CPSC 304 Project Cover Page

Milestone #: __1__

Date: __09-02-2024__

Group Number: __45__

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

2. A brief project description answering these questions:

a. What is the domain of the application? Describe it.

The domain of this application is for agricultural firms. The database application system can be used for agricultural farm management, crop production and crop distribution.The entities included in the domain of the system are

1. **Farms** - Farms are owned in different locations by the agricultural firm and are managed by the firm.
2. **Farmers** - Farmers are assigned to work at specific farms by the agricultural company. They are responsible for crop production and farming operations performed on the farms.
3. **Supervisors** - Supervisors are hired by the firm to monitor the proper functioning of the farms along with forming a budget of each farm.
4. **Crops** - Crops are produced by farms and the company keeps track of the quantity and type of crops produced. These crops are later sold through distribution channels.
5. **Soil Type** - The company keeps track of the specific soil types needed for each crop and the soil type of each farm. This ensures that the crops are cultivated in a proper environment.
6. **Farming Equipment** – Farms need different equipment for farming purposes.
7. **Distribution Channels** - The crops produced are sold through different distribution channels such as offline and online.

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b. What aspects of the domain are modeled by the database?

The application models the farming management aspects of the agricultural firm. In real life, this model can be used by a firm which owns multiple farms, assigns multiple farmers work on these farms, produces different varieties of crops and sells the produced crops through different channels. Such an agricultural firm will need to keep track of the location, soil type and area of each owned farm, type and quantity of each crop produced by each farm and the contact and personal details of the farmers working on the farms, details of the supervisors monitoring the farms. The company will also need to keep track of the budget needed for each farm and the farming tools needed by each farm. The management of such companies will require an application model to keep a record of all the operations which is addressed by this application model.

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3. Database specifications: (3-5 sentences)

a. What functionality will the database provide?

The main functionality of the database is to provide a farming management application. The database will be used for keeping a record of the farms owned by the company with their location, soil type and area of the land. It will be used to keep a record of the farmers working on the specific farms, along with the details of the farmers, including the number of hours they work at a specific assigned farm. The system enables tracking the crop details such as the crop name and quantity produced by each farm can be recorded, along with the soil type needed for each crop. The database will also keep track of the type and quantity of crops sold through different distribution channels.

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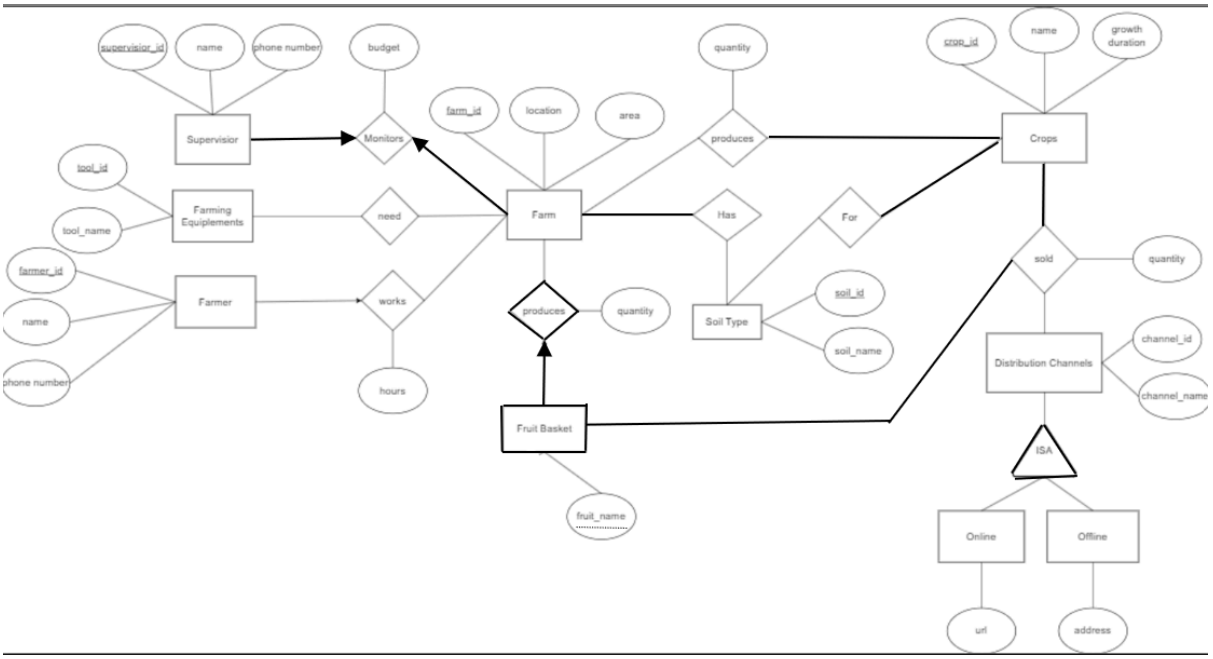
4. Description of the application platform: (2-3 sentences)

a. What database will your project use (department provided Oracle, MySQL, etc.)?
We are planning to use MySQL for this project as most of our group members are familiar with it and have already settled on our devices. Other than this, we find it a bit simpler than the other possible options.

b.What is your expected application technology stack?
For programming purposes we are planning to use Java IDE, React(Javascript) for frontend and MySQL for DBMS.

ER Diagram



Additional Comments

The above diagram has a weak entity set called fruit basket. Some specialized farms produce seasonal fruit baskets which are specific to the farms. Fruits with the same name can be produced in different farms but can only be uniquely identified by the farm they were produced in.