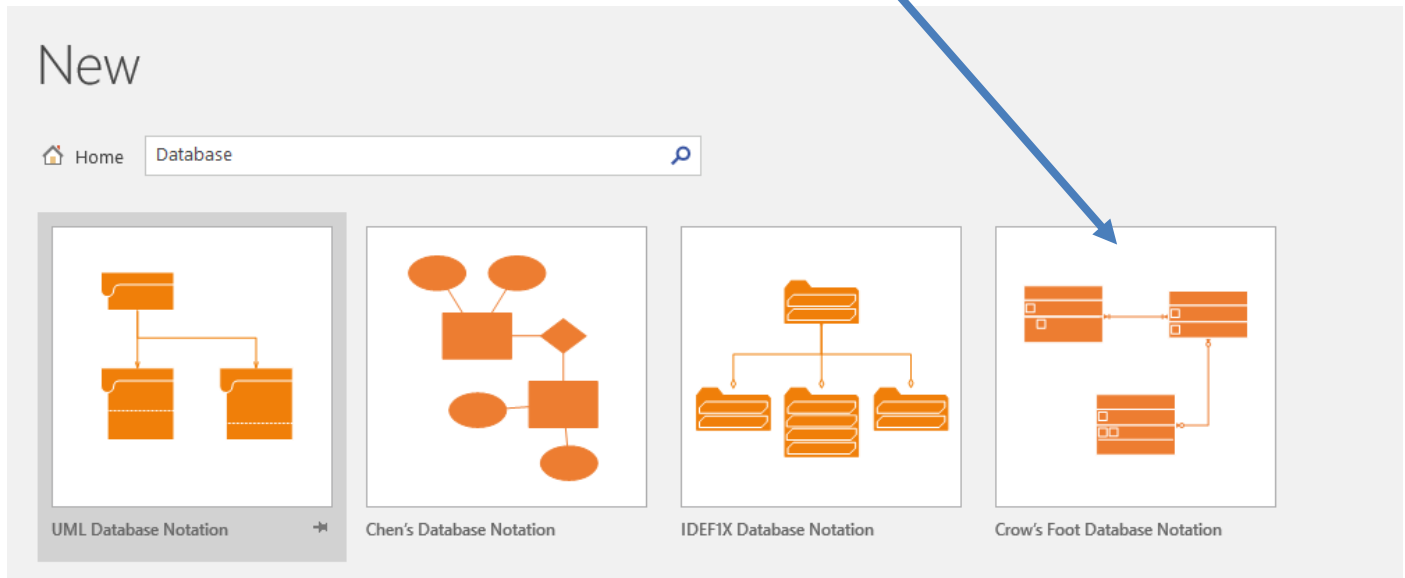


S2.3: Entity relationship Diagrams

Use MS Visio or similar software to draw your diagrams – crow's foot database notation is best:



Task 1: The Sock Company

The Sock Company is an online business selling a huge range of fancy socks. They are a recently new company and are currently tracking all their sales in a spreadsheet. The business took off quite quickly and they have suddenly become extremely busy. The company is now struggling to keep track of orders and stock levels, and as such they really need a database to make the day-to-day operations run more smoothly.

Create an Entity Relationship Diagram to model The Sock Company:

It will help if you start by considering the following two points:

- What data needs to be stored.
- What events happen that create or have a need for data.

When you are clear on the two things above, follow these steps to create your diagram:

1. Identify the entities? (Can be people, things, events)
2. Define the relationships between the entities?
3. Show the relationship cardinality.

4. Are there any many-to-many relationships? Or one-to-one relationships? If so, try to resolve them.
5. Define the attributes for each entity?
6. Identify the Primary and Foreign keys for each entity/table.

Task 2: The Computing Challenge

The Computing Challenge is a module that first year UCLan computing students' study at the start of their course. The module is run over the first three weeks of the year before all other modules begin. Students are placed in teams of 4-5 and are tasked with designing and producing an app for a given theme.

Throughout the course of the three weeks the teams attend classes most days, and are awarded points for various activities, such as presenting their app/work, completing tasks and challenges, and other general work that impresses their tutor. All points awarded in classes are recorded by the class tutor, along with a reason for awarding them, and are passed on to the module leader afterwards for checking. Attendance within the teams is monitored closely and points are also awarded or taken away for good or bad attendance of team members.

Throughout The Challenge a Leader Board is displayed showing the ranking of all teams. At the end of the three weeks the teams showcase their apps at a symposium to the wider UCLan community where they get the chance to earn some final points. The points are then all added up and a winning team is announced.

Create an Entity Relationship Diagram to model The Computing Challenge.

Again, start by considering the following two points:

- What data needs to be stored.
- What events happen that create or have a need for data.

Then follow the steps to create your diagram:

1. Identify the entities? (Can be people, things, events)
2. Define the relationships between the entities?
3. Show the relationship cardinality.
4. Are there any many-to-many relationships? Or one-to-one relationships? If so try to resolve them.
5. Define the attributes for each entity?
6. Identify the Primary and Foreign keys for each entity/table.

- **Complete any SQL tasks outstanding from the first two weeks**
- **Use any remaining time to work on your assignment – your tutor will be available throughout the lab to give feedback on your assignment.**

Note that any work not finished in class should be completed in your own time.