

## System and Unit Test Report

Smart-Irrigation Backend

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### Sprint 1

A.) User Story 2 from Sprint 1 : As a developer, I want the data from the raspberry pi to be stored on a MySQL database so I can easily query the data.

Scenario :

- 1.) Start SqlPullTest.pl with python SqlPull.py in same diectory.
  - a.) Enter in a range of readings to request.
- 2.) User should see range of values reported from MySQL table.

### Sprint 2

A.) As a developer, I want to be able to generate dummy data for testing so that I can continue development regardless of the PI sensor's state.

Scenario :

- 1.) Run RandCSV.py
- ...

B.) As a frontend developer, I want to be able to access data through an API so that I can provide functionality to the user.

Scenario :

- 1.) Enter the /smart-irrigation/Backend/QA directory.
- 2.) Open 'testlist' and ensure the tests on the API you'd like to run are present.
  - a.) Tests can be viewed in the /Tests subdirectory of QA.
- 3.) Execute TestHarness.py in the QA directory.
- 4.) terminal should report the queries performed through the API and their successes and failures.

### **Sprint 3**

A.) As an administrator, I want to implement security into our API so that only the frontend has access to the information stored in the database.

Scenario :

- 1.) Enter the /smart-irrigation/Backend/QA directory
- 2.) Open the 'testlist' file.
  - a.) Ensure the testlist contains the tests httpauthentication\_bad and httpauthentication\_good.
- 3.) Execute TestHarness.py in the QA directory.
  - a.) Observe the terminal output for httpauthentication tests. good will use a correct username and password. bad will not.
  - b.) good should result in observed output "All Hail Bob!"
  - c.) bad should result a failure to login.
- 4.) Examine TestingLog\_<yourdate>\_at\_<yourtime> and ensure all tests completed successfully.

B.) As an administrator, I want to implement security into our API so that only the frontend has access to the information on the database.

Scenario :

- 1.) Enter the /smart-irrigation/Backend/QA directory
- 2.) Open the 'testlist' file.
  - a.) Ensure the testlist contains the tests httpauthentication\_bad and httpauthentication\_good.
- 3.) Execute TestHarness.py in the QA directory.
  - b.) Observe the terminal output for httpauthentication tests. good will use a correct username and password. bad will not.
  - c.) good should result in observed output "All Hail Bob!"
  - d.) bad should result a failure to login.
- 4.) Examine TestingLog\_<yourdate>\_at\_<yourtime> and ensure all tests completed successfully.