

**MARMARA UNIVERSITY**

**FACULTY OF ENGINEERING**

CSE3055

Database Systems

Project Step #2

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|  | Student Id | Name Surname |
| 1 | 150119745 | Haydar Taha TUNÇ |
| 2 | 150119739 | Emir Ege EREN |
| 3 | 150119743 | Burak DURSUN |

**INTRODUCTION**

We are designing a database containing the product sales and technical service activities offered by the İpek Su Arıtma company to the customers.

**ENTITIES AND DEFINITIONS**

**Person**: An entity that contains the common attribute of customers and employees.

**Customer**: It includes the attribute of people who buy or use the company's products and services.

**Employee**: It includes the attribute of the people working and serving in the company.

**Bank**: The attribute of the bank where the salary paid to the employees of the company is deposited.

**Products**: An entity that contains the attribute of the products sold or used in the company.

**Service**: Services offered by the company to customers.

**SourceFirm**: The company from which the products used or sold are purchased.

**Sales**: An entity that contains the attribute of the product sold, the buyer and the sale.

**PriceList**: Entity that contains the information and price of the product sold.

**CurrentTable**: The entity that holds the necessary information, including the accounts receivable or payable between the company and the customer.

**License**: Entity containing the attribute of the document showing the originality of the product.

**ServiceRequest**: Entity containing the information to be kept while the customer requests service from the company.

**BUSINESS PROCESSES AND DEFINITIONS**

İpek Su Arıtma Company sells many different products to customers and also provides technical service to its customers.

**Services**:

• Domestic Treatment Service:

1. Water Analysis

2. Fault Detection

3. Periodic Maintenance

4. Montage

5. Filter Change

• Industrial Treatment Service:

1. Demand and Determination

2. Montage

3. Water Analysis

4. Periodic Maintenance

5. Projecting

**Products**:

• Closed case water treatment systems:

1. Mineral water purifying device

2. Oxygen water purifying device

3. New generation water purifying device

4. Detox water purifying device

• Industrial Water Treatment Systems:

1. Water softening systems

2. Sand carbon softening systems

• Open case water purifiers:

1. Open case water purifiers with pump

2. Pumpless open case water purifiers

3. Direct flow water purifiers

4. High flow water purifiers

• Water treatment tank:

There are water treatment tanks of various sizes.

• Water dispensers:

1. Stainless steel purified water dispenser

2. Industrial type purified water dispenser

3. Home, office, restaurant type purified water dispenser

**BUSINESS RULES AND CONSTRAINTS**

Creating database of İpek su arıtma company using MSSQL.

Adding the necessary information to the database system by contacting the company many times.

**FUNCTIONAL - NON-FUNCTIONAL BUSINESS REQUIREMENTS**

Functional Business Requirements:

* External interfaces: These requirements include user interfaces (interaction logic between software and user), screen layouts, hardware interfaces, and other related features.
* Business rules: Business rules are lists of statements that tell you whether you may or may not do something or that give you the criteria and conditions for making a decision.
* Authentication: Authentication requirements are policies that dictate how a user must authenticate before access is granted to a protected web application.
* Authorization: Authorization is the process of giving someone the ability to access a resource.

NonFunctional Business Requirements:

* Usability: Usability defines the level of difficulty for a user to learn and operate the system.
* Security: Security requirements provide that the software is protected against unauthorized access to the system and stored data.
* Reliability: Reliability defines how likely it is that the software will run error-free over a period of time.
* Performance: Performance is a quality attribute that describes the responsiveness of the system to various user interactions with it.
* Diagrams: A diagram showing the relationships between entities.
* Scalability: Defines how the system grows without adversely affecting its performance

**CUSTOMER RELATED DOCUMENTS**

