

Assignment 2

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

Ans: The two values can be represented of either as True or as False. We have to write it like this: - True, False

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

Ans: All search phrases are found through AND searches. For instance, a search for zika, malaria, and dengue only yields results that include all three search phrases.

Either phrase can be found using an OR search. When you search for dengue, malaria, or zika, all results that contain any of the three search phrases are returned.

Items that contain the specified phrase are removed by NOT. Looking up malaria. Malaria-related results are returned by NOT zika, but NOT zika-related results are not returned. This is a method of optimizing outcomes. Note that AND NOT can be used on occasion and does the same purpose as 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 evaluates)

Ans:

True	True	AND	True
True	False	AND	False
False	True	AND	False
False	False	AND	False

True	True	OR	True
True	False	OR	True
False	True	OR	True
False	False	OR	False

True	NOT	False
False	NOT	True

4. What are the values of the following expressions?

Ans:

(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: ==, !=, <, >, <=, and >=.

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

Ans:

Equal operators use double equal sign where assignment operator use single equal sign.

While = is the assignment operator that assigns a value to a variable, == is the equal to operator that compares two values and evaluates to a Boolean.

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 blocks will be lines under the if statement. The code will be like this

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

And it will print just "spam" "spam". As spam is 0 it won't go under the if statement.

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 number"))
```

```
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: You can press **Ctrl + C** .

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

Ans: The break statement in Python terminates the loop in which it was inserted. A single loop iteration is skipped using a continue statement in Python. In either a for or a while loop, we can use the break and continue statements.

```
students = ["Paul", "Erin", "Connie", "Moir"]
```

```
for student in range(0, len(students)):
```

```
    if student == 2:
```

```
        break
```

```
    else:
```

```
        print(students[student])
```

```
print("Counter is " + str(student))
```

```
print("Program Complete")
```

Here the output will be:

```
Paul  
Counter is 0  
Erin  
Counter is 1  
Program Complete
```

```
students = ["Paul", "Erin", "Connie", "Moir"]
```

```
for student in range(0, len(students)):
```

```
    if student == 2:
```

```
        continue
```

```
    else:
```

```
        print(students[student])
```

```
print("Counter is " + str(student))
```

```
print("Program Complete")
```

Here the output will be:

```
Paul  
Counter is 0  
Erin  
Counter is 1  
Moir  
Counter is 3
```

Program Complete

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

Ans: The output will be all same. Just the pattern are different.

range(10): Here the start hasn't been declared but still will start from 0.

range(0,10): Here the start and end both are declared.

range(0,10,1): Here the start and end has declared along with the step. 0 is the start point, 10 is the end point and 1 is the step.

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: For loop:

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

```
    print(i)
```

While loop:

```
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?

Ans: This function can be called with **spam.bacon()**.