**MUSICAL INSTRUMENTS SHOP**

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**1. INTRODUCTION**

**1.1. The System Environment**

The database application I will develop for the project will be related to a shop that sells musical

instruments. System users consist of companies that sell musical instruments of different brands

and categories. In this database;

• The name, surname, marriage status, date of birth, gender, education level, position, phone number, address, and e-mail information of the people working in the shop will be stored in the employee information table.

• Salaries of the employees will be stored in the employee salaries table according to the position they work.

• The instruments sold by the employees, the date of sale, and the number of products sold will be stored in the sale table.

• The price, stock status, number of products sold, and supplier of the instruments will be stored

in the instruments table.

• Suppliers' names, telephone numbers, e-mails, and addresses information will be stored in the

supplier information table.

• There will be a table that consists of instrument information, such as category and instrument

name.

• The name, surname, telephone, address, city, and e-mail of the customers who bought the instrument and the name of the product they bought will be listed in the customer information table.

As the relationship structure, instrument information and its supplier’s data will be associated under the instruments table. Purchase and sale tables will be generated upon instrument id which is a primary key in the instruments table and is stored in various tables. The Sales table will include the employee id as a foreign key from the employee information table which also relates to employee salaries by employee position. Since there is no database application, you must keep stock data or customer information manually. Manually storing information is a time-consuming process and increases the risk of misinformation. For instance, for a product that you have not updated its stock status, you may think that you have this product, but it has been sold. Or you can't tell which of your two different customers with the same name and surname bought a guitar. If you do not want such situations to happen, you should spend more time with your data. This leads to a waste of time. Although the structure of the system is somewhat complex in general, it is necessary for the proper processing of data. For instance, by connecting products to customers in a one-to-many relationship, the problem of selling the same product to two different users is eliminated. Or categorizing the products would be a time-saving system to see the stock status of the products. So, it is very significant to develop and use a database management system in big data that needs to be updated instantly to avoid such confusion and waste of time.

**1.2. Mission of Project**

As the system environment describes this project will have the mission of constructing the business processes of a store that sells musical instruments in a *simplified, automatized* database system. Throughout the design period of the project, the user experience will be prioritized by carefully choosing tables and entities as well as the other database tools (relationships, queries, etc.) that will be provided. At the end of the creation of the system, a data store will be made available for the user. The goals of this system are to be able to *keep track* of product, customer, and employee records. The organized system will ensure *reduced* data redundancy and *increased* effective management. These main goals can be separated into subgoals, *managing* purchase,supplier, instrument, and sale action data separately. The usage of different data categories in thedatabase will *simplify* the workflow of the store. Accordingly, the objective is to allow thecustomer (-shop owner-) to be able to direct their time and effort on other parameters other thandata collection which is time-consuming and extremely complex to do by traditional methods.

**1.3. Scope of Project**

With the musical instruments system, I will create for my project to be effective and efficient,

I will be able to transparently convey information about price changes and pricing to buyers. My products are only to be sold as final products, so I will not be selling parts of the musical instruments such as the body of the guitars. For this reason, only musical instruments are available for sale in the paintings. The system includes employee data related to the instrument

sold by them. Instruments will be stored in categories to be able to have categorized purchased

and sold quantity/value information. Customer data will also be linked with the instruments that

they have bought, allowing the system user, to have a sense of customer preferences and shopping habits for business strategies. I will not show additional information about the return

process of musical instruments. Addressing the purpose of the project, a record of the number of decreased and increased products will be kept. For the shipping process, the products are going to be reduced from stock and the remaining transactions will not be printed. I will start my project by first finding out what products are sold in a musical instrument shop. After I have schematized the information, I will proceed by processing the logical connections within the working order. While advancing the database system in this SQL system, I will not neglect to carry out beta tests for the operation of the system by identifying the shortcomings. Pulling new data, saving existing data, and updating all data cannot be neglected.