Week 7 Module 9.1 Case Study Milestone #1

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CSD310-H323 Database Development and Use (2255-DD)

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Group Name:

Group 1 The best group!

Team Members:

Joel Atkinson, Zachary Baker, Kyle Klausen, Juan Macias Vasquez, Brittaney Perry-Morgan

Chosen Case Study:

Bacchus Winery

Business Rules (based on case study + assumptions)

Business Rules:

1. Supply Inventory Management

    -   All supplies (bottles, corks, labels, boxes, tubing, vats) must be tracked in an inventory database with the details on which supplies come from which vendor, expected delivery date, actual delivery date, and the quantity of each item ordered.

    -   Suppliers should provide an expected delivery date and the actual delivery date should be flagged if it is delivered after expected delivery date in order to help company better manage inventory to production.

    -   Monthly report should be pulled and sent out to show how well suppliers are keeping up with the needs of production and production vs sales to ensure that the right amount of supplies are ordered in order to produce the correct amount of wine bottles for the amount of sales that are occurring.

2. Online Ordering and Shipment tracking

    -   An online portal established for distributors who can sign in using distributor credentials to ensure that orders align with inventory levels

    -   Each order should have a unique order ID number which would allow distributors to track shipment to that order.

    -   System should integrate the distribution database with the shipping details database in order to provide estimated shipping times to the customer and allow for shipment tracking.

3. Wine Distribution Tracking

   - Distribution database should track the sales of each type of wine and which distributor is selling which types of wine and how much each distributor sells.

   - Report should be generated monthly to compare actual sales vs predicted sales for each wine type to identify which ones are over selling and which ones are underselling.

4. Employee hour tracking

   - Employee hours must be recorded monthly for all employees.

   - System should track and categorize hours by regular time, overtime, or vacation time pay to help payroll keep a record of all hours recorded at what rate to better plan for hours and employees needed for certain time frames.

   - Monthly report should be generated to summarize total hours worked per employee and highlight any anomalies to see who is working excessive hours or not being utilized enough

5. End of Year Report

   - A yearly report should be generated summarizing all datapoints to ensure that suppliers are supplying the correct amount of products on time, the correct amount of wine is being produced based on sales of each type and that employee hours are being utilized correctly and that the correct amount of employees are onboarded.

6. Access and Security

   - Only authorized employees can access the companies' sensitive data

   - Distributors can only access the inventory from supplier and the sales/shipment tracking for their orders

   - Transactions and interactions between databases should be dated to keep track of what is happening when.

Assumptions:

- There are already systems in place to track much of this information such as sales, production and employee hours that can be digitalized

- Customer would be involved in the creation of these systems to ensure that their expectations are being met and they are providing us with all the information and data required to run these systems

- The goal of these systems is to ensure that the correct amount of wine is being produced with the correct number of supplies and correct number of employees/employee hours to cut down on waste and overspending

- The suppliers give shipping details and estimated delivery times when shipping supplies to Bacchus Wines

- Employee hours and needs change throughout the year based on seasons (winter being down season, summer being much busier, etc)

- Stan and Davis have basic understanding of technology and will be able to use and utilize new electronic database systems.

- Reports will need to be sent to certain employees based on their job descriptions and clearance level within the company

Initial ERD (Entity Relationship Diagram)