

README

Sprint 0 Report

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1. Key Decisions of the SOS Project (2 points)

Object-oriented programming language	Python
GUI library (strongly encouraged)	Tkinter
IDE (Integrated Development Environment)	VS Code
xUnit framework (e.g., JUnit for Java)	PyTest
Programming style guide (must read it carefully)	PEP 8
Project hosting site	Github
Other decisions if applicable	None at the moment

2. Unit testing (4 points)

- ✓ ~~Test 1~~
- ✓ ~~Test 2~~
- ✓ ~~Source Code of program~~
- ✓ Screenshots

To run the program:

Activate virtual environment

```
source venv/bin/activate
```

Run test 1 **FAIL**

```
pytest -q test1.py
```

The image shows a VS Code editor window with a dark theme. The top bar shows the file explorer on the left and the search bar on the right. The editor has four tabs: 'GUI.py U', 'test1.py U', 'test2.py U', and 'test2Class.py U'. The active tab is 'test1.py U', which contains the following Python code:

```
sprint0 > Q2-Unit-Test > test1.py > ...
1 # Author Jordan Taranto
2 # Source: https://semaphoreci.com/community/tutorials/testing-python-applications-with-pytest
3
4 import pytest
5
6 # Unit Test 1
7 def capital_case(x):
8     return x.capitalize()
9
10 def test_capital_case():
11     assert capital_case('semaphore') == 'Semaphore'
12
13 def test_capital_case():
14     assert capital_case('semaphore') == 'Semaphore'
15
16 def test_raises_exception_on_non_string_arguments():
17     with pytest.raises(TypeError):
18         capital_case(9)
19
```

The bottom panel shows the 'TERMINAL' output of the command `pytest -q test1.py`. The output shows a failure for the test `test_raises_exception_on_non_string_arguments` due to an `AttributeError: 'int' object has no attribute 'capitalize'`. The test summary indicates 1 failed and 1 passed in 0.01s.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
(venv) taranto@tarantos-MacBook-Air Q2-Unit-Test % pytest -q test1.py
.F
===== FAILURES =====
test_raises_exception_on_non_string_arguments

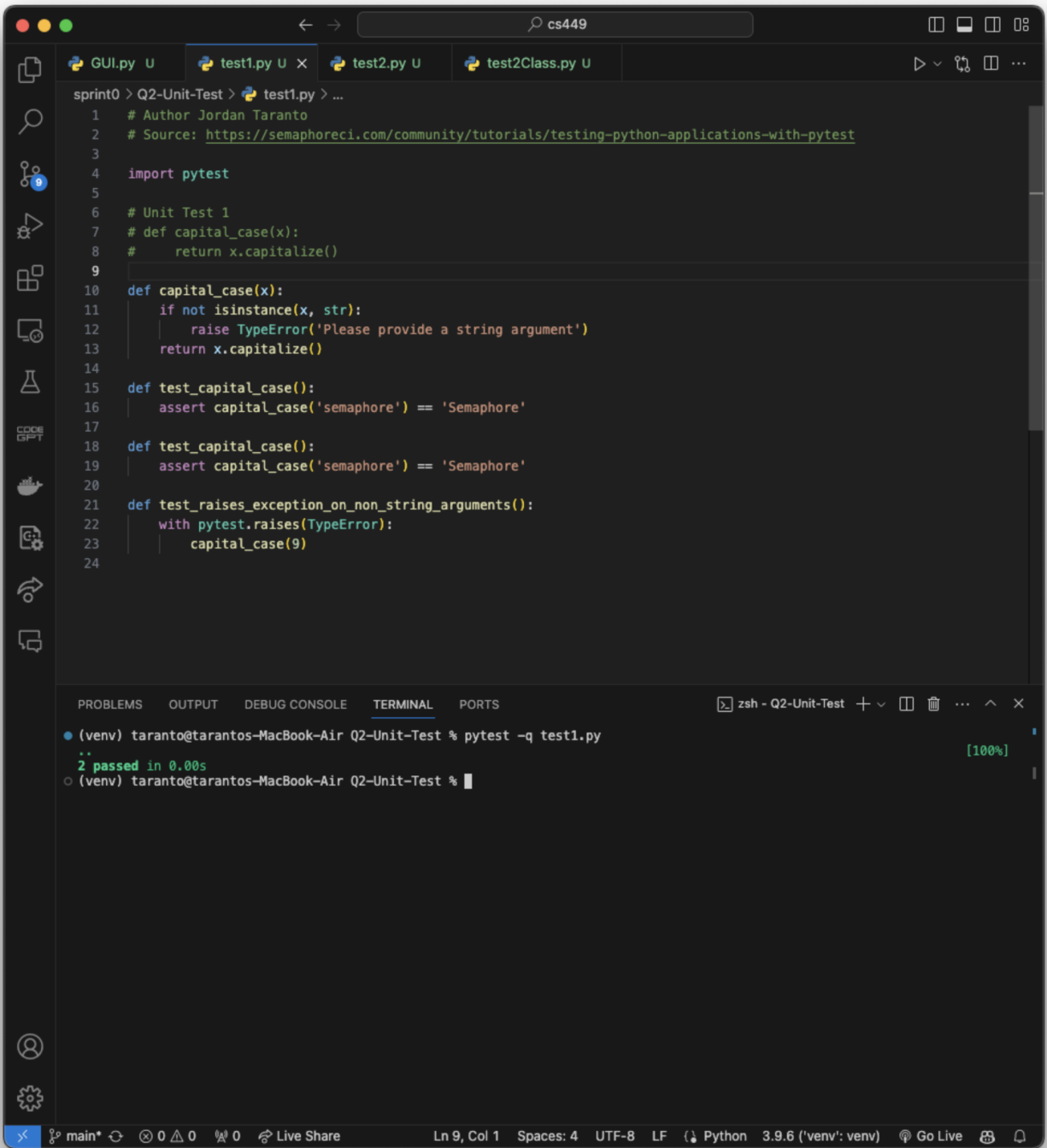
def test_raises_exception_on_non_string_arguments():
    with pytest.raises(TypeError):
        capital_case(9)
>
test1.py:18:
-----
x = 9

def capital_case(x):
    return x.capitalize()
>
E     AttributeError: 'int' object has no attribute 'capitalize'

test1.py:8: AttributeError
===== short test summary info =====
FAILED test1.py::test_raises_exception_on_non_string_arguments - AttributeError: 'int' object has no attribute 'capitalize'
1 failed, 1 passed in 0.01s
(venv) taranto@tarantos-MacBook-Air Q2-Unit-Test %
```

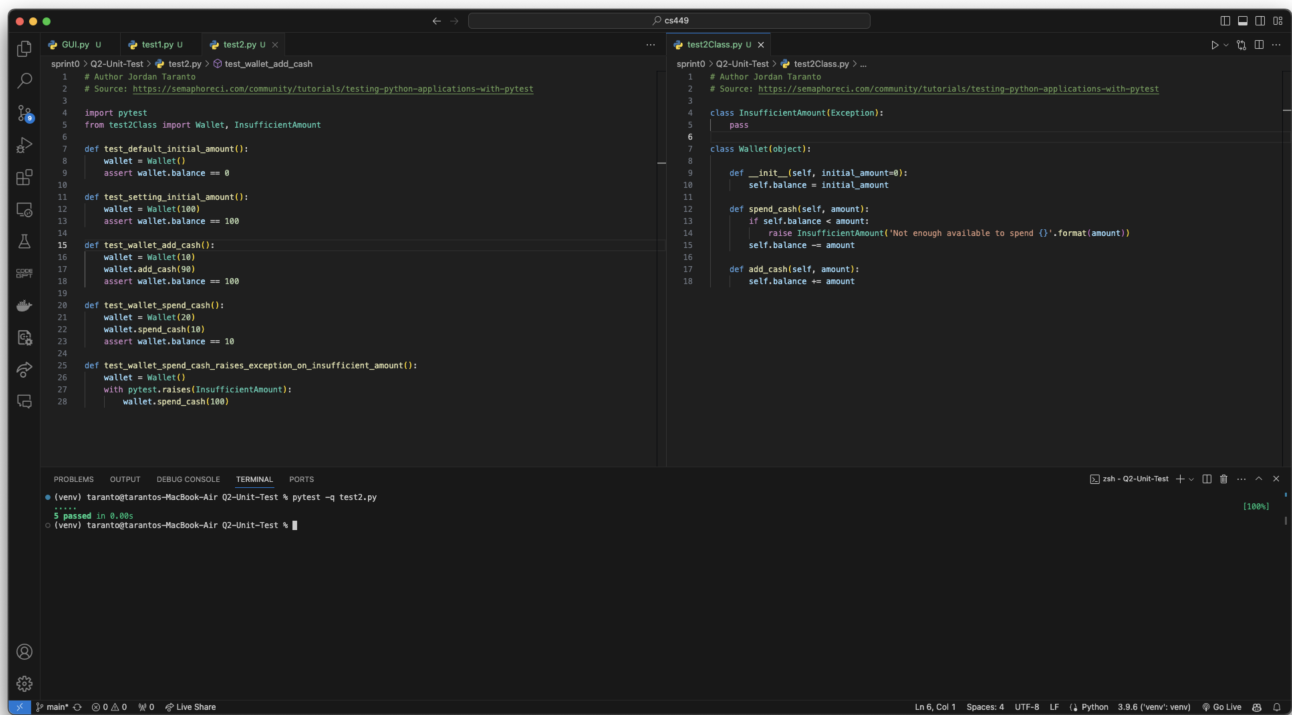
Run test 1 **PASS**

```
pytest -q test1.py
```



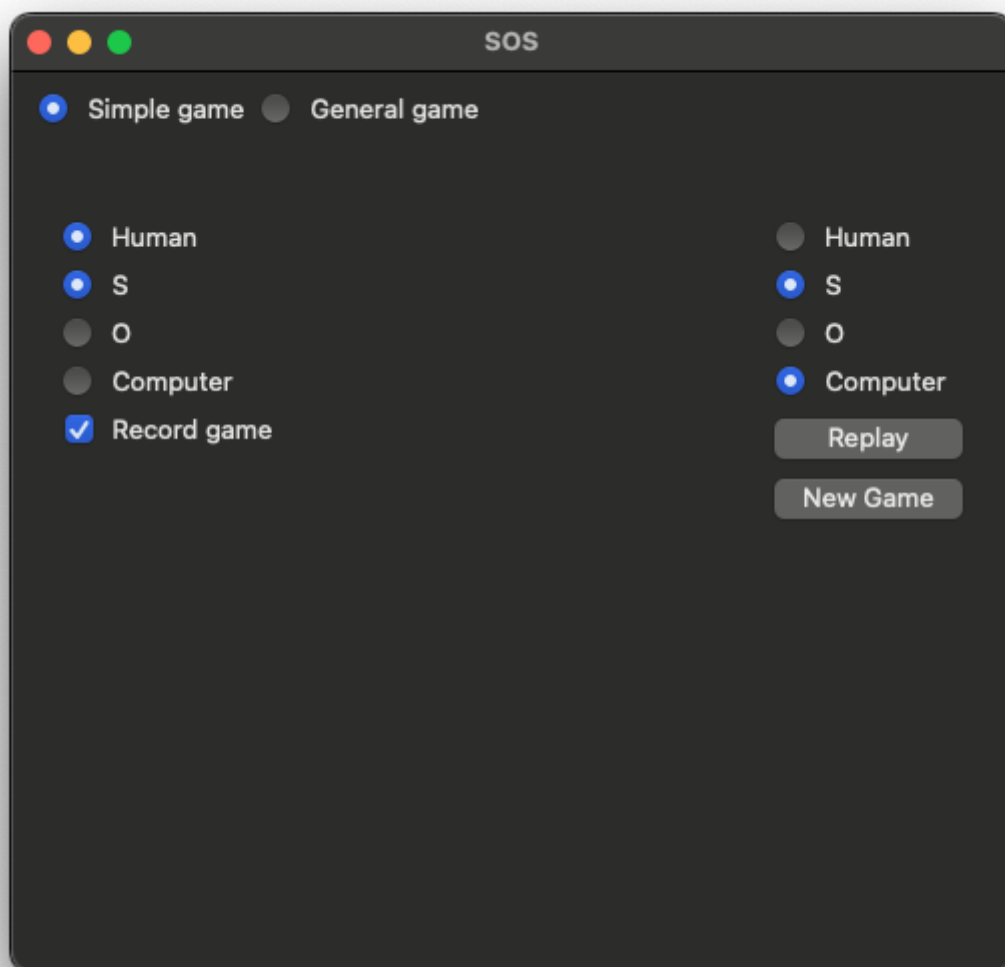
Run test 2 **PASS**

```
pytest -q test2.py
```



3. GUI programming (4 points)

- ✓ Text
- ✓ ~~Lines - have but need to work on game logic~~
- ✓ Check box
- ✓ Radio Buttons
- ✓ Screenshots



```

# Sprint-0
# Author: Jordan Taranto
# Reference: https://medium.com/@fareedkhandev/modern-gui-using-tkinter-12da0b983e22

import tkinter as tk

# function for new game
def start_new_game():
    pass

# function for replay game
def replay_game():
    pass

# root window and size
root = tk.Tk()
root.geometry("500x450")
root.title("SOS")

# board size
board_size = tk.IntVar(value=8)
# record game
record_game = tk.BooleanVar()

# board
top_frame = tk.Frame(root)
top_frame.pack(side="top", fill="x", padx=10, pady=5)

# game type at the top
game_type_frame = tk.Frame(top_frame)
game_type_frame.pack(side="left", fill="x", expand=True)
tk.Radiobutton(game_type_frame, text="Simple game", value="simple").pack(side="left")
tk.Radiobutton(game_type_frame, text="General game", value="general").pack(side="left")

# board size
board_size_frame = tk.Frame(top_frame)
board_size_frame.pack(side="right", fill="x")
tk.Label(board_size_frame, text="Board size").pack(side="left")
tk.Entry(board_size_frame, textvariable=board_size, width=3).pack(side="left")

# blue player and radio buttons
blue_player_frame = tk.LabelFrame(root, text="Blue", padx=10, pady=10)
blue_player_frame.pack(side="left", fill="y", padx=10, pady=5)
blue_player_type = tk.StringVar(value="human")
blue_player_letter = tk.StringVar(value="S")
tk.Radiobutton(blue_player_frame, text="Human", variable=blue_player_type,
value="human").pack(anchor="w")
tk.Radiobutton(blue_player_frame, text="S", variable=blue_player_letter,
value="S").pack(anchor="w")
tk.Radiobutton(blue_player_frame, text="O", variable=blue_player_letter,
value="O").pack(anchor="w")
tk.Radiobutton(blue_player_frame, text="Computer", variable=blue_player_type,
value="computer").pack(anchor="w")
tk.Checkbutton(blue_player_frame, text="Record game", variable=record_game).pack(anchor="w")

# red player and radio buttons

```

```
red_player_frame = tk.LabelFrame(root, text="Red", padx=10, pady=10)
red_player_frame.pack(side="right", fill="y", padx=10, pady=5)
red_player_type = tk.StringVar(value="human")
red_player_letter = tk.StringVar(value="S")
tk.Radiobutton(red_player_frame, text="Human", variable=red_player_type,
value="human").pack(anchor="w")
tk.Radiobutton(red_player_frame, text="S", variable=red_player_letter,
value="S").pack(anchor="w")
tk.Radiobutton(red_player_frame, text="O", variable=red_player_letter,
value="O").pack(anchor="w")
tk.Radiobutton(red_player_frame, text="Computer", variable=red_player_type,
value="computer").pack(anchor="w")

# replay and new game buttons
tk.Button(red_player_frame, text="Replay", command=replay_game).pack(fill="x", pady=2)
tk.Button(red_player_frame, text="New Game", command=start_new_game).pack(fill="x")

# main loop
root.mainloop()
```