

Subject:

TC4002 - Analysis, Design and Construction of Software Systems

Professor:

Gerardo Padilla Zarate

L4.2 - Code Coverage and Coding Standard**Student:**

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For this assignment, I had to go back and modified some of my programs in order to get the most coverage possible. Lab3_17.py and lab3_19.py asked for the unit testing of a built-in function, math.factorial() and filecmp.com(), respectively, I had to slightly modified them in order to applied the proper unit test to them.

1) For all previous exercises, measure the coverage for your testing. Provide Screenshots for the measurements. Try to achieve at least 90% of Statement Coverage. Get PEP8 checking tool and modify your programs to achieve 8 issues in PEP8. Provide Screenshots as evidence.

✓ Test Results	19 ms	Testing started at 04:00 p. m. ...
✓ test_lab1_8	19 ms	C:\Users\jucorral\Documents\persona
✓ TestLab1_8	19 ms	Launching unittests with arguments
✓ test_mean	13 ms	
✓ test_mean_types	0 ms	
✓ test_mean_values	0 ms	
✓ test_median	0 ms	Ran 9 tests in 0.024s
✓ test_median_types	0 ms	OK
✓ test_median_values	0 ms	
✓ test_percentil	2 ms	
✓ test_quartil	0 ms	Process finished with exit code 0
✓ test_std_deviation	4 ms	

Figure 1 - test_lab1_8.py

✓ Test Results	1 ms	Testing started at 04:03 p. m. ...
✓ test_lab1_9	1 ms	C:\Users\jucorral\Documents\persona
✓ TestLab_9	1 ms	Launching unittests with arguments
✓ test_decimal2Roman	1 ms	
✓ test_decimal2Roman_type	0 ms	
✓ test_decimal2Roman_value	0 ms	Ran 3 tests in 0.004s
		OK
		Process finished with exit code 0

Figure 2 - test_lab1_9.py

✓ Test Results	4 ms	Testing started at 04:03 p. m. ...
✓ test_lab2_14	4 ms	C:\Users\jucorral\Documents\persona
✓ TestLab2_14	4 ms	Launching unittests with arguments
✓ test_add_item	2 ms	
✓ test_bubble_sort_bool	0 ms	
✓ test_bubble_sort_float	0 ms	
✓ test_bubble_sort_int	0 ms	Process finished with exit code 0
✓ test_bubble_sort_string	0 ms	
✓ test_left_merge	0 ms	Ran 12 tests in 0.011s
✓ test_readFromTextFile	2 ms	OK
✓ test_read_unexisting_file	0 ms	
✓ test_remove_item	0 ms	
✓ test_remove_item_list_empty	0 ms	
✓ test_right_merge	0 ms	
✓ test_saveToTextFile	0 ms	

Figure 3 - test_lab2_14.py

✓ Test Results	12 ms	Testing started at 04:04 p. m. ...
✓ test_lab2_15	12 ms	C:\Users\juccorral\Documents\person
✓ Test	12 ms	Launching unittests with arguments
✓ test_create_record	1 ms	
✓ test_load_records_from_file	1 ms	
✓ test_load_records_from_not_found_file	0 ms	
✓ test_save_to_file_diff_info	3 ms	Ran 6 tests in 0.019s
✓ test_save_to_file_same_info	7 ms	OK
✓ test_search_record_mult_types	0 ms	
		Process finished with exit code 0

Figure 4 - test_lab2_15.py

✓ Test Results	3 ms	Testing started at 04:04 p. m. ...
✓ test_lab3_17	3 ms	C:\Users\juccorral\Documents\person
✓ TestFactorial	3 ms	Launching unittests with arguments
✓ test_edge_cases	3 ms	
✓ test_happy_paths	0 ms	
✓ test_sad_paths	0 ms	
✓ test_types	0 ms	Ran 4 tests in 0.004s
		OK
		Process finished with exit code 0

Figure 5 - test_lab3_17.py

✓ Test Results	4 ms	Testing started at 04:04 p. m. ...
✓ test_lab3_19	4 ms	C:\Users\juccorral\Documents\person
✓ TestFilecmp	4 ms	Launching unittests with arguments
✓ test_file_not_found	3 ms	
✓ test_is_eq	0 ms	
✓ test_not_eq	1 ms	
		Ran 3 tests in 0.007s
		OK
		Process finished with exit code 0

Figure 6 - test_lab3_19.py

✓ Test Results	29 ms	Testing started at 04:04 p. m. ...
✓ test_lab3_20	29 ms	C:\Users\juccorral\Documents\personal
✓ Test	29 ms	Launching unittests with arguments p
✓ test_0_add_record	1 ms	
✓ test_1_del_record	1 ms	
✓ test_2_del_record_when_empty	0 ms	Process finished with exit code 0
✓ test_3_search_record_mult_types	4 ms	=== Start add_record test ===
✓ test_4_save_to_file_same_info	10 ms	Records before: 0, records now: 1
✓ test_5_save_to_file_diff_info	8 ms	=== Start del_record_test ===
✓ test_6_cmp_file_vs_temp	5 ms	The directory has 4 users
		Records before: 4, records now: 3
		Records before: 3, records now: 2
		Records before: 2, records now: 1
		Records before: 1, records now: 0
		=== Start del_record_test ===
		The directory has 0 users
		=== Start search_record test ===

Figure 7 - test_lab3_20.py

```

C:\Users\jucorral\Documents\personal\Master\TC4002_analisisDiseñoYConstrucc
ionDelSoftware\lab4>coverage run --source=. -m unittest discover
.....=== Start add_record test ===
  Records before: 0, records now: 1
=== Start del_record_test ===
  The directory has 4 users
  Records before: 4, records now: 3
  Records before: 3, records now: 2
  Records before: 2, records now: 1
  Records before: 1, records now: 0
=== Start del_record_test ===
  The directory has 0 users
=== Start search_record_test ===
  Searching: 32 - type: <class 'str'> in age or email
    Juan Stenner matched
  Searching: 25 - type: <class 'int'> in age or email
    No such user
  Searching: 32 - type: <class 'int'> in age or email
    No such user
  Searching: True - type: <class 'bool'> in age or email
    No such user
  Searching: None - type: <class 'NoneType'> in age or email
    No such user
  Searching: esther.rivas@gmail.com - type: <class 'str'> in age or email
    Esther Rivas matched
=== Start save_to_file_same_info test ===
  Populating records
  Saving to test1.txt
  Saving to test2.txt
  Comparing test1.txt vs test2.txt
=== Start save_to_file_diff_info test ===
  Populating records
  Saving to test1.txt
  Adding Ivette Rios to the records.
  Saving to test2.txt
  Comparing test1.txt vs test2.txt
=== Start cmp_file_vs_temp test ===
  Populating records
  Saving to test1.txt
  Comparing test1.txt vs records
  Adding Ivette Rios to the records.
  Comparing test1.txt vs records
.
-----
Ran 44 tests in 0.129s

OK

C:\Users\jucorral\Documents\personal\Master\TC4002_analisisDiseñoYConstrucc
ionDelSoftware\lab4>_

```

Figure 8 - coverage run

```

C:\Users\jucorral\Documents\personal\Master\TC4002_analisisDiseñoYConstruccionDelSoftware\lab4>coverage report
Name                               Stmts  Miss  Cover
-----
lab1_8.py                          30      0  100%
lab1_9.py                          16      0  100%
lab2_14.py                         30      0  100%
lab2_15.py                         28      0  100%
lab3_17.py                         4       0  100%
lab3_19.py                         3       0  100%
lab3_20.py                        34      0  100%
test_lab1_8.py                     49      0  100%
test_lab1_9.py                     19      0  100%
test_lab2_14.py                    65      0  100%
test_lab2_15.py                    51      0  100%
test_lab3_17.py                    22      0  100%
test_lab3_19.py                    17      0  100%
test_lab3_20.py                    88      0  100%
-----
TOTAL                             456      0  100%

C:\Users\jucorral\Documents\personal\Master\TC4002_analisisDiseñoYConstruccionDelSoftware\lab4>

```

Figure 9 – coverage report

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C:\Users\jucorral\Documents\personal\Master\TC4002_analisisDiseñoYConstruccionDelSoftware\lab4>coverage html

```

Figure 10 – coverage html