**ISYS2077 – Database Concepts**

# Assignment 1 - Database Creation

You are in charge of creating the staff database of PataSoft, a newly formed software development company, using the following incomplete schema (use your database knowledge and critical thinking skills to complement it):

1. Position (code, title, income): stores every existing position at PataSoft with the respective code, title and income. Example of three tuples from this table:
   * <‘CA1’, ‘CEO’, 10000>
   * <‘CB1’, ‘Engineering Director’, 6000>
   * <‘CC1’, ‘Software Developer’, 2000>
2. Employee: stores every employee working at PataSoft with the respective number, name, current position and department codes. Examples of tuples from this table:
   * <1231, ‘Dora Lee’, ‘CA1’, ‘DE1’> [updated]
   * <3458, ‘Anna Nguyen’, ‘CC1’, ‘DE2’>
3. Department: stores every existing department at PataSoft with the respective code, name, location and director’s employee number. Example of a tuple from this table:
   * <‘DE3’, ‘Software development’, ‘42, Nguyen Van Linh, Da Nang’, 3458>
   * <‘DE1’, ‘Sales HCMC’, ‘12, Nguyen Hue, Ho Chi Minh City’, 1231>
4. Projects: stores every project (past or present) done at PataSoft with the respective code, project name, client name, project description. Example of a tuple from this table:
   * <4512, 'The Sims go to University', 'Edward Nguyen', 'This game, transcribe the worldly acclaimed Sims game to the university environment. You can attend classes, do you assignments and pass exams. You can also [...]'>
5. Deliverables: stores every employee’s delivered work with the respective employee’s number, deliverable name, date and project codes. Examples of tuples from this table:
   * <1231, 'patch 1.26', 2016-07-30, 4512>
   * <2458, 'Holiday DLC', 2016-08-12, 4512>

Steps to follow

1. First, create a SQL file called **ISYS2077\_E1\_sYYYYYY.sql** where **YYYYYY** is your student ID.
2. Write CREATE TABLE statements for each table given in the schema above. Use the exact same table and column names as given in the schema. Note that columns part of a primary key are underlined, and foreign key columns are prefixed by the table’s name and column that are referenced. The column types are not given in the schema. You have to choose good types for your columns, according to the information given above. Not all primary and foreign keys are given in the schema above. You should add the appropriate primary and foreign keys according to the description given above. Moreover, note that it is possible also the use ALTER TABLE statements if CREATE TABLE statements only are not sufficient to create the PataSoft database.
3. Insert some data in the tables. Insert an employee with your name.You only need a few rows (at least 4) in each table, you don’t need to put hundreds or thousands of rows in your database. Write your INSERT INTO statements at the end of your SQL file in general (some cases might require to be before).
4. Save your CREATE TABLE statements and INSERT INTO commemplands in your SQL file.Running this file should create your schema and your tables, and insert a few rows in each table (without producing any errors).
5. Make sure your SQL file can be run properly on the course database server (as in tutorials).