DataScience Specialization - Test Series 1 - Batch A & B - 7th October 2023

Total points 33/50

✓ In Python 2, what is the primary reason for using xrange() instead of range()? 1/1

- (●) xrange() is more memory-efficient for large ranges. ✓
- ( ) range() is not available in Python 2.
- ( ) xrange() is faster for small ranges.
- ( ) There is no difference between xrange() and range() in Python 2.

✗ In Python 3, how do you open a file in binary mode for reading and writing simultaneously? 0/1

- file.open("myfile.txt", "rb+")
- open("myfile.txt", "rb+") ✗
- open("myfile.txt", "rw")
- file.open("myfile.txt", "rw")

Correct answer

- file.open("myfile.txt", "rb+")

✓ What is the output of the following code snippet? my_dict = {'a': 1, 'b': 2} 1/1
new_dict = my_dict.copy()
new_dict['a'] = 3
print(my_dict['a'])

- 1 ✓
- 2
- 3
- KeyError

✓ What is the result of len(set(range(5)))? 1/1

- (●) 5 ✓
- ( ) 4
- ( ) 3
- ( ) 2

✓ What is the output of the given code 1/1

```
def mylist(i, x=[]):
x.append(i)
return x

for i in range(3):
y = mylist(i)
print(y)
```

- ( ) [0,1,2,3]
- ( ) [1,2,3]
- ( ) RuntimeError
- (●) [0][0, 1][0, 1, 2] ✓

✗ What is the output of the given code 0/1

```
given_lists = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

new_list = list()

for a in given_lists:
new_list += a

print(new_list)
```

- [1,2,3,4,5,6,7,8,9]
- [1,4,7]
- [[1, 2, 3], [4, 5, 6], [7, 8, 9]] ✗
- SyntaxError

Correct answer

- [1,2,3,4,5,6,7,8,9]

✓ What is the output of the given code 1/1

```
t = (1, 2, 3, 4, 5)
x = t[::-2]
```

- (5,2,3,1)
- (5,3,1) ✓
- (1,3,5)
- TypeError

✓ What function to use to get common elements from the given sets 1/1

```
s = {1, 2, 3}
t = {3, 4, 5}
x = s.function(t)
```

- ○ shared
- ◉ intersection ✓
- ○ union
- ○ common

✓ What is the output of the given code 1/1

```
x = {'a': 1, 'b': 2}
y = {'b': 3, 'c': 4}
def func(x, y):
z = x.copy()
z.update(y)
return z

s=func(x,y)
print(s)
```

- ◉ {'a': 1, 'b': 3, 'c': 4} ✓
- ○ {'a': 1, 'b': 6, 'c': 4}
- ○ RuntimeError
- ○ [{'a': 1, 'b': 3}{ 'b': 3, 'c': 4}]

✓ What is the output of the given code 1/1

```
x = {'a': 1, 'b': 2}
y = {'b': 3, 'c': 4}
z = {**x, **y}
print(z)
```

- (●) {'a': 1, 'b': 3, 'c': 4} ✓
- ( ) [{'a': 1, 'b': 9}{ 'b': 9, 'c': 16}]
- ( ) [1,2,3,4]
- ( ) None of the above

✗ What is the output of the given code 0/1

```
x = {1:10,2:20,3:30,4:40}
z = x.values()
print(z)
```

- (●) dict_values([10, 20, 30, 40]) ✗
- ( ) dict_values([1,2,3,4])
- ( ) [10, 20, 30, 40]
- ( ) RuntimeError

Correct answer

- (●) dict_values([1,2,3,4])

✓ What is the output of the given code 1/1

```
d = {'a': 1, 'b': 2, 'c': 3}
x = d.update({'b': 4,'d':10})

print(d)
```

- (●) {'a': 1, 'b': 4, 'c': 3, 'd': 10} ✓
- ( ) {'a': 1, 'b': 4, 'c': 3}
- ( ) {'a': 1, 'b': 2, 'c': 3, 'd': 10}
- ( ) TYpeError

✓ What is the value of x 1/1

```
d = {'a': 1, 'b': 2, 'c': 3}
x = ('a' in d)
```

- (●) TRUE ✓
- ( ) 1
- ( ) {'a':1}
- ( ) SyntaxError

✓ What is the output of the given code 1/1

```
z = {i: i ** 2 for i in range(5)}
# x = d[a]
print(z[3])
```

- ○ 6
- ◉ 9 ✓
- ○ 16
- ○ 3

✓ What is the output of the given code 1/1

```
d = {i: chr(65+i) for i in range(5)}
x = sum(d.keys())

print(x)
```

- ○ 11
- ○ 270
- ◉ 10 ✓
- ○ 0

✗ What is the value of x 0/1

```
d = {'cars':['xyz','abc','alpha','zeta']}
x=d['cars'][::-1]
```

- ['zeta', 'alpha', 'abc', 'xyz']
- ['xyz','abc','alpha','zeta']
- xyz
- zeta ✗

Correct answer

- ['zeta', 'alpha', 'abc', 'xyz']

✓ What is the output of the given code 1/1

```
nums = [10,20,30,40,50]
for i, num in enumerate(nums):
print(f" {i}: {num}")
```

- "1: 10
- " 1: 20
- "0: 10 ✓
- TypeError

✓ What is the output of the given code 1/1

```
def fun(*args):
if len(args)>5:
return sum(args)

x = fun(5,4,3,2,1)
print(x)
```

- ○ 15
- ○ 0
- ◉ None ✓
- ○ TypeError

✗ In Python 2, which operator performs floor division and discards the fractional part of the result? 0/1

- ◉ / ✗
- ○ //
- ○ "%
- ○ **

Correct answer

- ◉ //

✓ In Python 2, how do you concatenate two strings str1 and str2 efficiently? 1/1

- ○ str1.concat(str2)
- ◉ str1 + str2 ✓
- ○ str1.concatenate(str2)
- ○ concat(str1, str2)

✓ What is the result of the following code in Python 2? x = 5
y = x + 1 if x % 2 == 0 else x – 1 1/1

- ○ 6
- ◉ 4 ✓
- ○ 5
- ○ 7

✓ What does the ord() function do in Python 3? 1/1

- ○ It calculates the absolute value of a number.
- ◉ It returns the Unicode code point for a given character. ✓
- ○ It generates random numbers.
- ○ It raises an exception.

✗ What does the len() function return for an empty dictionary in Python 3? 0/1

- ○ 0
- ○ 1
- ◉ None ✗
- ○ It raises an exception.

Correct answer

- ◉ 0

✓ What is the result of the following code in Python 3? num = 7 result = "Even" if num % 2 == 0 else "Odd" 1/1

- ○ Even
- ◉ Odd ✓
- ○ 7
- ○ EvenOdd

✓ What is the maximum value that can be stored in a Python int? 1/1

- ○ 2^31 – 1
- ◉ 2^63 – 1 ✓
- ○ It depends on the system architecture.
- ○ Unlimited

✓ What is the output of abs(-5)? 1/1

- ○ -5
- ◉ 5 ✓
- ○ 0
- ○ Error

✗ Given x = 2.5 and y = 2, what is the result of x ** y? 0/1

- ◉ 5 ✗
- ○ 6.25
- ○ 4
- ○ 2

Correct answer

- ◉ 6.25

✓ What is the purpose of the recursion in a Python function? 1/1

- ○ To call other functions
- ○ To define inner functions
- ◉ To call the same function within itself ✓
- ○ To handle exceptions

✓ How can you pass a variable number of keyword arguments to a Python function? 1/1

- ○ By using the *args parameter
- ◉ By using the **kwargs parameter ✓
- ○ By specifying all possible arguments in the function definition
- ○ Python does not support variable keyword arguments

✓ What is the output of the following code? numbers = [1, 2, 3, 4, 5]
squared = map(lambda x: x ** 2, numbers)
result = list(squared) 1/1

- ◉ [1, 4, 9, 16, 25] ✓
- ○ [2, 4, 6, 8, 10]
- ○ [1, 3, 5, 7, 9]
- ○ [1, 2, 3, 4, 5]

✓ How do you use a lambda function to filter elements from a list? 1/1

- ◉ filter(lambda x: x % 2 == 0, my_list) ✓
- ○ my_list.filter(lambda x: x % 2 == 0)
- ○ lambda(my_list).filter(x: x % 2 == 0)
- ○ lambda x: x % 2 == 0, my_list

✗ In Python, can lambda functions have access to variables defined outside of the lambda expression? 0/1

- (●) No, lambda functions can only access their own arguments ✗
- ( ) Yes, lambda functions can access variables from the enclosing scope
- ( ) No, lambda functions have their own isolated scope
- ( ) Yes, lambda functions can access global variables.

Correct answer

- (●) Yes, lambda functions can access variables from the enclosing scope

✗ While opening a file with open() function what error we get if the file does not exist? 0/1

- ( ) FileDoesNotExist
- ( ) FileNotPresentError
- ( ) FileNotFoundError
- (●) FileNotFound ✗

Correct answer

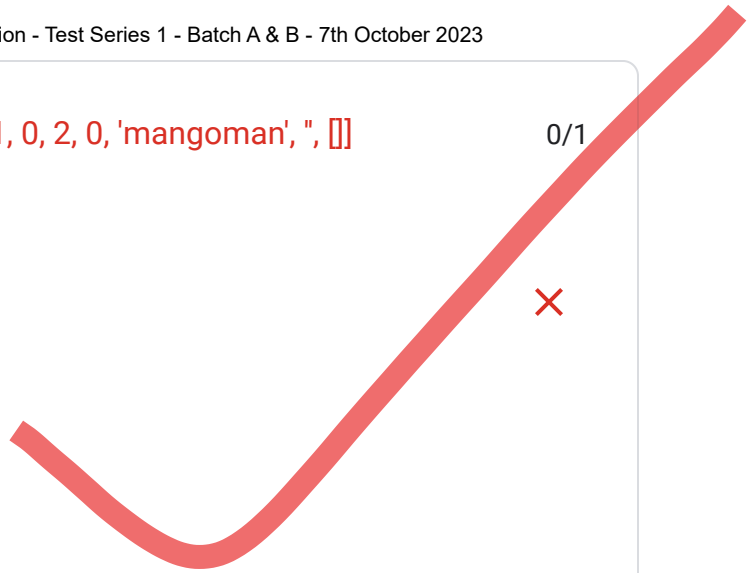
- (●) FileNotFoundError

✗ What is the output of given code. l=[1, 0, 2, 0, 'mangoman', '', []] list(filter(bool, l)) print(l) 0/1

- (●) [1, 0, 2, 0, 'mangoman', '', []] ✗
- ( ) [1, 2, 'mangoman', '', []]
- ( ) [0, 0, 'mangoman', '', []]
- ( ) None of the above

Correct answer

- (●) [1, 2, 'mangoman', '', []]



✓ what does this function call return len(["alpha",2, 4, 6]) 1/1

- ( ) 8
- ( ) 5
- (●) 4 ✓
- ( ) 3

✗ What is the output of this code snippet list=[0,1,1,1]def sum(list): sum=0 for i in range(0,len(list)) sum=sum+i return sum 0/1

- ○ 6
- ○ 3
- ○ 4
- ◉ none of the above ✗

Correct answer

- ◉ 6

✓ What is the output for given code snippet def callFunc(n): sum=0 sum+n callFunc(n+1) return sum 1/1

- ○ n*n
- ○ n*n*n
- ◉ RuntimeError ✓
- ○ none of the above

✗ What is the output of the following code : x=(1,2,3,4) x=x+(9,8,7) print(x) 0/1

- (1,2,3,4,9,8,7)
- (9,8,7,1,2,3,4)
- (1,2,3,4,7,8,9)
- none of the above ✗

Correct answer

- (1,2,3,4,9,8,7)

✗ What is the output of the given code : x=set('a') x.add('abc') print x 0/1

- {'a','abc'}
- {'a','b','c'} ✗
- {'abc'}
- RuntimeError

Correct answer

- {'a','abc'}

✓ What should be at the argument of print to print the string s="abcd" for i in range (len(s)) print(argument) 1/1

- ○ print(i)
- ○ print(i+1)
- ◉ print(s[i]) ✓
- ○ none of the above

✗ What is the output of this dict= {'Name':'Zara','Age':7,'Class':'First'}print("dict['Name']:",dict['Name']) 0/1

- ○ zara
- ○ Name : zara
- ◉ dict['Name']: Zara ✗
- ○ none of the above

Correct answer

- ◉ Name : zara

✓ What is the output of the given code 1/1

```
x = [10, [3.121, 40, [30, 'nick', 2.718]], 'harry']
arr = x[1][2][1]
print(arr)
```

- (●) nick ✓
- ( ) harry
- ( ) 10
- ( ) 40

✓ What is the output of the given code 1/1

```
a = {10:1, 20:4, 30:9}
b = a.pop(20)
print(b)
```

- ( ) Error
- ( ) NA
- (●) 4 ✓
- ( ) 9

✗ What is the output of the given code 0/1

```
x = [1, 2, 3, 4, 5]
y = x[1:4]
print(y[2])
```

- 2
- 3
- 4 ✗
- none of the above

Correct answer

- 3

✓ What is the output of the given code 1/1

```
t = (1, 2, [3, 4])
t[2] += [5, 6]
print(t)
```

- (1,2,[3,4,5,6]))
- (1,2,[3,4],5,6)
- TypeError ✓
- RuntimeError

✓ What is the output of the given code 1/1

```
x = [1, 2, 3]
y = (4, 5, 6)
z = x + y
print(z)
```

- [1,2,3,(4,5,6)]
- (4,5,6[1,2,3])
- (●) TYpeError ✓
- None of the above

✗ What is the output of the given code 0/1

```
a = (i for i in range(5))
x = sum(a)
print(x)
```

- 10
- 5
- 16
- (●) None of the above ✗

Correct answer

- (●) 10

✗ What is the value of x 0/1

a = [10, 22, 30, 4, 5]
b = [91, 81, 72, 61, 5]
x=set(a) & set(b)

- ○ {10,20,30,4,5,91,81,72,61,5}
- ◉ [10,20,30,4,5,91,81,72,61] ✗
- ○ {5}
- ○ TYpeError

Correct answer

- ◉ {5}

✓ What is the output of the given code 1/1

x = {10,20,30,40}
y = {20,40,60,80}
z = x.difference(y)
print(z)

- ○ {-10,-20,-30,-40}
- ○ {20,40}
- ◉ {10,30} ✓
- ○ None of the above

✓ What is the output of the given code 1/1

```
d = {'a': [1, 2,5,10,20], 'b': [3, 4,1]}
if 5 in d['a']:
print("yes")
else:
print("No")
```

- ○ No
- ◉ Yes ✓
- ○ TypeError
- ○ RuntimeError