**Introduction**

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* Chosen scenario: Scenario 1

**Entities**

* Oder – this entity tracks each order’s information
* Product – this entity collects the products’ information (including inventory)
* Customer – this entity tracks customers’ detail
* Company – this entity used to collect the company’s information
* Part – this entity is used to keep track of the parts’ description

**Business Rules**

* A customer may place zero, one or more orders.
* An order must have one and only one customer.
* The company can have zero, one or more orders.
* An order must have one and only one customer.
* An order can have one or more products.
* One product may be included in zero, one or many orders.
* A product may have one or many parts inside.
* A part can used in zero, one or more products.
* Discount amount is recorded on customer’s record.
* Product data is updated accordingly along with the part inventory data.

**Unknows**

* Are there other statuses for an order other than new?
* Can a customer record not include an email address?
* Is there any depreciation on products and parts?
* Is the company will open another one?

**Assumptions**

* An order can have multiple statuses; therefore, an order status table is required.
* An order can have different mailing and shipping addresses.
* The credit limit can change.
* A customer can have different discount in different period.
* The product price can change due to the market.
* Orders that can be filled or partially filled.