

CSCI 220
In-class Assignment

Interaction of strings and loops.

1. Write the output of the following code. Some of the code results in errors. [Notice what a BAD variable name *i* can be.] Assume that this string assignment has been executed first:

```
s = "ABCDE"
```

```
a. for i in s:  
    print (i, end = " ")
```

ABCDE

```
b. for i in range(s):  
    print (i, end = " ")
```

Error

*s is a string and range
needs int*

```
c. for i in len(s):  
    print (i, end = " ")
```

Error

Int is not a sequence

```
d. for i in range(len(s)):  
    print (i, end = " ")
```

01234

```
e. for i in range(len(s)):  
    print (s[i], end = " ")
```

A B C D E

```
f. for i in s:  
    print (s[i], end = " ")
```

Error cannot have a string be an index

2. Assume:

```
values = ["Ada", 17, 7, 2.5, "Lovelace", 9, -3]
```

What is the value of x after each of the following statements?

a. `x = values[0] + values[4]` "AdaLovelace"

b. `x = len(values)` 7

c. `x = values[4:]` ['Lovelace', 9, -3]

d. `x = values[:1] + values[4:5]` ['Ada'] ['Lovelace'] → ['Ada', 'Lovelace']

e. `x = values[1:4] + values[5:]` [17, 7, 2.5, 9, -3]

f. `x = values[1:3] * 2` [17, 7, 17, 7]

3. Assume

```
text = "I see 4 of u"
```

What is the value of x after each of the following statements?

a. `x = len(text)` 12

b. `x = text[2] + text[8]` "so"

c. `x = text[:3]` "I s"

d. `x = text[2:6] + text[11:]` "see" + "u" → "see u"

e. `x = text[2:5] * 3` seeseese

f. `x = text[6] * 3` 444

4. Write four functions:

1. `getGrades()` → list of grades: Ask the user for the number of grades. Then build a list of all grades input by user.
2. `averageGrades(grades)` → float representing average of grades: Accepts a list of grades and returns the average of that list.
3. `increaseScores(grades, adjustAmount)`: Void function. Accepts a list of grades and a curve amount and adjusts each grade in the list by the curve amount.
4. `main()`: Void function to test above functions

We did not go over 4.c

4.a def getGrades():

numGrades = eval(input("Num Grades?"))

grades = []

for i in range(numGrades):

grades.append(eval(input("Enter grades:")))

return grades

4.d def main():

scores = getGrades()

print(scores)

4.b def averageGrades(grades)

total = 0

for grade in grades

total += grade

avg = total / len(grades)

return avg

4.d def main():

average = averageGrades(scores)

print(average)