Chapter 1 September 12, 2019

When we first started this project, we knew that there were going to be some issues with the python scripts running on Linux. We had anticipated it, but it still gave us some troubles. The first issue is running the tests. There was test runner on the main repository's source file, however it did not run as expected. So, it was decided that just running the test cases themselves should suffice. The problem that was not anticipated was the libraries and dependencies. The first error that was encountered was a ModuleNotFound error. This is most likely due to how the interpreter is set up on Linux and how the python path works. Shaina researched the many ways of getting the proper modules in the python path and the system path. She was not successful. So, the next step, was to drop the libraries needed in the same directory as the test cases. Although the library issue was solved, another one manifested. There was an ImportError stating "cannot import name X." After some research, it was found that the most likely cause of this is a circular dependency issue. Knowing that circular dependencies can be tricky to maneuver, it was time to find another option.

After some more thought and research, David found a way to test python script through Linux with pytest. During installation, the first instinct is to immediately type, "sudo apt install pytest" or "pip install pytest" and this works, yes. However, this project has been recently ported to python3 therefore, some libraries do not exist in python2 which is what most of the team's machines had installed pip with. Therefore, back to Google. Shortly after, a solution was found. Pip-3.2 had to be installed or the test case had to ran using the following command, "python3 -m pytest testcase.py." Quite frankly, the latter was the easiest to do because it was the one that had a 100% success rate. Some of the test cases worked, some of them still had issues with the

modules. We are still working on finding a way to fix that. However, at the moment, this is where we are. Below are some screenshots of the results that the team were able to require.

Pytest test case on python2, note that http.server is exclusive in a python3 module

Successful test runs on pytest

Sample output of both module and dependency errors

```
ModuleNotFoundError: No module named 'sugar3'
shaina@shaina-VirtualBox:~/Desktop/Seawolves/SugarProject/sugar/tests$ python3 test_downloader.py
test_downloader.py:22: PyGIWarning: Gtk was imported without specifying a version first. Use gi.requi
re_version('Gtk', '3.0') before import to ensure that the right version gets loaded.
  from gi.repository import Gtk
Traceback (most recent call last):
  File "test_downloader.py", line 24, in <module>
    from sugar3 import env
ModuleNotFoundError: No module named 'sugar3'
shaina@shaina-VirtualBox:~/Desktop/Seawolves/SugarProject/sugar/tests$
```

```
shaina@shaina-VirtualBox:~/Desktop/Seawolves/SugarProject/sugar/tests$ python3 test_webservice.py
test_webservice.py:20: PyGIWarning: Gtk was imported without specifying a version first. Use gi.requ
re_version('Gtk', '3.0') before import to ensure that the right version gets loaded.
  from gi.repository import Gtk
Traceback (most recent call last):
  File "test_webservice.py", line 22, in <module>
    from jarabe import config
ImportError: cannot import name 'config'
```