**Introduction to Database Systems**

**COMP1AB**

**Assessment 3 : Project**

**Given: Week 10 – Friday April 3rd**

**Due: Week 12 – Friday May 1st Online Submission of Word Document /PDF on Canvas**

**Open Book, Open Web Access.**

**Project Deliverables: - Please use MS Word/PDF for your submission:**

**Include Student No, Name, Programme on PAGE 1 of your Submission document**

**You must make a Statement that the project is all your own work.**

**Note: plagiarism is considered cheating and can result in penalties up to and including receiving a mark of zero for the project.**

**You will need to create your own Database on MySQL as previously shown in the Labs and Online.**

**Project Requirements:**

You are asked to design and implement a Database for a Customer Ordering System for Amazon as follows:

The customer has a unique customer number and contact information. A customer can place many orders for products, but a given purchase order is placed by one customer. A purchase order can have a many-to-many relationship with a product items. For simplicity you can assume every product has a unique product code regardless of what that product actually is.

Your design must enforce:

Uniqueness on important data items e.g. each product, customer, etc

Cannot have orders for customers that don’t exist.

You can make any assumptions about the data that you feel are relevant.

**Project Tasks and Submissions:**

1. List the Entities, Attributes and Relationships and Multiplicities. (**30 Marks)**
2. Draw an ER Diagram using the information from step 1. This can be done using the drawing tools in MS Word, or using the online tool to create ER diagrams – <https://online.visual-paradigm.com/> **(20 Marks)**
3. Implement the design from steps 1 &2 on your MySQL server. All CREATE TABLE, DROP TABLE statements must be provided in script form and should be included in your MS Word/PDF Document. You must indicate all Primary, foreign and candidate keys. **(20 Marks)**
4. Devise sample data i.e. make up at least 4 rows of data for each table. Provide the Insert statements in script form, including them in your MS Word/PDF document. **(10 Marks)**
5. Write **FIVE** SQL multi-table JOIN queries that demonstrate the functioning of your database design. All tables should be used in those queries - essentially you will be expected to formulate requests that require you to write 3/4/5 table joins to complete this part successfully. Include the queries in your MS Word/PDF Document **(20 Marks)**