SI 506: Exam 01

1.0 Date and location (in-class assignment)

- Thursday, 15 February, 2023
- 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/erasure 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 five (5) weeks of the course. Python 3.10+ remains the language of instruction for the exam.

As more fully described below you are permitted to utilize a single 8.5" x 11" *cheatsheet* of **handwritten** notes during the exam period.

3.0 Points

The exam is worth **500 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 answer; we will politely decline your request.

7.0 Challenges

The in-class paper exam comprises a maximum of fifteen (15) challenges. 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 Challenge format

Each challenge is structured as follows:

Background: Contextualizes the challenge.

Task: Describes what you *must* do.

Result: Provides one or more `assert` statements, each of which compare a target variable to the expected value.

7.3 Example Challenge

Background: Amtrak runs a number of named trains in the State of Michigan. The trains are named the *Blue Water*, *Pere Marquette*, and the *Wolverine*. The *Blue Water* connects Port Huron and Chicago; the *Pere Marquette* connects Grand Rapids to Chicago; while the *Wolverine* connects Detroit to Chicago. Each train features intermediate station stops at select Michigan cities, including Ann Arbor.

Task: Write a slicing expression using positive numbers that accesses all **westbound** trains in the trains list. Assign the new list to a variable named `westbound`.

```
trains = [
    "350 Wolverine eastbound CHI ARB 6:45a 12:26a",
    "351 Wolverine westbound ARB CHI 7:14a 10:32a",
    "352 Wolverine eastbound CHI ARB 2:15p 7:31p",
    "353 Wolverine westbound ARB CHI 10:23a 2:02p",
    "354 Wolverine eastbound CHI ARB 5:50p 11:04p",
    "355 Wolverine westbound ARB CHI 7:00p 10:40p",
    "364 Bluewater eastbound CHI LNS 4:00p 8:55p",
    "365 Bluewater westbound LNS CHI 8:54a 11:45a",
    "370 Pere_Marquette eastbound CHI GRR 6:30p 11:34p",
    "371 Pere_Marquette westbound GRR CHI 6:00a 9:08a",
]
```

```
# TODO: slice westbound trains; assign variable < westbound > to new list
```

Result: Slicing `trains` correctly will ensure that the following `assert` statement evaluates to `True`.

```
assert westbound == [
    "351 Wolverine westbound ARB CHI 7:14a 10:32a",
    "353 Wolverine westbound ARB CHI 10:23a 2:02p",
    "355 Wolverine westbound ARB CHI 7:00p 10:40p",
    "365 Bluewater westbound LNS CHI 8:54a 11:45a",
    "371 Pere_Marquette westbound GRR CHI 6:00a 9:08a",
]
```

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.