

# DATABASE SYSTEMS

## ASSIGNMENT 1

### NOTES

- ❑ *Students should read everything presented below carefully.*
- ❑ *This assignment 1 is worth **15%** of the overall grade.*
- ❑ *This assignment is on relational data modelling.*
- ❑ *Appropriate softwares can be used to support your design.*
- ❑ *Plagiarism must be avoided. Otherwise, zero mark is given.*

### I. REQUIREMENTS

1. Design a fully labelled (E)ERD according to your own business description. The diagram has to show appropriate entities (with key attributes underlined), relationships, cardinality ratios, and optional & mandatory membership classes.
2. Mapping your (E)ER diagram above to a relational database schema.
3. Based on your relational database schema, specify 10 queries using the relational algebra operators.
4. Identify all constraints not shown in your (E)ER diagram (at least 5 constraints).

### II. SUBMISSION DEADLINE

**11pm, October 28<sup>th</sup>, 2024**

You have to present your assignment to me on October 31<sup>st</sup>.

The group leader submits the report to BKeL before deadline.