# coding in python

week 5

# last week

- ❏ we generated definitions

- ❏ what if we want only want words starting with certain letters?

# this week

- ❏ while loops

- ❏ functions
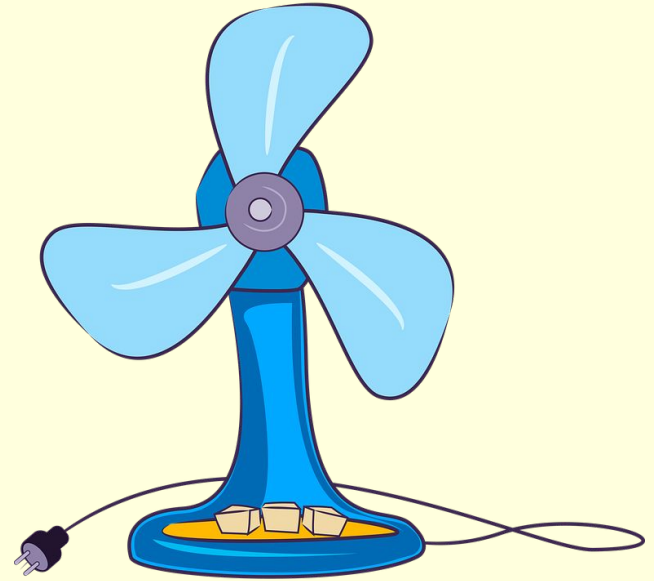
- ❏ getting into our projects

# first, while loops

- ❏ we have seen these before

- ❏ they are similar to for loops

# what do while loops do?

❏ while loops run a piece of code while a condition is true

# think about a fan

- ❏ what if you wanted to design a fan that would turn on only at the right temperatures

- ❏ you could use a for loop!

# two pieces of while loops
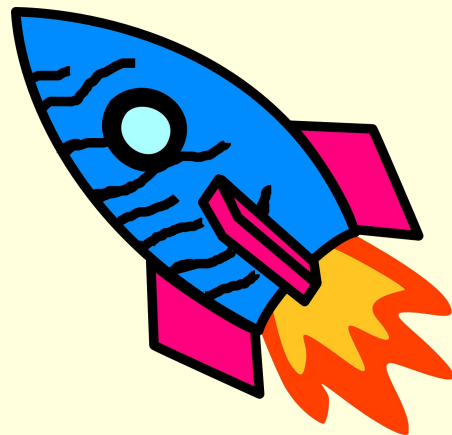
❏ condition

❏ code

# while loops in python

>>> while condition is true:

       run code

❖

# lets try it!

- ❏ remember our rocket ship program?

  - ❏ Counts down and says "blast off" at the end

- ❏ write it using a **while** loop instead of a **for** loop

  - ❏ hint: create a variable outside the loop

# functions

- ❏ functions are used to represent chunks of code

- ❏ they are similar in purpose to variables

# why use functions

❏ functions let us reuse code

❏ they also make our code more flexible

# two pieces of functions

❏    parameters (values)

❏    code

# creating functions

>>> def my_function (parameters):

       code

❖

# using functions

❏ we have seen functions at work before!

❏ now we can use our own functions like that

>>> my_function(parameters)

❖

# parameters

❏ parameters are values you can give your functions

❏ you can use them in your code simply by typing their name

❖

# lets try it

❏ go back to your rocket ship code

❏ put in a function and create a parameter so that you can change the

rocket ships name

❖

# return

- ❏ what if we don't want to print what we get from a function

- ❏ maybe we want to use it for something else

- ❏ to do this, we use return

- ❖

# your project

- ❏ have you thought of a project yet?

- ❏ not yet?

# coming up with a project

- ❏   interests

- ❏   hobbies

- ❏   school

- ❏   work

# your task

- ❏ think of how you would complete your project *you* did it

- ❏ then, think of how a computer could do it through code

- ❏ do some research