



# Tutorial

CPSC 217

# Making decisions in Python (Few exercises)

1. The Fast Freight Shipping Company charges the following rates:

Weight of Package	Rate per Pound
2 pounds or less	\$1.50
over 2 pounds but not more than 6 pounds	\$3.00
over 6 pounds but not more than 10 pounds	\$4.00
over 10 pounds	\$4.75

Write a program that asks the user to enter the weight of a package and then displays the shipping charges.

# Making decisions in Python

## (Few exercises)

2. A software company sells a package that retails for \$99. Quantity discounts are given according to the following table:

Quantity	Discount
10 - 19	10%
20 - 49	20%
50 - 99	30%
100 or more	40%

Write a program that asks the user to enter number of packages purchased. The program should then display the amount of the discount (if any) and the total amount of the purchase after the discount

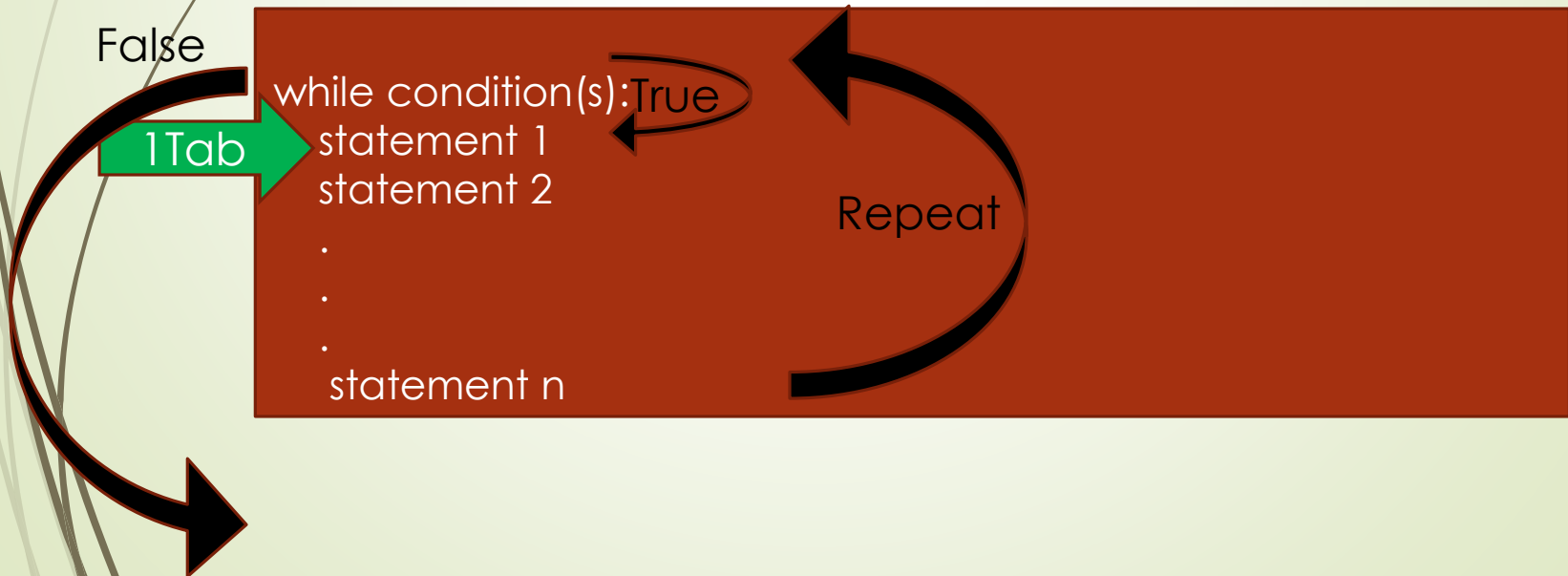
# Looping in Python

- Till now, you have probably noticed that we are writing codes that can be **executed only once**! We have written some cool programs with the previous structures; however, doing everything only once is actually in contrast with the nature of programming! Computers are built to **do similar tasks over and over again** and we, as the programmers, have to write codes for that.
- To accomplish this, we need to **use loops**. Loops are structures that are used to execute **a code block repeatedly**. However, you should always have in mind that loops **HAVE TO BE TERMINATED**! In fact, there should be some “**conditional statement**” which is evaluated in each iteration, and is guaranteed to **become false at some point**!

# Looping in Python

➤ Loops in python are “for” and “while”

➤ While loop



# Looping in Python

- Write a program that prints all the integers between 1 to 1000 (inclusive) separated by ','.

```
it = 1
while it <= 1000:
    print(it, end = ',')
    it = it + 1
```



# Looping in Python

- Write a program that prints all the integers between **160 to 800** (inclusive) separated by **spaces**.

**Try yourself**

- Write a program that prints all the **even integers** between **160 to 800** (inclusive) separated by **spaces**.

**Try yourself**



# Looping in Python

- Write a program that prints all the **integers that are divisible by 13** within the range **160 to 800** (inclusive).

**First, try yourself. Later see the solution below.**

## Solution

```
it = 160

while it <= 800:

    if it % 13 == 0:
        print(it, end = ' ')

    it = it + 1
```





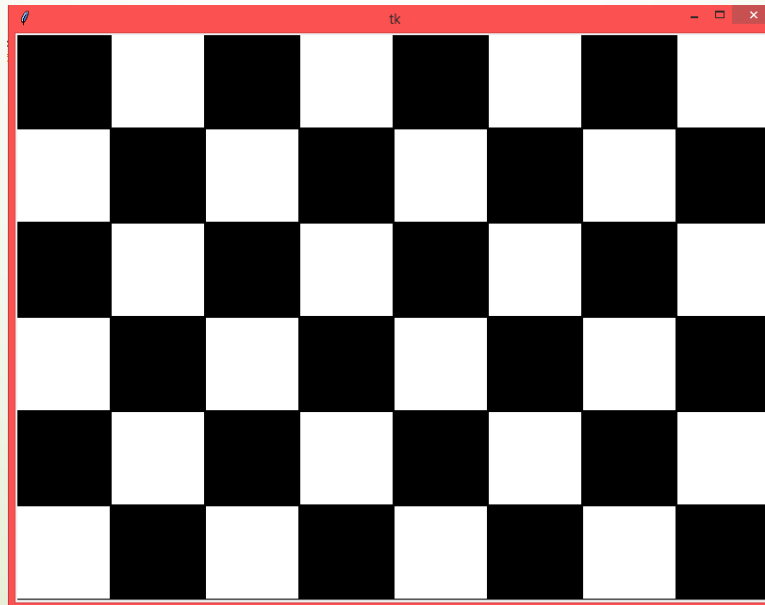
# Practice 1

- Write a program which first asks for a password to be entered by the user and stores it in a variable.

Then, you should ask the user to enter the password again. If the passwords match, print a “Successful Login” message. Otherwise, keep asking for the password till they do match.

## Practice 2

- Using the SimpleGraphics library, write a program which draws a checkerboard on the screen (6 rows and 8 columns). The squares should be 100 by 100 pixels (a total of 48 squares).



Hint: Use nested while loops