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

Ans: The two data types of Boolean are TRUE and FALSE.

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

Ans:The different types of Boolean operators are Relational operators,Membership operators,AND, OR etc.

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: TRUTH TABLE FOR AND TRUTH TABLE FOR OR

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

|  |  |  |
| --- | --- | --- |
| A | B | A OR B |
| 1 | 0 | 1 |
| 0 | 1 | 1 |
| 1 | 1 | 1 |
| 0 | 0 | 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 comparison operators?

Ans: The different types of the comparison operators are:

* <= Less than or Equal to
* >= Greater than or equal to
* ! = NOT Equal to
* == Equal to
* <: Less than
* >: Greater than

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

Ans: The difference between Equal to operator and the assignment operator are:

|  |  |
| --- | --- |
| EQUAL TO OP | ASSIGNMENT OP |
| Equal to is a relational operator | This is used to assign a value to the variable |
| Denoted by symbol “==” | Denoted by symbol ”=” |
| Used to compare two values | Used to assign a value |

7. Identify the three blocks in this code:

spam = 0 → Initialization

if spam == 10:

print('eggs') BLOCK 1

if spam > 5:

print('bacon') BLOCK 2

else:

print('ham')

print('spam')

print('spam') BLOCK 3

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 = int (input(“Enter the value of spam”))

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: Infinite loop is an iterative control structure that never terminates (or eventually terminates with a system error ) and they generally results in programming error such infinite loops cause a program to “hang” that is to be unresponsive to the user . in such cases the program must be terminated by use of some special keyboard input such as CTRL+C to interrupt the execution.

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

Ans: BREAK () :

* Eliminates the execution of the remaining iteration of the loop ;
* Resume control to end of the loop;
* It early terminates the loop;
* Stops the continuation of the loop it can be used with switch label.

CONTINUE():

* Terminates only the current iteration of the loop;
* Resumes the next iteration of the loop
* Early execution of the next iteration
* It only stops the current iteration and Cannot be used switch and labels

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

Ans: All the three are same and they give the same output when they are iterated as we can see in the last ex: range(0,10,1) the 1 indicates step size where as the other two the default step size is one in the last ex the step size is explicitly mentioned.

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: USING FOR LOOP

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

**print(i+1)**

Ans**:** USINGWHILELOOP

**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: The function can be called Using spam.bacon()