**ASSIGNMENT: 2**

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

Ans: Two values of the boolean data type are True and false.we write it as True and False keywords.

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

Ans. Three different types of boolean operators are and , or , 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 ).**

Ans.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Operand 1 | Operand 2 | Evaluate(and) | Evaluate(or) | (not)applied on operand1 |
| True | True | True | True | False |
| True | False | False | True | False |
| False | True | False | True | True |
| False | False | False | False | True |

**4. What are the values of the following expressions?**

a. (5 > 4) and (3 == 5) : False

b. not (5 > 4) : False

c. (5 > 4) or (3 == 5) : True

d. not ((5 > 4) or (3 == 5)) : False

e. (True and True) and (True == False) : False

f. (not False) or (not True) : True

**5. What are the six comparison operators?**

Ans. The six comparison operators are

* Less than(<)
* Less than equal to(<=)
* Greater than(>)
* Greater than equal to(>=)
* Equal to(==)
* Not Equal to(!=)

These comparison operators compare two values and return a boolean value, either True or False.

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

The difference between equal to and assignment operator is that :

* The assignment operator is denoted by ‘=’ and is used to assign a value on the right to the variable on the left.
* Whereas, equal to operator is denoted by ‘==’ and it checks whether the two given operands are equal or not. If so, it returns True. Otherwise it returns False.

Condition:

* Assignment operator used to assign a value on the right to the variable on the left.

Ex: a= 7

Here the value 7 has been assigned to a. So if we print the value of a we will get 7.

* Equal to operator checks whether the two given operands are equal or not. If so, it returns True. Otherwise it returns False.

Ex: 3==4 will give us boolean value False because 3 is not equal to4

2==2 will return True because 2 is equal to 2.

**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')

Ans. The three blocks in above code are:

1.

if spam == 10:

print('eggs')

2.

if spam > 5:

print('bacon')

3.

else:

print('ham')

print('spam')

print('spam')

**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.**

Ans:

spam=0

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?**

Ans. To exit from an infinite loop press CTRL+C .

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

* The break statement terminates the loop containing it. Control of the program flows to the statement immediately after the body of the loop.

If the break statement is inside a nested loop , the break statement will terminate the innermost loop.

* Whereas, the continue staement is used to skip the rest of the code inside a loop for the current itertion only.Loop does not terminate but contiues on with the next iteration.

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

Ans: There is no difference between range(10) , range(0,10) and range(0,10,1).we can understand this by a python code and its output:

|  |  |  |
| --- | --- | --- |
| for i in range(10):  print(i)  output:  0  1  2  3  4  5  6  7  8  9 | for i in range(0,10):  print(i)  output:  0  1  2  3  4  5  6  7  8  9 | for i in range(0,10,1):  print(i)  output:  0  1  2  3  4  5  6  7  8  9 |

**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.**

Ans: Program using for loop:

* for i in range(1,11,1):

print(i)

Program using while loop :

* i=1

while i<=10 :

print(i)

i=i+1

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

Ans : After importing spam we will call it as:’

spam.bacon()