Date: 4th May, 2024   Time: 09:30 - 11:00 & 14:15 - 15:45
Venue: Computer Barn C   Expected no. of students: $\leq$ 25 per class
Expected Level of students: F.2 to F.4   Context: Coding/Programming in Python
Foci: Boolean values, Loops, Lists, Game Creation

Intended Learning Outcomes

By the end of the lesson, students should be able to:

- manipulate lists to store and retrieve data.

- work well with Python loops to repeat similar sets of instructions, or to iterate through lists.

- create an medium-sized text-base game.

Basic Rundown

- Teachers use Kahoot to do a short recap of previous lesson's concepts.

- Teachers clear the misconceptions (if any).

- Teachers demonstrate Hangman, and state the lesson's goal.

- Teachers introduce the agenda of the lesson.

  (The above takes $\leq$ 20 minutes)

- Teachers teach the foci one-by-one.

    - Boolean values
        * Teachers expands more on Boolean values from previous lesson.
    - Lists ($\leq$ 15 minutes)
        * Teachers introduce what lists are.
        * Students practice mutating and accessing functions of lists with examples given.
        * Students apply lists with loops and knowledge from previous lesson.
    - Loops ($\leq$ 15 minutes)
        * Teachers introduce the `while` and `for` loops.
        * Students practice loops with examples given.
    - Teachers summarise the above concepts.
    - Final game (Remaining time)
        * Teachers guide students into implementing their own final game with the given Jupyter Notebook file.

Materials

- Computers at the venue to allow students to have hands-on experience in programming.

- A set of lecture notes to assist teachers in the lesson and students to follow along.

- A set of Jupyter Notebook `.ipynb` files to allow students to code along in the lesson.

- Prizes (snacks, for example) for answering questions.