Test 2

Due Apr 12 at 5:20pm **Points** 100 **Questions** 19
Available Apr 12 at 4pm - Apr 12 at 5:20pm 1 hour and 20 minutes
Time Limit 80 Minutes

Instructions

Please read the following notes carefully before working on the test problems.

This test has two parts. Part 1 contains simple questions (multiple choices, true/false, filling blanks etc). It is a close-book test. So answer questions without using any references (no use of Python interpreter too.) Part 2 requires coding. You may use Python interpreter as well as regular course materials (textbook, slides etc.), but no outside resources (e.g. Internet search etc.). Please observe CPP academic integrity.

If you spot any error or ambiguity in a test problem, for Part 1 problems, please choose an answer best fits the question and we will resolve any issues after solution discussion; for Part 2 problems, please use your best judgement to interpret problems, give your assumptions (if needed) -- note: write your assumption clearly in your code as comments, and solve the problem based on your assumptions.

100 points, 75 minutes.

This quiz was locked Apr 12 at 5:20pm.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	63 minutes	84 out of 100

Score for this quiz: **84** out of 100
Submitted Apr 12 at 5:04pm
This attempt took 63 minutes.

Question 1 — 2 / 2 pts

Assume prices initialized as [10, 20, 30, 40], what will be stored in the list prices after the following code executes?

```
for e in prices  :
       e *= 1.1
```

- correct answer not found in given choices
- Correct! [10, 20, 30, 40]
- [11.0, 22.0, 33.0, 44.0]
- [11, 22, 33, 44]
- [1.1, 1.1, 1.1, 1.1]

Question 2

2 / 2 pts

Assume ***aList = [1, 2, 3]***, what will be stored in cList after the execution of the statement ***cList = [aList * 2]*** ?

- [1,2,3,1,2,3]
- Correct! [[1,2,3, 1,2,3]]
- [2, 4, 6]
- correct answer not found in given choices
- [[1,2,3],[1,2,3]]

Question 3

2 / 2 pts

What are the keys in the following dictionary?

```
fruit = {"Apple": "Green", "Banana": "Yellow"}
```

- "Apple", "Banana", "Green", and "Yellow"

Correct!

- "Apple" and "Banana"
- "Green" and "Yellow"
- correct answer not found in given choices

Question 4

2 / 2 pts

Assume that a dictionary has been initialized as shown below, which statement will NOT print out both the fruit and its color?

```
fruit = {"Apple": "Green", "Banana": "Yellow", "Plum": "Purple"}
```

- for k in fruit.keys() : print(k, fruit[k])
- for k in fruit.items() : print (k)

Correct!

- for k in fruit.values() : print(k)
- for k in fruit: print(k, fruit[k])
- correct answer not found in given choices

Question 5

2 / 2 pts

What will be stored in ***data["Feb"][1]*** if the following statement executes? If error, write Error.

data = {"Jan": 31, "Feb": [28, 29], "Mar" : 31}

Correct!

29

orrect Answers

29

Question 6

3 / 3 pts

The following codes may or may not have errors. Which of the following best describes the nature of the error if any?

```
   myName = (“mary", "christmas”, "happy", ["holidays", "December"])      #l
ine 1
   myName[0] =’Mary                                                       #l
ine 2
   myName[-1][0]= ‘Hoho’                                                  #l
ine 3
```

Correct!

- (●) error in line 2: cannot update a tuple because tuple is immutable
- ( ) error in line 2: cannot update a string because string is immutable
- ( ) No error or correct answer not found in given choices
- ( ) error in line 3: index usage improper
- ( ) error in line 1 -- [] and () couldn't be used in a mixed mode
- ( ) error in both line 2 and line 3: tuples are immutable, cannot be updated

Question 7

3 / 3 pts

The following codes may or may not have errors. If you think line 1 has an error, write 1 in the answer; if line 2 has an error, write 2. if no error, write 0.

```
animals = [“fish”, (“cat”, “kitten”), “dog”]   #line 1
animals[1] = “tabby”                           #line 2
```

Correct!

0

orrect Answers

0

Question 8

3 / 3 pts

Given tp = (1), lst = [1, 2], what value would be assigned to result after the execution of result = tp[0] + lst[1]? If error, write Error.

- correct answer not found in given choices
- 2

Correct!

- Error
- 3

Question 9

3 / 3 pts

Given d = {}, which of the following best describes d's value?

- d is an empty list
- correct answer not found in given choices
- d is an empty set

Correct!

- d is an empty dictionary

d is an empty tuple

Question 10

0 / 3 pts

Given a list **values = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]**, what will be the result of values[::-2]? In case of error, write Error. For list, leave one space between elements.

ou Answered

100 80 60 40 20

orrect Answers

[100, 80, 60, 40, 20]

[100,80,60,40,20]

Question 11

3 / 3 pts

Given the following two pieces of codes, will they print out the same result? True (Yes), False (No). Note: if one has error while the other runs properly, the answer is No. If both generates error, answer Yes.

(a) Assume initially prices = (10.0, 20.0, 30.0, 40.0),

```
for x in prices :
    x = x * 1.1
    print(x, end=' ')
```

(b) Assume initially prices = [10.0, 20.0, 30.0, 40.0],

```
for j in range(len(prices)) :
    prices[j] = prices[j] *1.1
    print(prices[j], end= ' ')
```

Correct!

- (selected) True
- False

Question 12

3 / 3 pts

Given a function that takes a data structure and a value as parameter, and a number of calls, which of the following ones (choose all) that are true/correct?

```
def op (dataS, y) :
        dataS[0] = y

#call 1 where L is a list, say ['a', 'b', 'c']
op(L, 1)

#call 2 where aTup is a tuple, such as ('a', 'b', 'c')
op (aTup, 1)

#call 3 where d is a dictionary such as {0: 'a',  2 : 'b'}
op(d, 1)
```

- [ ] Call 2 runs properly
- [ ] The function definition has error

Correct!

- [x] Call 1 runs properly

Correct!

- [x] Call 3 runs properly

Question 13

3 / 3 pts

What will be printed out by the following code if we've assigned "apple;;ssqqqww....." to the variable txt?

```
x = txt.rstrip(".qsw")
print(x)
```

Correct!

apple;;

orrect Answers

apple;;

Question 14

0 / 3 pts

In the following Python code, we'd write an exception handler that is able to catch any type of runtime exceptions, i.e. catch all exceptions. Please fill in the to write the required handler.

```
a = [1, 2, 3]
try:
    print ("Second element = %d" %(a[1]))
    print ("Fourth element = %d" %(a[3]))
________ #need an exception handler here
    print ("Error occurred")
```

ou Answered

except Exception:

orrect Answers

except:

except :

Question 15

3 / 3 pts

Assume actions in comments are properly coded, in the execution of the following code, will an exception occur? If yes, what happens to the exception?

```
def f(i) :
   try:
      #here we call g(i+5)
 except ValueError:
        #here we print out "Value Error"

def g(i):
  a = "Hello"
  return a[i]

def main() :
   try:
       f(3)
   except IndexError :
```

```
        #Here we print out "Index Error"
main()
```

Correct!

- (selected) yes, and it will be handled in main()
- no exception
- yes, and it will be handled in f()
- yes, and it will crash the program

Question 16

10 / 10 pts

Write short codes to perform the following, no need to test run your code:

(a) write one line of code (without using a loop) to convert a line of text, for example: **“today is a beautiful day”**, into a list of words, for example: **[“today”, “is”, “a”, “beautiful”, “day”]**

(b) write codes to save elements of a list (e.g. **[“today”, “is”, “a”, “beautiful”, “day”])** into a text file named "elements.txt" with each element on one line, i.e.

```
today
is
...
```

Your Answer:

(a) Assume that the line of text is assigned to a string name "text"

wordList = text.split()

(b)

```
fp = open("elements.txt","w")
for item in wordList:
    fp.write(item+"\n")
fp.close()
```

Question 17

8 / 10 pts

Write code for the following set operations, no need to test run the code.

Create an empty set (say named as t)
add "bye", "sad", "happy" to the above empty set t #use any operation to add okay
Let s = {“bye” , “hi”, “good”, “okay” , “sad” }
perform set symmetric difference of s and t and assign the result to w
print every element in set w with each element in one line

Your Answer:

```
t = set()

t.update("bye","sad","happy")

#Assume that set s as mentioned has been initialized

w = s^t

for element in w:

 print(element,end = '\n')
```

update wrong -2

Question 18

16 / 20 pts

Use a try-except exception handling to wrap up the code below and include the following exception handling requirements. No test run

needed. Note: cannot have any additional statements after the try-except construct (i.e. no additional code after the finally clause.

(1) if the data file can't open, use a proper exception (not a catch all exception) to catch this error and handle it by printing out an error message.

(2) if the version number entered not an integer, try to catch this particular type of error (not a catch all exception) and set the version to 0.

(3) if no exception, close the file and print out a message "Good". (This code must be placed after all Except clauses).

(4) at the end (i.e. with or without exception) print out "Done".

```
    #add exception handling to this piece of code
    filename = input ("Enter the data file name")
    version = int(input("Enter an integer to indicate the version of data fi
le"))
    infile = open(filename, "r")
```

Your Answer:

try:

```
  filename = input ("Enter the data file name")
    version = int(input("Enter an integer to indicate the version of data fi
le"))
    infile = open(filename, "r")
except FileNotFoundError:
 print("Can't open file")
except ValueError:
 print("Input must be an integer")
else:
 print("Good")
finally:
 print("Done")
```

version = 0 missing -2 close file missing -2

Question 19

16 / 20 pts

Given two lists as follows: nameLst = ['Kevin', 'Ada', 'Jenny', 'Ada', 'Betty', 'Sam', 'Kevin', 'Betty', 'Ada', 'Terry', 'Nathan', 'Jenny'], scores = [80, 75, 68, 95, 85, 76, 78, 88, 92, 84, 82, 86], note: there are duplicate values in the lists, and you may initialize the lists directly in your code.

(a) Write code that uses Python list comprehension feature to create a ageLst that corresponds to the nameLst (i.e. each name will have a corresponding list). The ages are in the range of [18, 25], randomly generated.

(b) Write code to create a list of Profile that contains tuples of (name, age, score), for example, [('Ada', 19, 80), ('Kevin', 21, 75), ...] note: here the ages are randomly generated so may vary.

(c) Write a function aveScore() that takes a list in the form as generated in above (b) and returns the average score of the all scores in the list.

(d) Write a function sortLst() that takes a list in the form as generated in above (b) and returns a list sorted in alphabetical order of the names, if names are the same, higher scores come first, if names and scores both are the same, the young one (smaller age) comes first.

(5) Write a main() function that initializes the lists, i.e. the above (a) and (b), then calls the aveScore() and sortList() functions.

(6) Call the main() to run. Put output as comments at the end of your code. Upload (e.g. use insert document) a .py file with source code plus output pasted at the end as comments.

Your Answer:

test3.py (https://canvas.cpp.edu/users/43338/files/6714626?wrap=1&verifier=qUO8GOfqNRYIkgK5LfIHVilZTeSVRojPDbHtefBo) ⬇ **(https://canvas.cpp.edu/users/43338/files/6714626/download?verifier=qUO8GOfqNRYIkgK5LfIHVilZTeSVRojPDbHtefBo&download_frd=1)**

sorting order wrong -1 average score wrong -3

Quiz Score: **84** out of 100