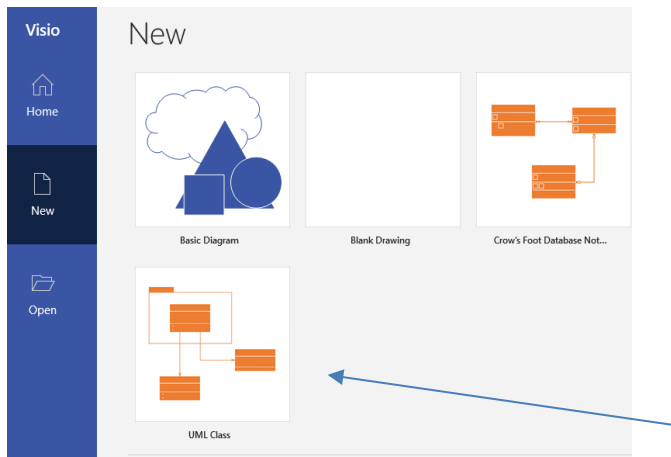


S2.8: CLASS DIAGRAMS

TASK 1

1. Read the DinoLand case study. Based on this information, create a Class Diagram using Visio:



1. As part of the process, create CRC cards for the classes you have identified.
2. Simplify your class diagram using inheritance (and aggregation if appropriate). Make sure that you show multiplicity, optionality, etc.

Notes on Class Diagrams:

- Most of your diagram will be made up of Classes and Associations (and at least one Inheritance component)
- Right click the Association and choose show multiplicity. You now have to manually change the multiplicities (and delete the extra ones)
- Double click the Association to write the relationship on the edge.

TASK 2

Spend the remainder of the lab working on your 3-week mini project. Hopefully you should have identified a database idea and completed step (1) Identify an initial list of attributes. Your list should include everything you need to store information about in your database.

Here is the breakdown of tasks from last week's worksheet:

You should treat this as an item of work that could be added to a personal portfolio to show to a prospective employer. Over the three weeks you will design and build a database of your own choice from scratch. You can choose any real-world scenario you like, but it should have a certain level of complexity (minimum of 4 tables). If you are struggling to come up with anything here are some ideas:

- A music streaming application
- A video sharing application
- An online marketplace application
- A railway reservation system
- A hospital management system
- An online job portal
- A hotel booking system
- A second-hand vinyl record store
- An online food delivery service
- A taxi service
- A dating application

1. Once you have chosen your idea you should create an initial un-normalised list of attributes. Remember to include everything you will need to store information about in your database.
2. The next step is to normalise your list of attributes following the stages from 1NF to 3NF, creating ERD's, as you have done in the labs for the past few weeks.
3. When you have a normalised design, create a data dictionary for each of the tables. Making sure to specify each attributes data type and size, and any sensible validation that could be used. You can use the table that was included in the Data Integrity lab.
4. Create the table scripts specifying some of your validation to each table. Specifying the primary and foreign keys is the minimum validation, in addition to this you should apply other types of validation for each of your tables.
5. Run each of your scripts in Oracle Apex to create the database. Remember that the order you create the tables is important. You can't create a table that references another table before the other table has been created.
6. Now add some sample data to each table. The more you add the better. You can write the SQL INSERT scripts to do this. However, the easiest way is via the form entry in Apex. Again, remember the order that data is entered is important.

7. Finally, write a few queries to demonstrate your database. The more complex these queries are, the better they will demonstrate your SQL expertise!