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# LAB TWO

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## ERD SOFTWARE

CS1103, Winter 2021

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## LEARNING OUTCOMES

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At the conclusion of the lab, students should be able to

- Create, save and open entity-relationship diagrams using draw.io
- Specify entities and their attributes
- Specify relationship cardinality between entities

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## BACKGROUND

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There are many software applications that allow expression of entities and their relationships (ERD diagrams). In fact most well-known DBMS systems (Microsoft SQLServer, Oracle, mySQL) have dedicated packages. They are great productivity tools but not so great for learning, so we won't be using them. Instead, we'll use a free online drawing tool that supports ER diagrams, draw.io .

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## EXERCISE

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1. Start draw.io, and choose to
  - save to your local device
  - create a new, blank diagram
    - Notice that you can (and should!) give the diagram a legitimate name, such as Lab2.drawio.

Once the diagram tool has opened, the last step is to open the Entity Relation palette from the left-hand list of shapes.

2. Using the tutorial available from <https://about.draw.io/entity-relationship-diagrams-with-draw-io/>, create the ER diagram in Crow's Foot notation.
3. When you're done, save the diagram. Notice that the file will download to your Downloads directory. Using the file manager move it to where you're storing your CS1103 materials.
4. Quit the application (web page), re-open draw.io and choose the existing diagram to ensure that you can continue to work on an ER diagram.
5. Lastly, export your diagram as a jpeg, and create a word-processing document containing your jpeg and list the following information:
  - The attributes of the User entity

- The primary and foreign keys of the Comments entity. For each of the foreign keys, identify the entity and item they reference
- The type and cardinality of the Users-Coach relationship
- The type and cardinality of the Users-Habit relationship
- The primary key for the Coach relation/table

## SUBMISSION

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Before 4:30pm on the day after this lab, students should submit online to the lms

- The word-processor report as a pdf file, containing your ERD image and the requested information.