by self.value and YYY by 1 + self.next.sum()

Replace XXX by self.value and YYY by self.value + self.next.sum()

3) Suppose we add this function `foo()` to the class `Tree` that implements search trees. For a name mytree with a value of type `Tree`, what would `mytree.foo()` compute? ***2.5 point***

```
def foo(self):
        if self.isempty():
            return(0)
        elif self.isleaf():
            return(self.value)
        else:
            return(self.value + max(self.left.foo(),
                                    self.right.foo()))
```

The sum of the elements in the tree

The maximum sum across all root to leaf paths in the tree

The length of the longest root to leaf path in the tree

The number of root to leaf paths in the tree.

4) The preorder traversal of a binary search tree with integer values produces the following sequence: 35, 23, 26, 46, 40, 39, 41, 52. What is the value of the right child of the root of the tree? ***2.5 poi***

39

40

Week 7: Classes, objects and user defined datatypes

Week 7 Quiz

- Quiz : Week 7 Quiz

Week 8: Dynamic programming, wrap-up

Week 8 Programming Assignment

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```
        return(0)
    elif self.isleaf():
        return(self.value)
    else:
        return(self.value + max(self.left.foo(),
                                self.right.foo()))
```

- ○ The sum of the elements in the tree
- ◉ The maximum sum across all root to leaf paths in the tree
- ○ The length of the longest root to leaf path in the tree
- ○ The number of root to leaf paths in the tree.

4) The preorder traversal of a binary search tree with integer values produces the following sequence: 35, 23, 26, 46, 40, 39, 41, 52. What is the value of the right child of the root of the tree? ***2.5 point***

- ○ 39
- ○ 40
- ○ 41
- ◉ 46

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers