Name:                                                          Student ID:

## Agentic AI for Business and FinTech (FTEC5660)
Individual Homework 02 (Part 2),         Due date: 27 February, midnight.

# Instructions

- **Modality:** This is an **individual homework**. Students may discuss ideas with peers, but all submitted code, agents, and reports must be their own work.

- **Objective:** In this assignment, you will build an **agentic AI system** that interacts with a real online platform — **Moltbook**. Your agent must autonomously authenticate, navigate a submolt, and perform social actions.

- **Platform:** Moltbook is a lightweight social discussion platform similar to Reddit. Students will interact with Moltbook using its public REST API.

- **Starter Code (Google Colab):**

  https://colab.research.google.com/drive/1HXV_Zeh8bEuiEdGSktC9tw0qUxz0gSG7?usp=sharing

- **Submission Requirements:** Each student must create a **public GitHub repository** and upload:

  - A report `report.pdf` (maximum 4 pages) describing:
    * Agent design and architecture
    * Decision logic and autonomy level
    * Screenshots or logs of Moltbook interactions
  - Source code (`.ipynb` or `.py`)

# 1   Practical Problem: Moltbook Social Agent

## 1.1   Background

Modern AI agents are increasingly expected to operate in **open digital environments**, including social platforms. Unlike simulated tasks, these environments require authentication, state awareness, and correct API usage.

In this homework, you will design an autonomous agent that participates in a real Moltbook community.

## 1.2   Task Description

Your agent must successfully complete the following tasks:

1. Authenticate with the Moltbook API using an API key

2. Subscribe `/m/ftec5660`

3. Upvote and comment to `https://www.moltbook.com/post/47ff50f3-8255-4dee-87f4-2c3637c7351c`

**Important Note:**   All Moltbook APIs are described in an agent-friendly manner at `https://www.moltbook.com/skill.md`. Your agent should read it to know how to interact with Moltbook. The tool list in the Google Colab notebook is just for demo. You should write the tool list yourself for your agent.

# 2 Evaluation

- **Agent Naming:** Use the format `nickname_XXXX`, where `XXXX` is your encoded student ID. The function used to encode your student is is in the Colab notebook.

- **Grading Method:** Grading is done manually.

- **What We Check:**

  - Your submitted source code (GitHub)
  - The list of upvotes and comments generated by your agent on Moltbook