

+ - / \* // \*\*

# SIMPLE PYTHON CALCULATOR

Do some math with two inputs you entered

# Structure, how I made folders and files

I wanted to make it a simple python package

Pyproject.toml – app specifications

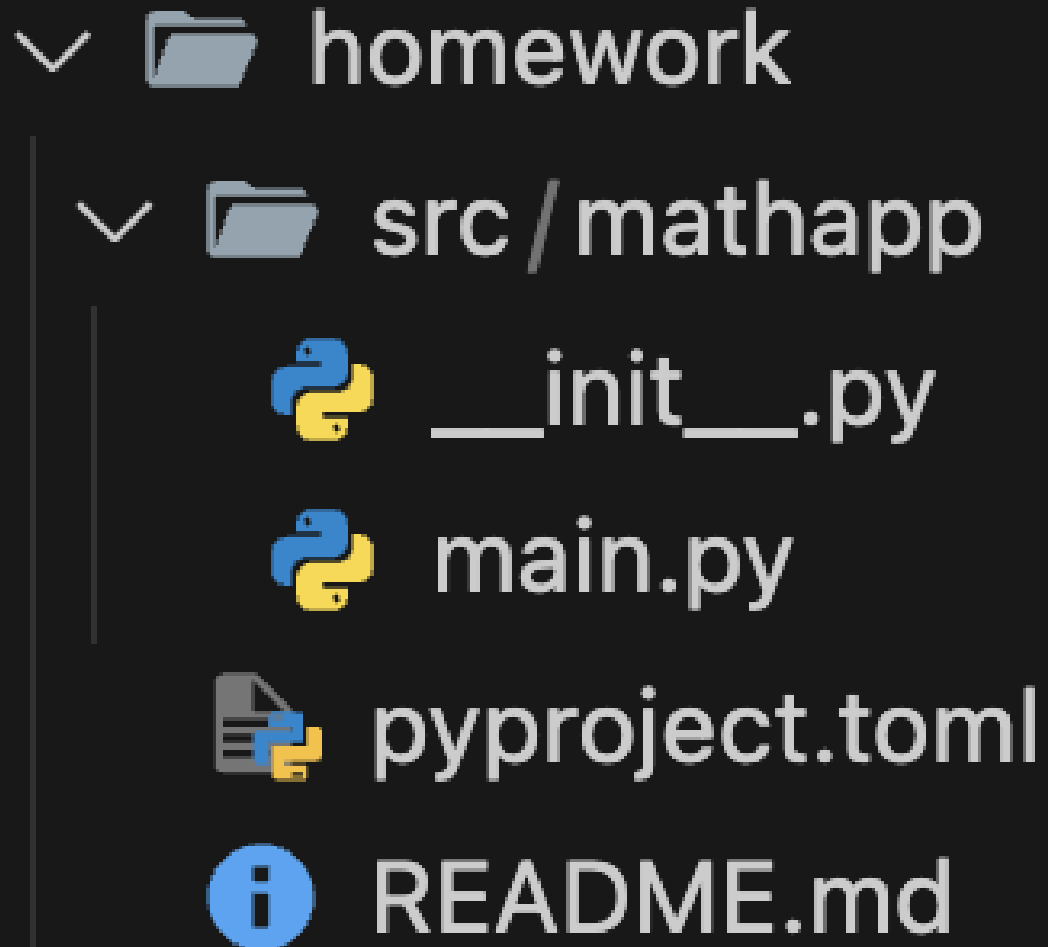
README.md – docs & manuals

## Setup the application

```
pip install -e .
```

## Run the application and see the result


```
run
```



# Constants

```
# Defining the math operators we can use
OPERATORS = ['+', '-', '/', '*', '//', '**']
```

- Clean and understandable code
- Prevent from accidental changes leading bugs
- Change at once
- ...



```
1 # A simple calculation program
2
3 # Defining the math operators we can use
4 OPERATORS = ['+', '-', '/', '*', '//', '**']
5
6 # Checking if the input is number
7 def validate_numeric(input):
8     if not input.isnumeric():
9         print("The input is not a number!")
10    do_math()
11
12 def do_math():
13     print("-----")
14     # Defining first input variable
15     a = input("Enter the first number: \n")
16     validate_numeric(a)
17
18     # define second input variable
19     b = input("Enter the second number: \n")
20     validate_numeric(b)
21
22     # ask for math operator
23     o = input("Enter one of following math operators (+, -, /, *, //, **): \n")
24     if o not in OPERATORS:
25         print("The operator is not valid!")
26         do_math()
27
28     # check if division by zero
29     if o == '/' and b == '0':
30         print("Division by zero!")
31         do_math()
32
33     result = eval(f"{a} {o} {b}")
34
35     # calculate the result
36     print(f"The result is, \n {result}")
```

# Input Validation

- Check first and second input is number or not
- Use built-in String.isnumeric() method

```
# Checking if the input is number
def validate_numeric(input):
    if not input.isnumeric():
        print("The input is not a number!")
        do_math()

def do_math():
    print("-----")
    # Defining first input variable
    a = input('Enter the first number: \n')
    validate_numeric(a)

    # define second input variable
    b = input("Enter the second number: \n")
    validate_numeric(b)
```

# Logic 😊

- built-in eval() function in python
- print suitable message to user
- restart app if validation fails
- result at the end

```
# ask for math operator
o = input("Enter one of following math operators (+, -, /, *, //, **): \n")
if o not in OPERATORS:
    print("The operator is not valid!")
    do_math()

# check if division by zero
if o == '/' and b == '0':
    print("Division by zero!")
    do_math()

result = eval(f"{a} {o} {b}")

# calculate the result
print(f"The result is, \n {result}")
```