Python Project 2022

7. Juni 2022

1 Project Description

The Program developed is a simulator for sensor data. It should be capable of generating Values, storing them in a file, reading from the file and generating visual output via matplotlib.

2 Git

First, you need to create a user on Github, which is free of charge. To do so go to the website github.com
test

3 Stage One

3.1 Argument Handling

In this stage, the argument handling for the simulator should be implemented. Argument handling is the way how arguments, that are given at the call of the program, are checked if they fit their purpose. As an example: a program `add`, that adds two numbers is called with the following call sequence:

```
name@pc$ ./add.py <number_one> <number_two>
```

If the user calls the program with

```
name@pc$ ./add.py 1 2
```

everything is fine but what about:

```
name@pc$ ./add.py something 2
```

The adder will not know how the argument `something` should be interpreted, so internally the adder has to make sure that only valid arguments are actually processed, since otherwise errors may occur and the program can crash.

3.2 Reqirements

Our implementation of the program will be called in the following fashion:

```
name@pc$ ./sensor_generator.py <boundary_one> <boundary_two>
```

The program shall accept all numbers in the range of the float datatype in python. If the input values are out of range or not a number then the following error message shall be displayed and the program should terminate.

```
program terminated with errors!
input is not in range or not a number!
usage: ./sensor_generator.py <boundary_one> <boundary_two>
```