

IT2026 ASSIGNMENT 01

(Due Date: October 02, 2026)

Instructions: You need to answer all questions in this assignment and your answers must be in English. Moreover, the following points should be noted.

- If you use a word processing software to edit your answer, please make sure that the answer file is either in WORD or PDF format.
- You need to submit the answer file before the due date to the Gmail account `johnsum.nchu@gmail.com`.
- Email heading must be conformed to `IT2026_Assignment01_studentID`.
- Filename must be conformed to `IT2026_Assignment01_studentID`.
- It is a bonus assignment. If you are too busy to complete the assignment, you can just skip it and then send me an email via the same Gmail account informing me that you are unable to submit the answer file.
- Your answer file must be submitted before time 00:00 of the due date.

The assessment of this course is solely depended on your work in the course project including your written report and your oral presentation. The score obtained from this assignment is bonus. It will be added to your project score.

Question 1

- (a) Show that $1 + 2 + \cdots + n = n(n+1)/2$.
- (b) What is the value of $1 + 2 + 3 + \cdots + 100$? Show your steps in detail.
- (c) What is the value of $2 + 4 + \cdots + 200$? Show your steps in detail.
- (d) What is the value of $1 + 3 + \cdots + 199$? Show your steps in detail.

Question 2

- (a) State three large language models (LLMs) which can be used without needed to have an account registered.
- (b) As mentioned in the class, LLM might give incorrect information in response to a prompt. Describe in detail how you validate if the information is correct.
- (c) State the names of three LLMs which are generate program codes.

Question 3

- (a) Apart from the LLM developers, like Google and OpenAI, who are the potential customers of Nvidia?
- (b) Which personal AI applications could be profitable?
- (c) Should those personal AI applications be free for use?
- (d) What are the factors governing an enterprise to use an AI application?