python_assignment

August 26, 2017

1 Questions to practice

1.1 Questions

1 . Calculate length of a list

2 . which will create a list: - `some_list = list()` - `some_list = list([1, 2, 3])` - `some_list = [1, 2, 3]` - `some_list = list(1, 2, 3)`

3 . let a list be `s = [1, 3, 2, 1, 5, 3, 9]`. use `min(s)`, `max(s)`, `sum(s)`. also calculate the average of the list.

4 . use `import random` and call `random.shuffle(some_list)` to shuffle the contents of the list `some_list`.

5 . print the last 3 elements of a list without using for loops.

6 . let `some_list = [1, 2, 3, 6, 5, 1, 7, 3]`. what is the output of: - `some_list[:-1]` - `some_list[-4:-2]` - `some_list[2:-3]`

7 . Let this section of code

```python
def extendList(val, list=[]):
    list.append(val)
    return list

list1 = extendList(10)
list2 = extendList(123,[])
list3 = extendList('a')

print "list1 = %s" % list1
print "list2 = %s" % list2
print "list3 = %s" % list3
```

What should be the output?

Why is it different?

How to fix this?

8 . given some code using classes:

```python
class A():
    x = 1
```

```
a = A()
print a.x

b = [A()] * 10

for ix in b:
    print ix.x

b[2].x = 5

for ix in b:
    print ix.x
```

Why is output different from expected?

How can we fix this problem?

9 . use `sorted` in lists. consider the code below:

```python
class Obj:
    def __init__(self, a=0, b=1):
        self.a = a
        self.b = b

if __name__ == "__main__":
    objects = [Obj(1, 2), Obj(5, 4), Obj(7, 3),
               Obj(11, 42), Obj(8, 0), Obj(5, 9)]
```

Sort the above list of objects using > a as key > b as key

10 . List and string slicing

```python
s = "This is introduction to python for web development"

# Obtain each word of the string in a list.
```

11 . Print Pyramid patterns using for and while loops

```
@
@@
@@@
@@@@
@@@@@
```

12 . What will the following code print

```python
some_string = "abacdaegakialaop"
print some_string.split('a', 2)
```