Python hands on assignment for week1

Assignment1

Answer the following questions

Write a brief description of all the following Object Types and Data Structures we've learned about:

Numbers:

Strings:

Lists:

Boolean:

There are 4 programming assignment question as well.

Numbers

Write an equation that uses multiplication, division, an exponent, addition, and subtraction that is equal to 100.25.

Hint: This is just to test your memory of the basic arithmetic commands, work backwards from 100.25

In [ ]:

Answer these 3 questions without typing code. Then type code to check your answer.

```
What is the value of the expression 4 * (6 + 5)

What is the value of the expression 4 * 6 + 5

What is the value of the expression 4 + 6 * 5
```

In [ ]:

What is the *type* of the result of the expression 3 + 1.5 + 4?

What would you use to find a number's square root, as well as its square?

In [ ]: `# Square root:`

In [ ]: `# Square:`

Strings

Given the string 'hello' give an index command that returns 'e'. Enter your code in the cell below:

In [ ]:
```python
s = 'hello'
# Print out 'e' using indexing
```

Reverse the string 'hello' using slicing:

In [ ]:
```python
s ='hello'
# Reverse the string using slicing
```

Given the string hello, give two methods of producing the letter 'o' using indexing.

```
In [ ]: s ='hello'
        # Print out the 'o'

        # Method 1:
```

```
In [ ]: # Method 2:
```

Lists

Build this list [0,0,0] two separate ways.

```
In [ ]: # Method 1:
```

```
In [ ]: # Method 2:
```

Reassign 'hello' in this nested list to say 'goodbye' instead:

```
In [ ]: list3 = [1,2,[3,4,'hello']]
```

Sort the list below:

```
In [ ]: list4 = [5,3,4,6,1]
```

Booleans

For the following quiz questions, we will get a preview of comparison operators. In the table below, a=3 and b=4.

Operator	Description	Example
==	If the values of two operands are equal, then the condition becomes true.	(a == b) is not true.
!=	If values of two operands are not equal, then condition becomes true.	(a != b) is true.
>	If the value of left operand is greater than the value of right operand, then condition becomes true.	(a > b) is not true.
<	If the value of left operand is less than the value of right operand, then condition becomes true.	(a < b) is true.
>=	If the value of left operand is greater than or equal to the value of right operand, then condition becomes true.	(a >= b) is not true.
<=	If the value of left operand is less than or equal to the value of right operand, then condition becomes true.	(a <= b) is true.

What will be the resulting Boolean of the following pieces of code (answer fist then check by typing it in!)

In [ ]:
```
# Answer before running cell
2 > 3
```

In [ ]:
```
# Answer before running cell
3 <= 2
```

In [ ]:
```
# Answer before running cell
3 == 2.0
```

In [ ]:
```
# Answer before running cell
3.0 == 3
```

In [ ]:
```
# Answer before running cell
4**0.5 != 2
```

Final Question: What is the boolean output of the cell block below?

```
In [ ]:  # two nested lists
         l_one = [1,2,[3,4]]
         l_two = [1,2,{'k1':4}]

         # True or False?
         l_one[2][0] >= l_two[2]['k1']
```

Programming Assignment

#Find you manager salary ?

Only using the section which is taught in week1 which means loops are not allowed.

Question 1) Let say your HR informed you that manager is earning double of square of your salary. Can you write python expression to figure out your manager salary? Assume your oen salary is 10,000. Question 2) Let say your manager is earning in US dollar and 1 US dollar is 70 Rs INR. Can you compute the salary in US dollars. You have to write python expression to do thatquestion 3) You have to store list of all people salary in a List (starting number of people 5). Let say salary are store in order of day they join. Now person who joined on day 1 resigned and left. And 1 new person join as well with same salary. Your manager asked you to provide him average of all people salary (Make sure to use index). Perform all above steps in python.Question 4) Write a python code to return string in reverse with skipping of 1 character Ex : Teclov o/p : vle Also make the first letter Caps

Great Job on your first assessment!