Constraints to Our Database

**All of the attributes in our database are non null. We decided that in order to keep data integrity we would make it so that all of our attributes are required when inserting into the database.**

Primary Key(s) are in yellow

Foreign Key(s) are in red

Primary and Foreign Key(s) are in orange

Check constraint attribute(s) are blue

* Email
  + email\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + email\_name
    - Not Null.
    - This is used to make sure that our customer has the ability to get into contact with either their employees or customers.
  + email\_domain
    - Not Null.
    - Gives us the domain of the email name so if the customer wants to look up specific domains, they have the ability.
  + person\_id
    - Not Null.
    - This attaches our Email table to the Person table.
* Phone
  + phone\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + phone\_area\_code
    - Not Null.
    - This is the first 3 digits of a person's phone number. Can be used to get a ballpark on the area they are from. We can combine this with the other phone number parts to get the full phone number.
  + phone\_telephone\_exchange
    - Not Null.
    - This is the 4 digits after a person's area code. We can combine this with the other phone number parts to get the full phone number.
  + phone\_assigned\_number
    - Not Null.
    - This is the final 4 digits of a person’s phone number. We can combine this with the other phone number parts to get the full phone number.
  + person\_id
    - Not Null.
    - This attaches our Phone table to the Person table.
* Position
  + position\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + position\_name
    - Not Null.
    - This gives our customer the ability to have different positions within the company.
* Status
  + status\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + status\_type
    - Not Null.
    - This describes whether the employee is full time or part time.
* Employee
  + employee\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + date\_hired
    - Not Null.
    - This gives the customer the ability to have an anniversary date/review date for each employee.
  + wage
    - Not Null.
    - This describes how much money the employee earns hourly with the company.
  + person\_id
    - Not Null.
    - This attaches our Employee table to the Person table.
  + position\_id
    - Not Null.
    - This attaches our Employee table to the Position table.
    - If the position\_id is changed, they will receive a wage increase of 25%
  + status\_id
    - Not Null.
    - This attaches our Employee table to the Status table.
* Person
  + person\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + person\_first\_name
    - Not Null.
    - Allows the customer to have a first name associated to each customer or employee.
  + person\_last\_name
    - Not Null.
    - Allows the customer to have a last name for their customers and employees.
* Shift
  + shift\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + shift\_time
    - Not Null.
    - This allows our customer to have employees that work either first, second, or third shift.
* Employee\_has\_shift
  + employee\_id
    - Not Null.
    - This is a composite key used with shift\_id.
    - This attaches our Employee\_has\_shift table to the Employee table.
    - The Employee\_has\_shift table was created to facilitate the relationship between the Employee table and the Shift table.
  + shift\_id
    - Not Null.
    - This is a composite key used with employee\_id.
    - This attaches our Employee\_has\_shift table to the Shift table.
    - The Employee\_has\_shift table was created to facilitate the relationship between the Employee table and the Shift table.
* Customer
  + customer\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + person\_id
    - Not Null.
    - This attaches our Customer table to the Person table.
    - We never want a person\_id to change, they should always be associated with the same customer\_id to avoid duplicates.
* Order
  + order\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + order\_time
    - Not Null.
    - This allows the customer to have a references to when the customer and employee interacted to complete the order.
    - We want ensure that everything in Order is factual. Therefore if order\_time is changed, change it back to it’s original.
  + employee\_id
    - Not Null.
    - This attaches the Order table to the Employee table.
    - We want ensure that everything in Order is factual. Therefore if employee\_id is changed, change it back to it’s original.
  + customer\_id
    - Not Null.
    - This attaches the Order table to the Customer table.
    - We want ensure that everything in Order is factual. Therefore if customer\_id is changed, change it back to it’s original.
* Order\_has\_Product
  + order\_id
    - Not Null.
    - This is a composite key used with product\_id.
    - This attaches our Order\_has\_Product table to the Order table.
    - The Order\_has\_Product table was created to facilitate the relationship between the Order table and the Product table.
  + product\_id
    - Not Null.
    - This is a composite key used with order\_id.
    - This attaches our Order\_has\_Product table to the Product table.
    - The Order\_has\_Product table was created to facilitate the relationship between the Order table and the Product table.
  + product\_quantity
    - Not Null.
    - Gives us the quantity on a given order. Can be used to determine total cost on an order.
    - If product quantity is updated to 0 or below, order 10 new products automatically.
* Product
  + product\_id
    - Not Null.
    - This is unique key and is auto incremented. This primary key is an individual in the table itself.
  + product\_name
    - Not Null.
    - The name of the product.
    - If product name is updated, change it back to the original name. We do not want to allo name changes, add a new product instead.
  + product\_description
    - Not Null.
    - The description of the product.
  + product\_price
    - Not Null.
    - The unit price of the product.