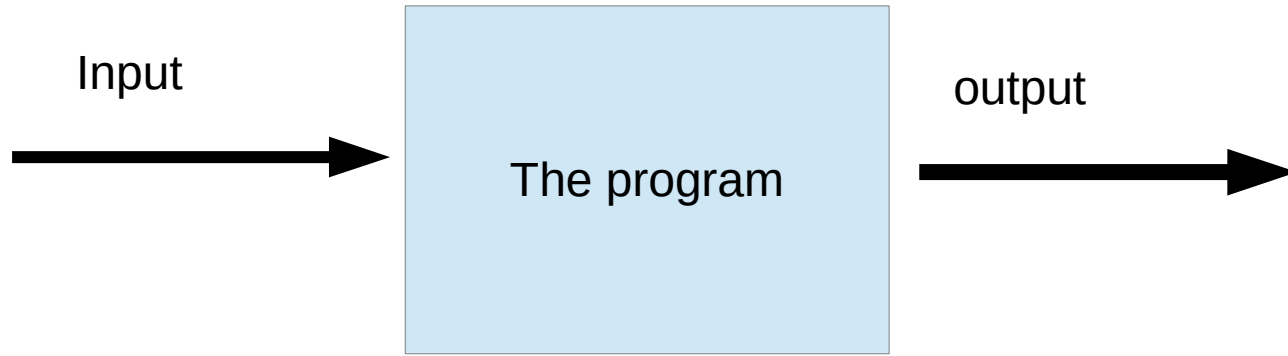# Programming

Quick recap

- The tools we have now:
  - **Variables** to keep data in our program while executing
    - Integer, boolean, string
    - Data structure: list (ordered), map/dictionnary (unordered)
  - **if/else** to decide what do to on <u>condition(s)</u>
  - **Loops** (for/while) to automate <u>repetive tasks</u>
  - **Files** to save the <u>data</u> once the program has finished

A program

Input → The program → output

A new tool: Function

- As the program becomes more complex:
    - The programmer needs to have <u>reusable component</u>
    - Simplify the logic by <u>decomposing</u> its parts

Functions

- A block of code that gets executed only when called
- As a **name**, receives 0 or more **arguments**
- Do something and sometimes **returns** a result

```
def my_function(argument1, argument2, ...):
    #function code
    return result
```

Example

import

- A mechanism to gain access to one **module** or more
- A module: A file containing python code

```
from app import ai
```

Example