CA1 (50%) **Team Project Specifications for Database Application**

Project Team Names		
Database Application Name and Description		
Entity – Relationship Model – Word document		(4/100 marks)
Normalisation. You should choose a many to many relationship and one or two related 1 to many relations and show how the data would look in a spreadsheet or report when unnormalized. Then normalize the data showing the 3 normal forms, 1 NF, 2 NF and 3 NF.		(4/100 marks)
Database Schema – your tables with primary and foreign key constraints correctly defined.		(4/100 marks)
Tables - using a variety of suitable data types, using constraints on column data, designing test data		(4/100 marks)
Database Connectivity – creating your test data	Create	(4/100 marks)
Including at least 2 queries which join multiple tables	Read	(4/100 marks)
Examples of update statements	Update	(4/100 marks)
Examples of delete statements	Delete	(4/100 marks)
Triggers – at least 2 triggers which will carry out some auditing or implement some extra database constraints		(4/100 marks)
Indexes – sensibly chosen based on expected use of columns used in your queries, use of EXPLAIN to show indexes being used		(4/100 marks)
Views - examples of security views, but also summation views which are useful for accountants or managers – which will provide some useful high level summaries of data, and include multiple joined tables which would be difficult for end users to join together		(4/100 marks)
Stored Procedures - at least two stored procedures that carry out some useful activity		(4/100 marks)
Database Administration – create some users, give them privileges on some tables and take the privileges away.		(4/100 marks)
Java – connect to a database from Java, process a query row by row, create and run some prepared statements		(4/100 marks)
Transactions – create some table changes that can be committed or rolled back. Show the operation of both.		(4/100 marks)