Project Sensors

Unit test plan

Module: sensors\_main

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Id** | **Description** | **Target(s)** | **Precondition(s)** | **Input(s)** | **Expected outcome(s)**  **(postcondition)** |
| **TC1** | Correct limits | Function check\_limits | None | limits == [18, 22] | Function returns True |
| **TC2** | Incorrect limits | Function check\_limits | None | limits == [22, 18] | Function returns False |
| **TC3** | Incorrect limits | Function check\_limits | None | limits == [18, 18] | Function returns False |
| **TC4** | Correct limits using negative number | Function check\_limits | None | lower limit = -12 and higher limit = 55 | Function returns True |
| **TC5** | InCorrect limits using negative number | Function check\_limits | None | lower limit = 55  and higher limit = -12 | Function returns False |
| **TC6** | InCorrect negative limits | Function check\_limits | None | lower limit = -12 and higher limit = -12 | Function returns False |

**Project Sensors**

**Integration test plan**

**Module: sensors\_main**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Id** | **Description** | **Target(s)** | **Precondition(s)** | **Input(s)** | **Expected outcome(s)**  **(postcondition)** |
| **TC1** | Test integration between main and check\_limits  With incorrect negative inputs. | Module  sensors\_main,  functions main  and  check\_limits | Function check\_limits has been unittested. Function main is runnable, it is able to parse thecommandlinearguments and the call from it to check\_limits has been implemented. | Command line parameters (min. and max. temperature) 55 and -12. | In main, error message” Error: Incorrect command line arguments.” is printed to the console. |

**A system test case plan**

|  |  |  |
| --- | --- | --- |
| **Id:** | **Description:** | **Related requirements or use cases/user stories:** |
| ST2 | Testing adjusting the measurements per hour interval. | RQ3, UC3 |

**Precondition:** None.

**Postcondition:**

The system starts to read the sensor temperature at the new configured interval and generates a message (“The reading interval is modified and saved correctly”) is shown in console.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Step** | **Description** | **Inputs** | **Expected output(s) or result(s)** | **Actual output(s) or**  **result(s)** | **Pass / fail & notes** |
| 1 | Operator starts the sensors\_main.py from command prompt and selects change reading time interval. | Command line new interval:  3 hours | - |  |  |
| 2 | Software adjusts the reading interval to the new value. | - | Message in console:  (“The reading interval is modified and saved correctly”). |  |  |
| 3 | Software starts to read the data at the new required interval. |  | Temperature reading interval is updated. |  |  |