

Criteria A Planning

Scenario:

The client is Mr. xyz, who is a manufacturer of dairy products. I conducted an interview with him on 2nd April 2022 at his office. He explained his current system is based on Microsoft Excel and is highly inefficient. We discussed how he manually creates a summary document of the logistics part of his dairy business that helps him analyse his company's performance(Appendix A). My client further described how he currently uses services provided by an external transportation company to transfer milk from the collection centres to the factories. According to the distance travelled the total price for transportation is calculated. The transportation company uses GPS devices to measure the distance but are very inaccurate and inflated. Therefore, using google maps to create a distance matrix, he manually enters distances in Microsoft Excel which is very time consuming and inefficient. There are also human errors frequently that need to be cross checked. According to Mr. xyz, this process is extremely inefficient as hours are wasted every time giving him less time to complete other work(Appendix A). We agreed that it is necessary to automate the system to calculate distances, view and manage order and employee details using Java and databases to save time and costs.

Rationale:

The goal is to design a system that is efficient, effective, and dependable, and Java along with MySQL is ideal for this because it can improve our client's experience of swiftly computing distances and managing logistics.

Because of its cross-platform features, Java is the best language to utilise. Since other employees may use the system, it should support many platforms such as Windows, MacOS,

and others. Furthermore, Java provides multithreading, which allows for CPU optimization, increasing system efficiency and computing expenses. I'm also quite acquainted with Java, which makes it easy for me to create the application according to the client's specifications. If any changes are required, the system may easily be upgraded. For example, if new sites and distances are needed, the code may be readily modified. Furthermore, because Java is object-oriented, the code may be reused and modular programmes can be constructed. Java would greatly assist this system in terms of creating an effective means of calculating prices.

MySQL is an open-source database that connects databases to tools to make database management easier. It is a dependable, powerful, and stable solution with advanced features. MySQL can be used to store the data and then generate reports. It is one of the most secure databases that ensures data security and restricts unauthorised access. MySQL is developed to withstand even the most demanding applications while providing optimal performance, full-text indexes, and unique memory caches. It is a flexible solution that makes maintenance, debugging and upgrades fast and easy while enhancing the end-user experience. Being compatible with most operating systems Windows, Linux, NetWare, etc., it is the optimum solution to store order details . It can also be integrated with Java which will make the system efficient.

Success Criteria:

1. The system should be able to read from Excel spreadsheets.
2. The system should be able to generate new Excel spreadsheets.
3. The system should reduce distance calculation time for the client.
4. The system should encrypt the data and protect it from being accessed by any unauthorised source.

5. The system should be accessible by all employees across various platforms.
6. The client should be able to generate reports such as order with max quantity, order with min quantity the database accordingly.
7. Warning messages should be displayed in case of incorrect data entry.
8. The system should be in sync with the databases.
9. GUI should be user friendly by having buttons for navigation buttons, drop down menu, tables etc.

Word Count: 494