**Assignmnet 2**

**Name:- Shivam Kumar Shrivastava**

**Email:-sbashrivastava95@gmail.com**

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

Answer: There are two values of data types such as True and False. In Bool expression, it can be written as Truth represented as 1 and False 0.

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

Answer:- There are three boolean operators such as **AND, OR,** and **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 ).

Answer:- There are three Boolean operators such as AND, OR and NOT. The Boolean operator truth teable are given below:-

AND (A and B)

|  |  |  |
| --- | --- | --- |
| A | B | AND |
| 1 | 0 | 0 |
| 0 | 0 | 0 |
| 1 | 1 | 1 |
| 0 | 1 | 0 |

OR (A OR B)

|  |  |  |
| --- | --- | --- |
| A | B | OR |
| 1 | 0 | 1 |
| 0 | 0 | 0 |
| 1 | 1 | 1 |
| 0 | 1 | 1 |

NOT (NOT A)

|  |  |
| --- | --- |
| A | NOT A |
| 1 | 0 |
| 0 | 1 |

4. What are the values of the following expressions?

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

O/P: False

not (5 > 4)

O/P:- False

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

O/P:- True

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

O/P:- False

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

O/P:- False

(not False) or (not True)

O/P:- True

5. What are the six comparison operators?

Answer:- There are six comparision operators which are given below:-

1. == (Equal to) :- it is used for comparision of two values to be equal. e.g., x==y.
2. != (not equal to):- It is used for comparision of two values not be equal.eg., x!=y.
3. > (Greater than) :- It can be written as in expression as x>y
4. <(Less than):- It can be written as in expression as x<y.
5. >=(Greater than or equal to) :- It can be written in expression as x>=y.
6. <= (Less than or equal to):- It can be written in expression as x<=y.

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 (==) operator is comparision operator which is used for comparing two values such as x==y where as assignment operators (=,+=,-= ) are used to assign values to the varibales.

Condition to use equal to operator:-

* Equal to (==) operator used for comparing the two values . Suppose,

a=4

b=5

if a==b:

print(“It is equal numbers)

else:

print(“It is not equal numbers)

* Assignment operator is used for assigning values to the varibvale. Suppose

a=100

here, we have assign a to 100 values using assignment operator =

or

a+=100

here, it is same as a=a+100 values which is assignment operator.

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: #From here block 1 starts

print('eggs') #still in block 1

if spam > 5: # Here, bolck 2 starts under block 1 if statements

print('bacon') # Here, bolck 2 starts under block 1 if statements

else: #Here, block 3 starts under block 2 which is again under block 1 if statement

print('ham') #Block 3 ends here

print('spam') #Block 2 ends here

print('spam') #Block 1 ends here

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.

Code:-

spam = input()

if spam == 1:

print('Hello')

elif spam == 2:

print('Howdy')

else:

print('Greetings!')

9.If your programme is stuck in an endless loop, what keys you’ll press?

Answer:- In this case, you have to kill the program by pressing Ctrl+C keys.

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

Answer:- There are following difference between break and continue statement in programming:-

|  |  |
| --- | --- |
| Break | Continue |
| It terminates the current loop operations when it is used in the program and it is resumes operation operation in next statement. | It skips the operations when it is used and then resumes the operation further on condition from the begining. |
| Example:-  for letter in 'Python':  if letter == 'h':  continue  print ('Current Letter :', letter)  O/P:-  Current Letter : P  Current Letter : y  Current Letter : t  Current Letter : o  Current Letter : n | Example:-  for letter in 'Python':  if letter == 'h':  break  print ('Current Letter :', letter)  O/P:-  Current Letter : P  Current Letter : y  Current Letter : t |

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

Answer:- The range is built in function in Python which returns sequence of numbers strating from 0 by default it is increments by 1 and stops before specified number.

Syntax

Range(start,stop,step)

Let’s look at the questions examples

for i in range(10):

print(i,end=’ ‘)

Here, it means range(0,10,1)

Measns start with 0, end before 10 means 9, 1 means step size

Start=0, stop=10, step=1

#Example 2

for i in range(0,10):

print(i)

Also, means the same as discussed above

range(0,10,1)

if step size is not given then by default it is assumed to be 1.

#Example 3

for i in range(0,10,1):

print(i)

It is stated as :

Start=0, stop=10, step=1 which is defined clearly.

All above, range function writtings are same and written

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:- Print numbers 1 to 10 using For loop program:-

for i in range(1,11):

print(i)

Print numbers 1 to 10 using while loop program:-

i=1

while i<=10:

print(i)

i+=1

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

Answer:- It will be imported as, first we need to import the spam module then we need to import the function too.

from spam import bacon

or

we can write as

import spam

spam.bacon()

then we can use for own utilties.