

INEURON ASSIGNMENTS

Python Basics : Assignment 2

Question 1: What are the two values of the Boolean data type? How do you write them?

Answer:

- True, False

Question 2: What are the three different types of Boolean operators

Answer:

- and, or, not

Question 3: Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate).

Answer:

1. AND Truth Table

a	b	a AND b
False	False	False
False	True	True
True	False	True
True	True	True

2. OR Truth Table

a	b	a OR b
False	False	False
False	True	True
True	False	True
True	True	True

3. NOT Truth Table

a	b	NOT (a AND b)
False	False	True
False	True	True
True	False	True
True	True	False

a	b	NOT (a OR b)
False	False	True
False	True	False
True	False	False
True	True	False

Question 4: What are the values of the following expressions?

(5 > 4) and (3 == 5)

not (5 > 4)

(5 > 4) or (3 == 5)

not ((5 > 4) or (3 == 5))

(True and True) and (True == False)

(not False) or (not True)

Answer:

Expressions	Results
(5 > 4) and (3 == 5)	False
not (5 > 4)	False
(5 > 4) or (3 == 5)	True
not ((5 > 4) or (3 == 5))	False
(True and True) and (True == False)	False
(not False) or (not True)	True

Question 5: What are the six comparison operators

Answer:

- >, <, >=, <=, ==, !=

Question 6: How do you tell the difference between the equal to and assignment operators? Describe a condition and when you would use one

Answer:

- Equal to (=) is a simple assignment operator which used to store a value in a variable.

- Whereas, other assignment operators like +=, -=, *=, /=, %=, //= are used to do arithmetic operation and assignment in same line.
- Eg., a += 10 => a = a + 10

Question 7: Identify the three blocks in this code

```
spam = 0
if spam == 10:
    print('eggs')
if spam > 5:
    print('bacon')
else:
    print('ham')
    print('spam')
    print('spam')
```

Answer:

```
spam = 0
if spam == 10:
    print('eggs') ==> block 1
if spam > 5:
    print('bacon') ==> block 2
else:
    print('ham') ==> block 3
    print('spam')
    print('spam')
```

Question 8: Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam?

Answer:

```
spam = 1
if spam == 1:
    print('Hello')
elif spam == 2:
    print('Howdy')
else:
    print('Greetings!')
```

Hello

Question 9: If your programme is stuck in an endless loop, what keys you'll press?

Answer:

- CTRL + C

Question 10: How can you tell the difference between break and continue

Answer:

- Break: It will terminate the loop and proceed with next code after loop
- Continue: It will skip the next lines in loop block and moves control back to top of the loop

Question 11: In a for loop, what is the difference between range (10), range (0, 10), and range (0, 10, 1)?

Answer:

- range(10) : Program fix the range from 0th to 9th with count of 10. Starting index is counted as 0 in python.
- Range(0 , 10) : It is same as above. 0th is the index number and 10 is the count of positions from index 0
- Range(0, 10, 1) : It also same as above, starts with index 0th and finish at 9th index (total of 10 counts) and 1 indicates the steps to choose the index.
 - Eg.,
 - range (0, 5, 1) -> 0, 1, 2, 3, 4
 - range (0, 5, 2) -> 0, 2, 4

```
for i in range(0, 5, 2):  
    print(i)
```

0
2
4

Question 12: Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop?

Answer:

```
for i in range(1, 11):  
    print(i)
```

1
2
3
4
5
6
7
8
9
10

```
i = 1  
while i <= 10:  
    print(i)  
    i += 1
```

1
2
3
4
5
6
7
8
9
10

Question 13: If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

Answer:

spam.bacon()