TBD's Sugar Labs Testing Framework

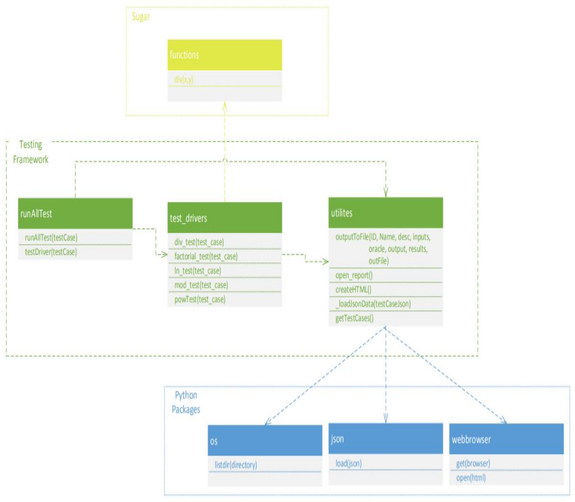
Thomas Setzler, John-Tyler Cooper, Austin Purtell
Department of Computer Science, College of Charleston, Charleston, SC

Overview

- SugarLabs is an HFOSS designed to operate as its own environment
- System of modules designed to promote learning through interaction and collaboration
- Part of the One Laptop Per Child project to promote educational opportunities around the world

Methodology

- Create five or more test cases for each method being tested from Sugar Lab's functions.py
- Develop modularized drivers to be used for each individual method being tested
- Utilize all developed drivers to create a timestamped report that opens automatically in the browser



Test Cases

- Test cases will check logic branches, floats, integers, strings, overflow, and other requirements
- div(x, y): division function. Must handle division by zero, integers, and floats
- pow(x, y): exponent function. Must support integers, floats, and values between 0 and 1,
- ln(x): natural logarithm function. Must operate on values greater than 0, and refuse values less than or equal to 0
- factorial(x): function to perform factorials. Must support integers greater than 0 and refused non-integer numbers less than or equal to 0
- mod(x, y): modular division function. Must accept integers , handle non integers, and return the remainder of x divided by y

Test Case Template

```
{
    "id":"0000000",
    "test_name":"template",
    "drive_name":"",
    "test_discription": "this is the template",
    "input":["2","2.0"],
    "oracle":"4.0",
    "outputs":[],
    "test_pass":false
}
```

Requirements

- Testing framework from TBD's GitHub repository
- Ubuntu 16.04, newer versions should be backwards compatible
- Python 2, most of the Sugar Labs code is written in Python 2
- Test Cases formatted according to the test case Template

Results

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TEST RESULTS

test conducted on 11.19.2019 at 18:32:12

Test Case ID	Name	Requirement	Inputs	Oracle	Output	Result
0000001	functions.div(x, y)	Divide by a negative number	['5', '-1']	-5	-5	Passed
0000002	functions.div(x, y)	Divide by two negative	['-6', '-3']	2	2	Passed

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Directory Structure