

Date: 20th April, 2024 Time: 09:30 - 11:00 & 14:15 - 15:45
Venue: Computer Barn C Expected no. of students: 19 & 24 per class
Expected Level of students: F.2 to F.4 Context: Coding/Programming in Python
Foci: Programming, I/O, Variables, Decision Making

Intended Learning Outcomes

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

- a basic understanding of what programming is,
- implement basic input/output statements in Python,
- manipulate data with variables in Python, combined with decision making,
- the skills to implement simple text-based operations in Python.

Basic Rundown

- Teachers use Mentimeter to grasp students' knowledge background.

(The above takes ≤ 5 minutes)

- Teachers teach the foci one-by-one.
 - What is programming? (≤ 12 minutes)
 - * Teachers introduces programming using real-life examples of tools and video games.
 - * Teachers introduce general knowledge around the programming language Python and Jupyter Notebook.
 - I/O and Variables (≤ 20 minutes)
 - * Teachers introduces what a variable is, and basic data types and arithmetic operations.
 - * Students open the Jupyter Notebook file.
 - * Teachers introduce the `print()` and `input()` functions.
 - Decision Making (≤ 20 minutes)
 - * Teachers introduce `if-elif-else` clauses and conditions, including `or`, `and` and `not` keywords.
 - * Students practice decision making with the number guessing game logic.
- Teachers summarise the lesson, and tease what's to come, introduces a take-home exercise and the game: Hangman.

(The above takes ≤ 5 minutes.)

Materials

- Access to 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 Jupyter Notebook (`.ipynb`) file to allow students to code along in the lesson.