SI 506: Exam 03

1.0 Date and location (in-class assignment)

- Thursday, 18 April 2024
- CCCB, Rm 0460
- Start: **4:05 PM**
- End: **5:45 PM**
- Duration: 100 minutes

❗ Please bring a pencil or pen to the exam.

2.0 Overview

The in-class paper exam is a hand-written "closed-book" experience in which no technology other than a pencil/pen/eraser may be used to complete the assignment. Use of a laptop or handheld mobile device (e.g., smartphones, PDA) is prohibited.

The exam covers computational terminology, concepts, topics, and techniques covered during the first fourteen (14) weeks of the course. The exam will focus on weeks 10–14 but be prepared to handle any and all topics, concepts, and techniques taught during the course up to the present time. Python 3.10+ remains the language of instruction for the exam.

3.0 Points

The exam is worth **800 points** and you accumulate points by answering successfully a series of challenges.

4.0 Solo effort

Please abide by the following rules:

1. You are **prohibited from soliciting assistance or accepting assistance** from any person during the exam period. The in-class paper exam that you submit **must constitute your own work**.

2. Likewise, you are **prohibited from assisting any other student** who is required to complete this assignment. This includes students attempting the assignment during the regular exam period as well as those who may attempt the assignment at another time and/or place due to scheduling conflicts or other issues.

5.0 Handwritten cheatsheet

You are permitted to utilize a single 8.5" x 11" sheet of paper for **handwritten** notes during the exam. You are free to utilize both sides of the cheatsheet to record notes.

❗ **Typed notes are prohibited**.

6.0 Questions/Help

If you need help deciphering a challenge's instructions raise your hand and a member of the teaching team will pay you a visit. Do not ask us to review your code; we will politely decline your request.

7.0 Challenges

A maximum of fourteen (14) challenges will appear on the exam. One challenge has been designated an optional bonus challenge. The teaching team recommends that you attempt each challenge in the order laid out by the exam.

7.1 Question types

The following question types may appear on the exam.

- Single select multiple choice
- Multi-select multiple choice
- Fill in the blank / Short answer (code and/or text)
- True / False

7.2 Code challenge format

Coding challenges are structured as follows:

Background: Contextualizes the challenge.

Relevant objects: Objects created earlier in the exam that you can reference in your expressions and statements.

Tasks: Describes what you *must* do.

7.3 Data Theme

The exam will feature planetary data sourced from the National Aeronautics and Space Administration (NASA). The data reproduces NASA's "Planetary Fact Sheet - Metric", a tabular layout that provides basic data about the eight planets that orbit the Sun. The table also includes information on the Earth's moon and the dwarf planet Pluto that orbit the Sun.

Two files that represent the data will be provided ahead of the exam for review purposes. Note that both files **contain the same information**, albeit organized differently. Both files exclude data on the Earth's moon.

File	Description
data-nasa-planets.csv	Contains a header row and nine (9) "planet" rows.
data-nasa-planets.json	Contains an array of nine (9) JSON objects; each object represents a planet.

Review the structure of each file. Think about the Python object returned by opening and reading each file. Although you do not need to memorize the planetary values contained in each file, you should familiarize yourself with the CSV file's "headers" row and the JSON file's name-value pairs.

Several challenges will be based on the data sourced from the CSV file while other challenges will feature data sourced from the JSON data.

❗ The files are provided for **review purposes only**. You are not permitted to bring paper copies of the files to the exam.

8.0 Exam submission and departure

The in-class paper exam *must* be submitted to the teaching team no later than 5:45 PM. Exams submitted outside the exam period will not be accepted and a score of zero (0) will be recorded in the grade book.

You *must* exit the classroom after submitting your exam to the teaching team.

9.0 Scoring

Paper exams are scored manually. Partial credit **may** be awarded for an otherwise incorrect challenge if the teaching team—at their sole discretion—deems a score adjustment warranted.