**Development of an Automated Computerized System for a start-up Manufacturing and Distribution Company**

* **Objectives**
  + **Move to a database from traditional file-based system (Automate the recording process)**
  + **Increase efficiency**
  + **Improve security of the company operations**
  + **Reduce excessive, insufficient production**
* **Solution**
  + **Web based solution for tracking production and distribution process**
  + **ML model for future sales prediction**
* **Parties interact with the system**
  + **Factory Manager 🡪 FM**
  + **Distribution Manger 🡪 DM**
  + **Sales Agent 🡪 SA**
* **Privileges to each party**
  + **Factory Manger**
    - **Visualize future sales predictions**

**In the Predictions Page**

* + - **Visualize production details in monthly or yearly**

**In the Product details page**

**Is in the Table format**

* + - **Enter new product item details or update, delete them**

**In the product details page**

**A form is used to enter new data**

**Delete button is there to delete rows**

**Update Button is there to update the rows**

* + - * ‘PRODUCT’ table should be update appropriately
    - **Enter factory production details to the database**

**In the Production Details Page**

* + - * Specific product group that manufactured in a particular day have same batch number. When a specific product group is manufactured, it is entered to the ‘FACTORY\_PRODUCT’ table.
    - **Issue products to store**

**In the Issued Products Page**

* + - * Specific product group that manufactured in a particular day have same batch number. After issuing items from that product group, ‘IsIssued’ field is updated.
      * FM can only see the products in issue page if ‘IsIssued’ field is false
  + **Distribution Manger** 
    - **Register new Sales Agents**
    - **Register new Shops**
    - **Double check unloaded products to head quarters**
      * After arriving products to the store distribution manager will enters the data.
      * Based on ‘StoredQuantity’ value and ‘Quantity’ value in ‘FACTORY\_PRODUCT’ table, ‘ReceivingStatus’ will be updated.
    - **Issue products to Sales Agents**
      * Here products are issued from ‘ISSUED\_PRODUCTS’ table. After issuing ‘CurrentQuantity’ field should be updated appropriately.
      * Products can be issued from ‘ISSUED\_PRODUCTS’ table if ‘CurrentQuantity’ is no longer zero.
    - **Tracking delivery status of issued products to sales agents**
      * Using ‘DelivaryStatus’ field in DISTRIBUTION\_PROCESS table
    - **Double check delivered product details**
      * When sales agent handling the money to DM, he can update the revenue and set the ‘DelivaryStatus’ field in ‘DISTRIBUTED\_PRODUCT’.
  + **Sales Agent**
    - **Enter delivery details to the database**
      * ‘DelivaryStatus’ field is a string value, and it is updated according to the ‘DeliveredQuantity’ field.
        + If ‘AssignedQuantity’ equals ‘DeliveredQuantity’ delivery status is updated as ‘success’.
        + If ‘AssignedQuantity’ greater than ‘DeliveredQuantity’ delivery status is updated as ‘error’.
        + If ‘CourieredQuantity’ is null delivery status is updated as ‘inProgress’.