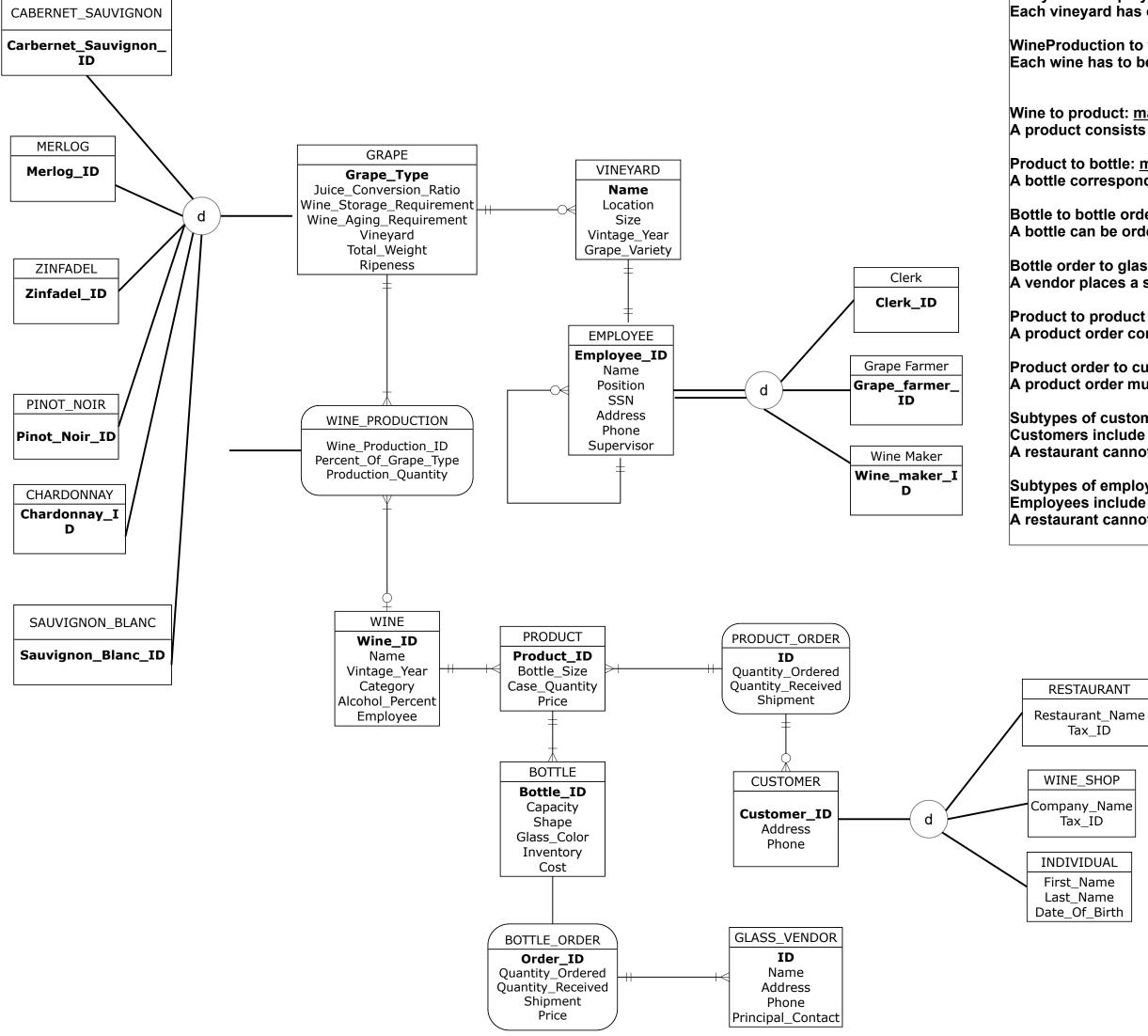
Group Project- 1 - phase 2 Corbinian Dietrich, Teun Meijer, Jie Xu CS350-Section1 10/23/2022



Assumptions:

Grape to Vineyard: mandatory one to optional many

A vineyard has one and only one grape and a grape corresponds to zero or many vineyards.

Vineyard to employee: mandatory one to mandatory one

Each vineyard has one employee, and each employee works at one and only one vineyard.

WineProduction to wine: mandatory one to optional one

Each wine has to be produced and the production process may be associated with a wine.

Wine to product: mandatory one to mandatory many

A product consists of one sort of wine but a wine sort can be contained in many products.

Product to bottle: mandatory one to mandatory many

A bottle corresponds to a single product whereas a product can contain many bottles.

Bottle to bottle order: mandatory one to optional many

A bottle can be ordered many times but also might not be ordered, a bottle order must be about one type of bottle.

Bottle order to glass vendor: mandatory one mandatory many

A vendor places a single order but a order can be placed by many vendors.

Product to product order: mandatory any to mandatory one

A product order contains a single product and a product is from a single order.

Product order to customer: mandatory one to optional many

A product order must belongs to one

Subtypes of customer: partial specialization & disjoint

Customers include but are not limited to restaurants, wine shops, and individuals, so it is partial specialization.

A restaurant cannot also be a wine shops, and individuals cannot represent a shops or restaurant, so they are disjoint.

Subtypes of employees: partial specialization & disjoint

Employees include but are not limited to Clerk, grape farmers, and grape makers, so it is partial specialization.

A restaurant cannot also be a wine shops, and individuals cannot represent a shops or restaurant, so they are disjoint.