

## Milestone 2 – Database Design (5%)

*Due: TBA*

This milestone will include the design component of the project. Groups will progress through the data modelling and normalization processes in order to finalize a database design. Working within their group and in consultation with your professor, students will practice the processes learned in class to design a relational database.

**ERD:** Groups will create a UML Entity Relationship Diagram (use draw.io or Word to create your diagram ) of their database design following the database modelling process. This design should then be checked to be compliant 3<sup>rd</sup> normal form through the normalization techniques learned in class.

**Data Dictionary:** Groups will produce a data dictionary for **each** of their designed tables. This data dictionary will include the same information as the ERD in table format in addition to data types, sizes, notes, and example data. A sample table is included below.

TABLE: **Employees**

Column	Data Type	Size, Precision	Default	PK/FK	Required	Range	Sample Data	Notes
EmployeeID	NUMBER	4		PK	Y	1-9999	1234	Autonumbered identity
firstName	String	25			Y		"Bob"	
lastName	String	25			Y		"McKenzie"	
phone	NUMBER	11			Y	2000000000-9999999999	9055551212	Assuming North American phone number
balanceOwing	NUMBER	9,2	0.00		Y	-10000 to 10000	345.65	Monetary value
DOB	DATE				Y		1972/05/16	Date of Birth (YYYY/MM/DD)

**Business Rules:** You will list 2 business rules for each related set of tables to justify your relationship types (1:1, 1:M, or M:N)

## Milestone 2 – Submission

The submission will be a single PDF document submitted through blackboard. This will include:

- A quick summary of what your database function is (from milestone 1)
- ERD
- data dictionary
- business rules
- formatted professionally and readable.