Conditionals: Boolean Strings

if, else, pass

In [2]:

```
sunny_today = False
if sunny_today:
    print("Today is a sunny day")
else:
    print("Today not a sunny day")
```

```
Today not a sunny day
```

.isalnum(), .istitlle(), .isdigit(), .islower(), .startswith()

In [5]:

```
test_string_1 = "welcome"
test_string_2 = "I have $3"
if test_string_1.islower():
    if test_string_2.islower():
        print("[1]",test_string_1,"\n[2]",test_string_2,"are both lower")
    else:
        print("only[1]",test_string_1,"is lower")
elif test_string_1.islower():
    print("only[2]",test_string_2,"is lower")
else:
    print("both string are not lower")
```

```
only[1] welcome is lower
```

In [6]:

```
test_string_1 = "welcome"
test_string_2 = "I have $3"
test_string_3 = "With a function it's efficient to repeat code"
```

In [10]:

```
def w_start_test(str):
    if str.lower().startswith('w'):
        return "Yes"
    else:
        return "No"
print("do string [1]'",test_string_1,"' starts with 'w'?",w_start_test(test
_string_1))
print("do string [2]'",test_string_2,"' starts with 'w'?",w_start_test(test
_string_2))
print("do string [3]'",test_string_3,"' starts with 'w'?",w_start_test(test
_string_3))
```

```
do string [1]' welcome ' starts with 'w'? Yes
do string [2]' I have $3 ' starts with 'w'? No
```

```
do string [3]' With a function it's efficient to repeat code ' starts with
'w'? Yes
```

Comparison operators

>,<, >= , <= , == , !=

In [1]:

```
x = 9 + 4
if x == 9:
    print("True")
else:
    print("False")
```

```
False
```

In [2]:

```
if 3 + 3 > 2:
    print("true")
else:
    print("False")
```

```
true
```

if Comparison

In [8]:

```
x =3
y = x + 8
print("y greater than or equal to x + x is",y > x + x)
```

```
y greater than or equal to x + x is True
```

String Comparison

In [13]:

```
msg = "Hello"
```

In [14]:

```
if msg == "Hello":
    print("Hello!")
else:
    pass
```

```
Hello!
```

In [16]:

```
greeting = "Hello"
msg = input("Say'Hello':")
if msg == greeting:
```

```
    print("msg is equal to greeting")
else:
    pass
```

```
Say'Hello':Hello
msg is equal to greeting
```

In [17]:

```
answer = input("What is 8 + 13 ?:")
if answer == "21":
    print("CORRECT ANSWER")
else:
    print("WRONG ANSWER")
```

```
What is 8 + 13 ?:20
WRONG ANSWER
```

In [21]:

```
def  tf_quiz(x, y):
    if int(x) + int(y) > 10:
        return "True"
    else:
        return "False"

print("Enter two single digit number whose sum is greater than 10")
a = input()
b = input()
print("Is sum of both digit is greater than 10?:", tf_quiz(a, b))
```

```
Enter two single digit number whose sum is greater than 10
3
4
Is sum of both digit is greater than 10?: False
```

In [23]:

```
def tf_quiz(x):
    if x.lower() in "save notebook":
        return "True"
    else:
        return "False"
question = input("Should save your notebook?:")
print("Is input to save notebook?:", tf_quiz(question))
```

```
Should save your notebook?:save
Is input to save notebook?: True
```

In [27]:

```
if "a" > "A":
    print("True")
```

```
True
```

In [28]:

```
 day = "monday"

if day.capitalize() == "Monday":
    print("Start the week!")
```

```
else:
    pass
```

```
Start the week!
```

elif and Casting

In [33]:

```
input_size = input("enter size in (S,M,L):").lower()
if input_size == 's':
    print("Price is $6")
elif input_size == 'm':
    print("Price is $7")
elif input_size == 'l':
    print("Price is $8")
else:
    print("NOT AVAILABLE")
```

```
enter size in (S,M,L):X
NOT AVAILABLE
```

Casting

int(), str(), float()

In [35]:

```
str_num_1 = "11"
str_num_2 = "15"
str_num_3 = 10
test = int(str_num_1) + int(str_num_2) + str_num_3
print(test)
```

```
36
```

In [44]:

```
str_integer = "34"
str_integer
int_number = 32
number_total = int_number + int(str_integer)
print(number_total)
```

```
66
```

In [48]:

```
x = input("enter value for x:")
y = input("enter value for y:")
if x.isdigit() and y.isdigit():
    print(int(x) + int(y))
else:
    print("Wrong input")
```

```
enter value for x:3
enter value for y:t
```

```
Wrong input
```

Math operator

addition, substraction, multiplication, division

In [49]:

```
print(43 - 15)
```

```
28
```

In [50]:

```
print(15 * 43)
```

```
645
```

In [51]:

```
print(516 / 12)
```

```
43.0
```

In [52]:

```
print(21/0.5)
```

```
42.0
```

In [53]:

```
print(111 + 84 - 45)
```

```
150
```

In [56]:

```
def multiply(x,y):
    return int(x) * int(y)
print("Enter two single digit number whose sum is greater than 10")
a = input()
b = input()
print("Multiplication of both digits:", multiply(a, b))
```

```
Enter two single digit number whose sum is greater than 10
3
2
Multiplication of both digits: 6
```

In [69]:

```
def improved_multiply(x,y,c):
    if c == '/':
        return str(x / y)
    elif c == '':
        return str(y*x)
    else:
        return "invalid operator"
```

```
print("Enter two single digit number whose sum is greater than 10")
a = input()
b = input()
c = input()
print(improved_multiply(int(a),int(b),c))
```

```
Enter two single digit number whose sum is greater than 10
4
3
/
1.3333333333333333
```

In [70]:

```
student_name = input("enter name: ").capitalize()
if student_name.startswith("F"):
    print(student_name,"Congratulations, names starting with 'F' get to go
first today!")
elif student_name.startswith("G"):
    print(student_name,"Congratulations, names starting with 'G' get to go
second today!")
else:
    print(student_name, "please wait for students with names staring with '
F' and 'G' to go first today.")
```

```
enter name: Manik
Manik please wait for students with names staring with 'F' and 'G' to go fi
rst today.
```

PRACTICE

In [75]:

```
age = int(input("enter the age:"))
if age >= 12:
    print("after 10 years your age will be", age + 10)
else:
    print("it is good to be of ",age)
```

```
enter the age:23
after 10 years your age will be 33
```

In [77]:

```
number = input("Enter digit:")
if number.isdigit():
    if int(number) > 100:
        print("TRUE")
    else:
        print("FALSE")
else:
    print("NOT A DIGIT")
```

```
Enter digit:w
NOT A DIGIT
```

In [79]:

```
letter = 'g'
```

```
def check_guess(x,g):
    if x .lower()== g.lower():
        return "True"
    else:
        return "wrong"
guess = input("Enter guess alphabet:")
print("Your guess is ",check_guess(guess,letter))
```

```
Enter guess alphabet:G
Your guess is  Right
```

In [84]:

```
def letter_guess(x,g):
    if x.lower()== g.lower():
        print("right guess")
        return "true"
    else:
        print("Wrong Guess")
        return "false"
letter = 'm'
if letter_guess(input("enter the letter to guess:"),letter) == "false":
    if letter_guess(input("enter the letter to guess:"),letter) == "false":
        if letter_guess(input("enter the letter to guess:"),letter) == "fal
se":
            print("false")
        else:
            pass
    else:
        pass
else:
    pass
```

```
enter the letter to guess:a
Wrong Guess
enter the letter to guess:s
Wrong Guess
enter the letter to guess:d
Wrong Guess
false
```

In [86]:

```
about_pet = input("Tell something about your pet:").lower()
if "dog" in about_pet:
    print("Ah, a dog")
elif "cat" in about_pet:
    print("Ah, a cat")
print("Thanking you for your story.")
```

```
Tell something about your pet:I have a dog
Ah, a dog
Thanking you for your story.
```

In [93]:

```
def rainbow_color(color):
    if color.lower() == 'r':
        return "Red"
    elif color.lower() == 'o':
```

```
        return "Orange"
    elif color.lower() == 'y':
        return "Yellow"
    elif color.lower() == 'g':
        return "Green"
    elif color.lower() == 'b':
        return "Blue"
    elif color.lower() == 'i':
        return "Indigo"
    elif color.lower() == 'v':
        return "Violet"
    else:
        return "no match"

color = input("Enter the first color from rainbow ROYGBIV:")
print(rainbow_color(color))
```

```
Enter the first color from rainbow ROYGBIV:b
Blue
```

In [100]:

```
def  age_20(x):
    return x - 20
x = int(input())
if x < 20:
    print("Invalid input")
else:
    print(age_20(x))
```

```
34
14
```

In [106]:

```
a = input("enter the input:")
if a.isdigit():
    print(age_20(int(a)))
elif a.isalpha():
    print(rainbow_color(a))
else:
    print("WRONG OPERATION")
```

```
enter the input:$
WRONG OPERATION
```

In [115]:

```
x = int(input())
y = int(input())
print(x + y)
answer = 'the answer is:' + str(x * y)
print(answer)
print((x + y)/2)
if x > y:
    print(x - y)

else:
    print(y - x)
    print(int(y/x))

if x !=0 and y!=0:
```

```
if x !=0 and y!=0:
    if x > y:
        print(int(x/y))
    else:
        print(int(y/x))
```

```
8
2
10
the answer is:16
5.0
6
4
```

Program: Chesse Order

In [120]:

```
minimum_weight = 1
maximum_weight = 100
order_weight = float(input("Enter cheese order weight (numeric value):"))
if order_weight < minimum_weight:
    print(order_weight,"is below minimum order amount")
elif order_weight > maximum_weight:
    print(order_weight,"is more than currently available stock")
else:
    print(order_weight, "costs $",15.98/2 * order_weight)
```

```
Enter cheese order weight (numeric value):2
2.0 costs $ 15.98
```