**Database Project Report**

We decided to use 3 Tables; Customers, Products, and Orders. The contents of these tables were mostly clear in the requirements, however we found the description of the Orders and Customer Payments implementation to be ambiguous. The way we chose to implement these two fields of information is by incorporating the payment field into the orders table.

**Attributes**

For the Customers table the attribute specifications were very clear and we implemented them as they were described. For Products we implemented most attributes as they were detailed, and we chose to implement the product type as an enum. We also added a cost attribute that will store the price of one unit of the product and is referenced by order. We are storing the cost as a varchar to avoid the complication of storing a double and will be converting it for calculations. Orders contains product\_id and cust\_idno which store references to the associated customer and product, quantity holds the number of the desired product being ordered, price\_each is a reference to the cost field of the associated product, total\_paid contains the current payment value and doubles as a method of accounting for the order completion status, and order\_no is the primary key that identifies each order.

**Tables**

The Customers and Products tables are independent while the Orders table is a weak entity that is dependent on the other two. Customers’ primary key is idnumber and its candidate key is email. Products’ primary key is product\_id. Orders’ Primary key is order\_num, and its foreign keys are product\_id which refers to Product’ primary key, and cust\_idno which refers to Customers’ primary key.

**Relations**

Orders and Customers share a 1 to N relationship, with 1 customer being able to have any number of orders, and 1 order only referring to a single customer. Products and Orders also share a 1 to N relationship, with 1 order containing only 1 product, and with 1 product being a part of any number of orders. Products and Customers do not share a direct relation.