Faculty of Engineering & Technology – Computer Science Department

Second Semester 2021 – 2022

Database Management Systems - Comp333

Phase 2: Espresso soft drinks company – Accounting software

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Group No: 10

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Summary:

The aim of this project is to reduce the work of espresso soft drinks company, by making them supply their machines easier and faster, and to see the connection with the customer viewing all his needed information, and also for the customer to be connected with his own supplier and for the machines that has not been sold yet with their current warehouses too.

Introduction:

The client is espresso soft drinks company. A company that imports soft drinks machines from the outside and sells them to different locations in the west bank, the company lies in Al-Birah City, and the customers are from all around the Palestinian West Bank.

Our work is to make a program that stores and manages their sales and machines data, which will help in reducing their accountancies time and make their work much easier, by making this database system that includes the company's: customers, machines with all their different types, types of soft drinks with all the quantities, warehouses, and all located suppliers too.

Figure 1: AD for the customer's Company

Data Requirements:

- **Customers:** Who each one has his own ID, name, type of business (like supermarket or café), address, phone number.

- **Machines:** (that can be either sold or still at the warehouse), a machine has an identifier ID, production date, warranty date, depending on its status a machine van be either stored in a warehouse, or sold to be owned by a customer, and each machine has a type that defines the rest of its data.

- **Types of machines**: A type has an identifier and a color, each type has a number of provided drinks with their quantities and types of cups too, and each type has a static price too.

- **Supervisor:** Who supplies the customer with the drinks for the machine and supervises him too, where a supervisor is defined by his id, and he has a name and a work nickname.

- **Types of drinks:** To specify the kind and type of the drink that the machine could provide, for example: coffee, chocolate, cappuccino, and Nescafe. Each type has a name, an identifier code, a price, a producing company, and its electrical information too.

- **Drink packages:** The quantity of a type of drink, that has a serial number identifier, a date of product, and a count of the summation of the quantity, if the drink is sold then it has an owner customer, and if it's not then it has a storing warehouse.

- **Warehouse**: The company can have more than a warehouse all in different areas, that stores the unsold machines and different quantities of drinks, warehouses are defined by numbers, each warehouse has an address and a rent price, and the type of the building that this warehouse is in.

- **Order:** The order is when a customer orders a new machine from a seller from the company's office, as the order has its id number, and it contains the purchase's data such as discounts and the payment method.

- **Delivery:** A delivery is when the purchased order is going to be delivered to the customer, where it has it defined by its id, each delivery is delivered by a driver from the company on a van from the company, it has a date and its own expenses too.

- **Shipment:** A shipment is when new machines and drink packages arrive to be stored in warehouses, each shipment has an identifier number, a date and a checking worker.

- Each warehouse can store many machines and packages of drinks, and each machine or quantity of drinks is stored in one warehouse.

- Each Machine has a type of machine and each drink package has a type of drink, yet each type of machine produces many machines, and each type of drink produces many packages.

- A shipment could have many machines and packages of drinks that arrive on it, yet each machine and drink package is arrived at one shipment.

- Each customer orders a machine by the type on a one order, which soon there will be a delivery where the machine itself will be delivered to the customer, any type of machine can be ordered as many times of customers.

- Each customer has one supervisor in his local area who arranges his company deals, and each supervisor could supervise many customers, and drink packages are sent to supervisors where each package is sent to one supervisor who deals with it and each supervisor gets however his area of customers need of drink packages.

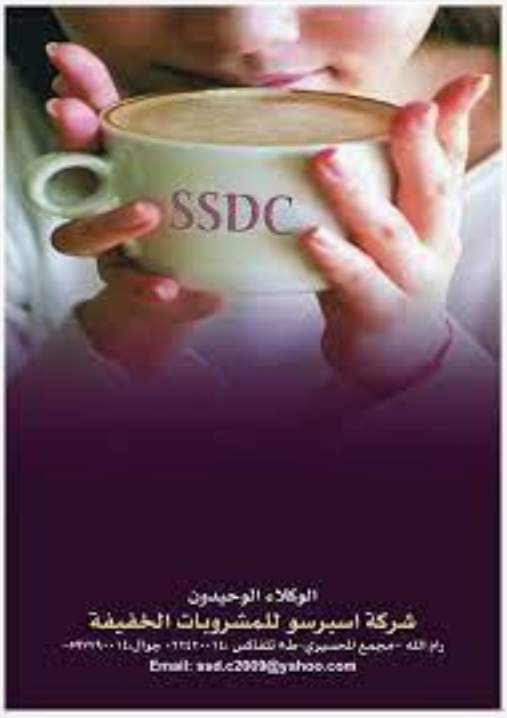

Figure 2: Company Logo

Er Diagram:

The ER diagram is displayed in the figure below:

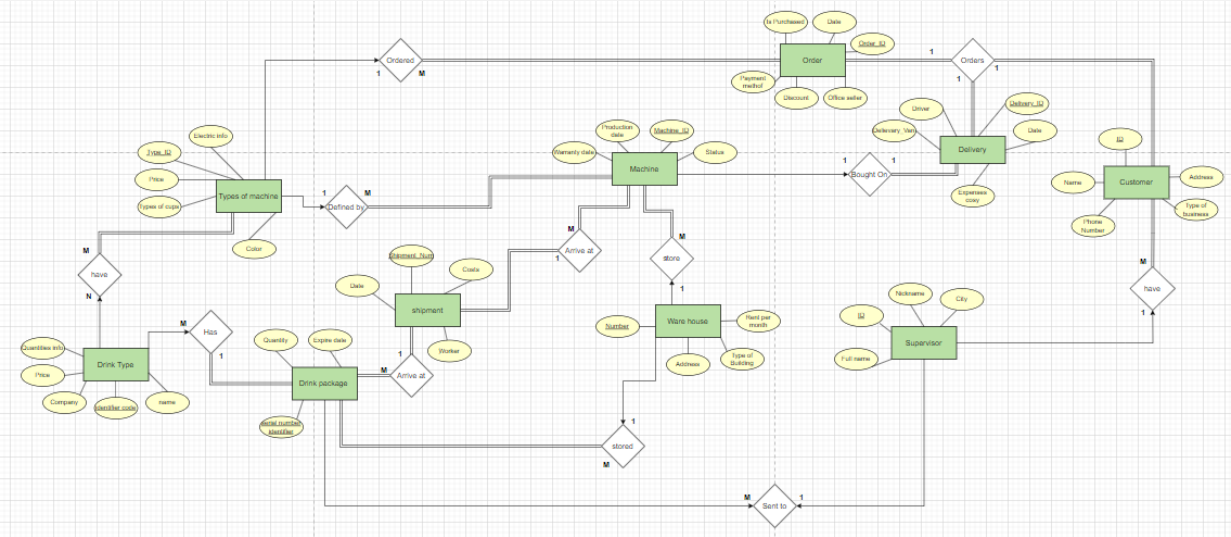

Figure 3: ER diagram

For better quality the diagram can be found in the link below:

https://drive.google.com/file/d/1zmr4SZPjSaogddAFbDPuYYENMv-dvlHQ/view?usp=sharing

The used technology:

This software is built in Java programing language and the database using MySQL, the user interface is made by using scene builder, all users will share the same code using GitHub where each user has their own pc with an operating system of windows 10.