CZ3002 Pre-defined Lab Projects (S1 AY 2019-2020)

1. **A face-recognition-based attendance taking system**
   Taking attendance is needed in many teaching/learning activities. The current attendance taking system is not only requiring manual efforts but also vulnerable to low performance. We hope to have a new attendance taking system using AI-based face recognition/identification techniques for our courses for better results. To build a useful system, the teams are to take into practical factors of the actual application of the system into consideration; and explore and select suitable techniques to achieve expected better performances.

2. **A platform to facilitate the learning-based social connectedness**
   A challenge for many students in learning is lack of necessary social connectedness with the peers. To maintain the connection with peers in the same course, a useful platform is expected. Particularly, this platform may keep the students being aware of the contents being taught, the responses of other peers in the same learning content, and opportunities to exchange on opinions or questions on the content. This platform is needed help them find an outlet to contribute to the learning society, to promote the student's interactions in a community and to improve their learning effectiveness.

3. **A drawing game that train brains**
   Drawing is an active way of learning in the sense it trains our brain, but not everyone likes it and not everyone is good at it. However, innovative technology, such as the app "Drawing Something", turns drawing easy, fun and sociable. You may develop a new drawing game that can train the capabilities of the brains of elderly, e.g. retrospective/autobiographic memory, and at the same time keep them mentally or/and socially active.

4. **Online Trail Making Test (TMT)**
   TMT is an online test game for cognitive training. TMT is a neuropsychological test which was originally used for assessing general intelligence. The subject is instructed to connect a set of 25 dots as quickly as possible while simultaneously maintaining accuracy. The TMT performance metrics (e.g. completion time and error rate) have clinical utility in diagnostic classification of cognitively healthy older adults and patients with dementia.