



**Tecnológico
de Monterrey**

Maestría en Inteligencia Artificial Aplicada

Pruebas de software y aseguramiento de la calidad

A6.2 Ejercicio de programacion 3

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Ejercicio 1

Coverage report:

```
A01208580_A6.2 on 🐍 main [?] via 🐍 v3.12.0 (ai-age
1a2@qwiklabs.net
> python3 -m coverage run -m unittest
.....
Ran 20 tests in 0.008s

OK

A01208580_A6.2 on 🐍 main [!] via 🐍 v3.12.0 (ai-agents-framework) on 🌐 us-
> python3 -m coverage report -m
Name                               Stmts   Miss  Cover   Missing
-----
src/__init__.py                     0       0   100%
src/customer.py                     43       0   100%
src/hotel.py                        50       0   100%
src/reservation.py                  41       0   100%
test/__init__.py                     0       0   100%
test/unit/__init__.py                0       0   100%
test/unit/test_customer.py          55       0   100%
test/unit/test_hotel.py             92       0   100%
test/unit/test_reservation.py        30       0   100%
-----
TOTAL                               311       0   100%
```

Antes de corregir errores de flake8:

```
A01208580_A6.2 on 🐍 main [?] via 🐍 v3.12.0 (ai-agents-framework) on 🌐 us-east-1) on 🧑 student-02-5B
> python3 -m flake8
./src/customer.py:5:1: E302 expected 2 blank lines, found 1
./src/customer.py:25:5: E303 too many blank lines (2)
./src/customer.py:30:5: E303 too many blank lines (2)
./src/customer.py:45:73: W291 trailing whitespace
./src/customer.py:51:1: W293 blank line contains whitespace
./src/customer.py:65:28: W292 no newline at end of file
./src/hotel.py:6:1: E302 expected 2 blank lines, found 1
./src/hotel.py:28:1: W293 blank line contains whitespace
./src/hotel.py:30:5: E303 too many blank lines (2)
./src/hotel.py:50:1: W293 blank line contains whitespace
./src/hotel.py:53:80: E501 line too long (101 > 79 characters)
./src/hotel.py:56:1: W293 blank line contains whitespace
./src/hotel.py:57:5: E303 too many blank lines (2)
./src/hotel.py:58:80: E501 line too long (94 > 79 characters)
./src/hotel.py:63:5: E303 too many blank lines (2)
./src/hotel.py:77:28: W292 no newline at end of file
./src/reservation.py:4:1: E302 expected 2 blank lines, found 1
./src/reservation.py:18:1: W293 blank line contains whitespace
./src/reservation.py:42:80: E501 line too long (88 > 79 characters)
./src/reservation.py:44:1: W293 blank line contains whitespace
./src/reservation.py:59:1: W293 blank line contains whitespace
./src/reservation.py:61:1: W293 blank line contains whitespace
./src/reservation.py:66:13: E303 too many blank lines (2)
./src/reservation.py:66:60: W292 no newline at end of file
./test/unit/test_customer.py:7:1: E302 expected 2 blank lines, found 1
./test/unit/test_customer.py:9:35: W291 trailing whitespace
./test/unit/test_customer.py:28:1: W293 blank line contains whitespace
./test/unit/test_customer.py:40:1: W293 blank line contains whitespace
./test/unit/test_customer.py:51:1: W293 blank line contains whitespace
./test/unit/test_customer.py:60:80: E501 line too long (118 > 79 characters)
./test/unit/test_customer.py:63:46: F841 local variable 'context' is assigned to but never used
./test/unit/test_customer.py:64:13: F841 local variable 'customer' is assigned to but never used
./test/unit/test_customer.py:65:1: W293 blank line contains whitespace
./test/unit/test_customer.py:74:46: F841 local variable 'context' is assigned to but never used
./test/unit/test_customer.py:76:1: W293 blank line contains whitespace
./test/unit/test_hotel.py:11:29: W291 trailing whitespace
./test/unit/test_hotel.py:24:5: E303 too many blank lines (2)
./test/unit/test_hotel.py:31:1: W293 blank line contains whitespace
./test/unit/test_hotel.py:43:1: W293 blank line contains whitespace
./test/unit/test_hotel.py:54:1: W293 blank line contains whitespace
./test/unit/test_hotel.py:63:80: E501 line too long (104 > 79 characters)
./test/unit/test_hotel.py:78:80: E501 line too long (81 > 79 characters)
./test/unit/test_hotel.py:106:46: F841 local variable 'context' is assigned to but never used
./test/unit/test_hotel.py:115:46: F841 local variable 'context' is assigned to but never used
./test/unit/test_hotel.py:124:1: W293 blank line contains whitespace
./test/unit/test_hotel.py:126:46: F841 local variable 'context' is assigned to but never used
./test/unit/test_hotel.py:127:13: F841 local variable 'hotel' is assigned to but never used
./test/unit/test_hotel.py:130:46: F841 local variable 'context' is assigned to but never used
./test/unit/test_hotel.py:131:32: W292 no newline at end of file
./test/unit/test_reservation.py:6:1: E302 expected 2 blank lines, found 1
./test/unit/test_reservation.py:7:21: W291 trailing whitespace
./test/unit/test_reservation.py:14:29: W291 trailing whitespace
./test/unit/test_reservation.py:17:44: W291 trailing whitespace
./test/unit/test_reservation.py:26:1: W293 blank line contains whitespace
./test/unit/test_reservation.py:27:46: F841 local variable 'context' is assigned to but never used
./test/unit/test_reservation.py:30:1: W293 blank line contains whitespace
./test/unit/test_reservation.py:32:46: F841 local variable 'context' is assigned to but never used
./test/unit/test_reservation.py:33:80: E501 line too long (84 > 79 characters)
./test/unit/test_reservation.py:34:33: W292 no newline at end of file
```

Después de corregir errores de flake8:

```
A01208580_A6.2 on ~/ main [?] via vi
klabs.net
> python3 -m flake8
ai-agents-framework
A01208580_A6.2 on ~/ main [?] via vi
klabs.net
^
```

Antes de corregir errores de pylint:

```
A01208580_A6.2 on ~/ main [?] via v3.12.0 (ai-agents-framework) on us-east-1 on student-02-5bc07dc8d1a2@qwi
klabs.net
> python3 -m pylint src/
***** Module reservation
src/reservation.py:14:4: C0116: Missing function or method docstring (missing-function-docstring)
src/reservation.py:18:12: W0101: Unreachable code (unreachable)
src/reservation.py:17:12: W0719: Raising too general exception: Exception (broad-exception-raised)
src/reservation.py:21:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
src/reservation.py:33:4: C0116: Missing function or method docstring (missing-function-docstring)
src/reservation.py:34:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
src/reservation.py:40:16: W0101: Unreachable code (unreachable)
src/reservation.py:39:16: W0719: Raising too general exception: Exception (broad-exception-raised)
src/reservation.py:45:16: W0101: Unreachable code (unreachable)
src/reservation.py:43:16: W0719: Raising too general exception: Exception (broad-exception-raised)
src/reservation.py:53:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
src/reservation.py:60:16: W0101: Unreachable code (unreachable)
src/reservation.py:59:16: W0719: Raising too general exception: Exception (broad-exception-raised)
src/reservation.py:52:4: R1710: Either all return statements in a function should return an expression, or none of
them should. (inconsistent-return-statements)
***** Module customer
src/customer.py:10:23: W0622: Redefining built-in 'id' (redefined-builtin)
src/customer.py:15:12: R1705: Unnecessary "else" after "return", remove the "else" and de-indent the code inside it
(no-else-return)
src/customer.py:15:12: R1720: Unnecessary "else" after "raise", remove the "else" and de-indent the code inside it
(no-else-raise)
src/customer.py:17:16: W0101: Unreachable code (unreachable)
src/customer.py:16:16: W0719: Raising too general exception: Exception (broad-exception-raised)
src/customer.py:25:4: C0116: Missing function or method docstring (missing-function-docstring)
src/customer.py:29:4: C0116: Missing function or method docstring (missing-function-docstring)
src/customer.py:30:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
src/customer.py:36:16: W0101: Unreachable code (unreachable)
src/customer.py:35:16: W0719: Raising too general exception: Exception (broad-exception-raised)
src/customer.py:43:4: C0116: Missing function or method docstring (missing-function-docstring)
src/customer.py:46:4: C0116: Missing function or method docstring (missing-function-docstring)
src/customer.py:52:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
src/customer.py:57:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
***** Module hotel
src/hotel.py:4:0: E0401: Unable to import 'src.reservation' (import-error)
src/hotel.py:11:23: W0622: Redefining built-in 'id' (redefined-builtin)
src/hotel.py:15:12: R1705: Unnecessary "else" after "return", remove the "else" and de-indent the code inside it (n
o-else-return)
src/hotel.py:15:12: R1720: Unnecessary "else" after "raise", remove the "else" and de-indent the code inside it (no
-else-raise)
src/hotel.py:17:16: W0101: Unreachable code (unreachable)
src/hotel.py:16:16: W0719: Raising too general exception: Exception (broad-exception-raised)
src/hotel.py:30:4: C0116: Missing function or method docstring (missing-function-docstring)
src/hotel.py:31:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
src/hotel.py:37:16: W0101: Unreachable code (unreachable)
src/hotel.py:36:16: W0719: Raising too general exception: Exception (broad-exception-raised)
src/hotel.py:44:4: C0116: Missing function or method docstring (missing-function-docstring)
src/hotel.py:47:4: C0116: Missing function or method docstring (missing-function-docstring)
src/hotel.py:51:4: C0116: Missing function or method docstring (missing-function-docstring)
src/hotel.py:60:4: C0116: Missing function or method docstring (missing-function-docstring)
src/hotel.py:70:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
src/hotel.py:75:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
src/hotel.py:1:0: R0801: Similar lines in 2 files
==customer:[20:30]
==hotel:[20:31]
    else:
        self.id = str(uuid.uuid4())
        self.name = None

    def create(self, name):
        self.name = name
        self._save()

    def delete(self):
        with open(self.DB_PATH, 'r+') as file: (duplicate-code)

-----
Your code has been rated at 6.50/10
```

```

A01208580_A6.2 on / main [?] via v3.12.0 (ai-agents-framework) on us-east-1 on student-02-5bc07dc8d1a2@qwiklabs.net
> python3 -m pylint test/
***** Module test.unit.test_hotel
test/unit/test_hotel.py:1:0: C0114: Missing module docstring (missing-module-docstring)
test/unit/test_hotel.py:10:0: C0115: Missing class docstring (missing-class-docstring)
test/unit/test_hotel.py:13:8: C0103: Attribute name "DB_PATH" doesn't conform to snake_case naming style (invalid-name)
test/unit/test_hotel.py:16:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_hotel.py:21:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_hotel.py:24:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:28:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_hotel.py:35:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:40:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_hotel.py:46:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:51:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_hotel.py:59:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:68:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:76:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_hotel.py:86:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:95:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_hotel.py:101:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:115:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:124:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:131:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_hotel.py:135:4: C0116: Missing function or method docstring (missing-function-docstring)
***** Module test.unit.test_reservation
test/unit/test_reservation.py:1:0: C0114: Missing module docstring (missing-module-docstring)
test/unit/test_reservation.py:7:0: C0115: Missing class docstring (missing-class-docstring)
test/unit/test_reservation.py:9:8: C0103: Attribute name "DB_PATH" doesn't conform to snake_case naming style (invalid-name)
test/unit/test_reservation.py:12:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_reservation.py:22:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_reservation.py:25:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_reservation.py:32:4: C0116: Missing function or method docstring (missing-function-docstring)
***** Module test.unit.test_customer
test/unit/test_customer.py:1:0: C0114: Missing module docstring (missing-module-docstring)
test/unit/test_customer.py:8:0: C0115: Missing class docstring (missing-class-docstring)
test/unit/test_customer.py:11:8: C0103: Attribute name "DB_PATH" doesn't conform to snake_case naming style (invalid-name)
test/unit/test_customer.py:14:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_customer.py:19:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_customer.py:22:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_customer.py:26:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_customer.py:33:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_customer.py:38:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_customer.py:44:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_customer.py:49:13: W1514: Using open without explicitly specifying an encoding (unspecified-encoding)
test/unit/test_customer.py:57:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_customer.py:67:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_customer.py:71:4: C0116: Missing function or method docstring (missing-function-docstring)
test/unit/test_customer.py:78:4: C0116: Missing function or method docstring (missing-function-docstring)
-----
Your code has been rated at 7.47/10

```

Después de corregir errores de pylint:

```

A01208580_A6.2 on / main [?] via v3.12.0 (ai-agents-framework) on student-02-5bc07dc8d1a2@qwiklabs.net
> python3 -m pylint src/
-----
Your code has been rated at 10.00/10 (previous run: 9.93/10, +0.07)

```

```

A01208580_A6.2 on / main [?] via v3.12.0 (ai-agents-framework) on
> python3 -m pylint test/
-----
Your code has been rated at 10.00/10 (previous run: 10.00/10, +0.00)

```

Ejemplos de cómo se almacena la información:

Archivo que almacena hoteles y reservaciones:

```
hotels.json M x
hotels.json > ...
You, 2 seconds ago | 1 author (You)
1 {
2   "9ef1c661-f9af-41dd-a943-a75c4947ad4c": {
3     "id": "9ef1c661-f9af-41dd-a943-a75c4947ad4c",
4     "name": "Hilton",
5     "reservations": {
6       "231": {
7         "customer_id": "cf067173-2ce1-4e0e-a7e9-955623add1ba"
8       }
9     }
10  }
11 }
```

Archivo que almacena clientes:

```
customers.json M ●
customers.json > ...
...
1 {
2   "cf067173-2ce1-4e0e-a7e9-955623add1ba": {
3     "name": "Mdiaz Malagon"
4   }
5 }
```