## Test E

This test is to ensure that the server can correctly communicate and interact with the mobile application. It will check the functionality of normal operation procedures, as well as how it handles unexpected or malformed input.

### Test Specification

The following criteria are required to pass this test:

* The server can be reached over the internet (ping test)
* The API is running and accessible
* User surveys (MTDS/training volume/sleep) can be successfully sent to the server, stored, and then retrieved with the survey data remaining in-tact (idempotence)
* The server only responds to users of the system; it does not return any useful information without a proper login
* The server will reject malformed input appropriately (sufficient error-handling)

### Test Description

This test will be conducted remotely to the server (over the internet). Part of the test will involve manually interacting with the server interface (API) via a normal web browser. This is to ensure that the interface is robust and can handle various forms of input. Subject to time constraints, and if deemed necessary, automated unit testing of the API may be an option.

Input data:

* Sample user (email/password)
* Sample survey data (MTDS/training volume/sleep)

Output data:

* The server response (JSON formatted)
* Examination of the data stored on the server

Testing procedure:

* Determine the URL or IP address of the server.
* Ping the server.
  + No response → test failed
* Enter the URL of the API (e.g. <http://server/api>) and check that it responds as expected. This includes checking the HTTP return code.
  + No response or invalid response → test failed
* Login to the API with the sample credentials. Check that the server accepts the credentials and responds as appropriate.
  + Rejection of credentials or invalid response → test failed
* Simulate the submission of various sample surveys to the server. Check that the server accepts this data. Check the response.
  + Rejection of sample data or invalid response → test failed.
* Submit various sample surveys that are known to have invalid responses. Check that the server rejects this data. Check the response.
  + Accepting the data or invalid response → test failed.
* Logout from the server. Check the response.
  + Invalid response → test failed.
* Attempt to request data specific to the sample user (private data). Check that the server rejects the request (already logged out).
  + Returns user specific data → test failed
* Using the administrative interface, check that the saved responses are equal to what was submitted.
* Perform various permutations of requests against the API manually. Check that the response is as intended.

### Test Analysis Report

TBA (once test has been conducted)

## Test F

This test is to ensure that the administrative interface has basic functionality.

### Test Specification

The following criteria are required to pass this test:

* The interface only allows authorised users access
* Users can be added/removed
* Survey data can be downloaded and saved appropriately (e.g. CSV format)

### Test Description

This test will be conducted remotely to the server (over the internet).

Input data:

* Sample administrator login (email/password)

Output data:

* Exported survey data

Testing procedure:

* Navigate to the administrative interface (e.g. <http://server/admin>). Ensure that it is accessible.
  + Not accessible → test failed
* Attempt login with invalid credentials.
  + Accepting invalid credentials → test failed
* Attempt login with the sample administrator credentials
  + Rejecting the credentials –> test failed
* Check that the interface is laid out as intended. Check that there are navigation options to add/remove users, to view survey data and to export that data.
  + Malformed interface → test failed
* Check the add/remove user functionality. After adding/removing a user, attempt login with those credentials on the API
  + Login possible with deleted credentials or login not possible with added credentials → test failed
* Check the ability to view survey results and the ability to export that data
  + Cannot view or export data → test failed
* Logout of the interface. Check that it is not possible to access any part of the administrative interface.
  + Able to access restricted areas without credentials → test failed

### Test Analysis Report

TBA (once test has been conducted)