1. What are the Boolean data type's two values? How do you go about writing them?

The Boolean data types two values are True=1 and False= 0

#Enter the name with lowercase letters

name=input("enter your name starting letter")

l=" "

true=1

false=0

#loop checking if it is lowercase or not

for letter in name:

if (letter>='a') and (letter<='z'):

l=l+letter

print(true)

print(l)

else:

print(false)

print("Don't use UPPER CASE letters")

2. What are the three different types of Boolean operators?

They are three different types of Boolean operators: AND, OR , NOT

a=int(input("enter a value:"))

if (a<1)and (a>0):

print("AND")

elif (a==0) or (a>1):

print("OR")

else:

if (a==0):

print("NOT")

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 ).

AND

|  |  |  |
| --- | --- | --- |
| A | B | Output |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

OR

|  |  |  |
| --- | --- | --- |
| A | B | Output |
| 0 | 0 | 0 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 1 |

NOT

|  |  |
| --- | --- |
| A | Output |
| 0 | 1 |
| 1 | 0 |

4. What are the values of the following expressions?

(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

5. What are the six different types of reference operators?

Arithmetic Operator, Logical Operator, Bitwise Operator, Comparison Operator, Assignment Operator and Operator Precedence

6. How do you tell the difference between the equal to and assignment operators?

-> The assign operator symbol is "=". The value will be assign right to the operator and variable will be left to the operator . Expression and name of the variable are not interchangeable.

-> The equal operator symbol is "==". It checks whether the two given operands are equal or not. It returns true if operands on both the sides are equal otherwise it returns false.

7. Describe a condition and when you would use one.

Boolean conditions it is used to evaluate the boolean value. The values are True and False, when an expression is compared or evaluated it will return those values.

x= 5

print(x==2) #True

print(x!=3) #True

print(x>3) #False

* The comparison between the two variables is done using the double equals operator"==".
* The "Not equals" operator is checking the variable is equal to given value
* Third condition is checking the given value whether it is greater than 3.

8. Recognize the following three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

(1)First "if condition " checkes if spam = 10. If it's fails goes to else part and execute the first print function which is print('ham').

(2) Second "if condition" check if spam>5 , if it is not greater than 5, then it goes to the else part and execute the second print function which is print('spam')

(3) Then finally at the end of the loop, the statement print('spam') is executed.

Output is-> ham

spam

spam

9. Create a programme that prints. If 1 is stored in spam, prints Hello; if 2 is stored in spam, prints Howdy; and if 3 is stored in spam, prints Salutations! if there's something else in spam.

spam=input("enter a spam value:")

if spam=="1":

print('Hello')

elif spam=="2":

print('Howdy')

elif spam=="3":

print("Salutions!")

else:

print("Not Allowed!")

10.If your programme is stuck in an endless loop, what keys can you press?

Ctr+C

11. How can you tell the difference between break and continue?

Break-> Break statement used to terminate the loop immediately and control is returned to the statment right after the body of the loop.

Continue-> Continue statement is used to skip the remaining code in the body of the loop and continue the iteration.

12. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

range(10) -> It returns a value of lower and upper bond. It is take automatically sequence of values "0" to "9" range but excludes the value "10".

range(0,10)-> This range is generated same as range(10) but here we directly mention the starting point "0" and stoping point "10" of index which means the index of 0 to 9 values is taken.

range(0,10,1)-> In this range starting point "0" and ending point "10" and step(postive jump) is "1" which means it increases between each integer in the sequence.

13. Using a for loop, write a short programme that prints the numbers 1 to 10 Then, using a while loop, create an identical programme that prints the numbers 1 to 10.

For Loop-> for i in range(1,11):

print(i)

While Loop-> i=1

while (i<=0)

print(i)

i=i+1

14. If you had a bacon() function within a spam module, what would you call it after importing spam?

If we had a bacon() function within a spam module, we would call it after importing spam as spam.bacon()