HW-WEEK2-#BaharSohrabi#40113841054157

1. A Boolean expression, sometimes called a predicate, may have only one of two possible values: false or true.

2. The term Boolean comes from the name of the British mathematician George Boole.

3. The integer 1 is always True.

4. The integer 0 is always False.

5. Yes.It is False.

6. x, y, z = 3, 5, 7

a)True

b)True

c)False

d)True

e)False

f)True

g)True

h)False

i)False

j)True

k)True

l)False

7.

a)True

b)False

c)False

d)True

e)False

f)True

g)False

h)True

i)True

j)True

k)False

l)True

m)False

n)True

o)True

p)True

q)False

r)True

s)False

t)True

u)True

v)False

w)False

x)True

y)True

z)False

8.

a) x!=2

b) x<=2

c) x>=y

d) x>y

e) $x \leq 10$ or $x \geq 20$

f) 10<x<20

g) $x \neq 0$

h)x=0

9.

a) x!=y

b) x=<y

c) x>=y

d) x<y

e) x>y

f) x==y

g) x==y

h) x!=y or x>=2

i) x!=y and x<=2

j) x==y

10.

It happens when a statement is true if and only if it is true.

11.

This statement is false.

12.

```
x=int(input("Please Enter a Number:"))
if 0<x<100:
    print("ok")
```

13.

```
x=int(input("Please Enter a Number:"))
if 0<x<100:
    print("ok")
else:
    print("Out of renge")
```

14.

```
x={'Monday':'Lunes','Tuesday':'Martes','Wednesday':'Miércoles','Thursday':'Jueves','Friday':'Viernes','Saturday':'Sábado','Sunday':'Domingo'}
y=input("Please Enter English Day Of The Week:")
if y in x:
    print("The Spanish equivalent of ",y,"is",x)
```

```
else:
    print("No Spanish equivalent found")
```

15.

a) i = 5 j = 7 k = 3

b) i = 5 j = 3 k = 7

c) i = 3 j = 5 k = 7

d) i = 3 j = 7 k = 5

e) i = 5 j = 3 k = 7

f) i = 7 j = 5 k = 3

16.

a) wow 3

b) whoa 21

c) 5

d) whoa 27

e) wow -5

17.

Program1:

a) ****
b) ***
c) ***
d) **
e) *
f) Nothing

Program2:

a) *
b) *
c) *
d) *
e) *
f) Nothing

The two programs behave differently because the first program uses an if statement, which will only execute the code within its block if the condition is true. The second program uses an elif statement, which will only execute the code within its block if all of the previous conditions are false and the current condition is true. This means that in the first program, all of the conditions will be checked even if one of them is true, while in the second program, only one condition will be checked

18.

```
a1 = int(input("x1:"))
max = a1
min = a1
a2 = int(input("x2:"))
a3 = int(input("x3:"))
a4 = int(input("x4:"))
a5 = int(input("x5:"))
if a2 < min :
   min = a2
if a3 < min :
   min = a3
if a4 < min :
   min = a4
if a5 < min :
   min = a5
print("Min = ",min)
if a2 > max :
   max = a2
if a3 > max :
   max = a3
```

```
if a4 > max :
   max = a4
if a5 > max :
   max = a5
print("Max = ",max)
```

19.

```
a1 = int(input("x1:"))
a2 = int(input("x2:"))
a3 = int(input("x3:"))
a4 = int(input("x4:"))
a5 = int(input("x5:"))
dublicated = 0
if a1 == a2 :
   dublicated += 1
if a1 == a3 :
   dublicated += 1
if a1 == a4 :
   dublicated += 1
if a1 == a5 :
```

```
    dublicated += 1
if a2 == a3 :
    dublicated += 1
if a2 == a4 :
    dublicated += 1
if a2 == a5 :
    dublicated += 1
if a3 == a4 :
    dublicated += 1
if a3 == a5 :
    dublicated += 1
if a4 == a5 :
    dublicated += 1
if dublicated != 0 :
    print(" * DUPLICATES  *")
else :
    print("ALL UNIQUE")
```

*factorial:

```
x=int(input("enter a number:"))
factorial=1
if nx<0 :
  print("factorial does not exist for negetive numbers")
elif x==0:
  print("the factorial of 0 is 1")
else:
    for i in range(1,x+1):
      factorial=factorial*i
      print("the factorial of",x,"is",factorial)
```

The End>.<