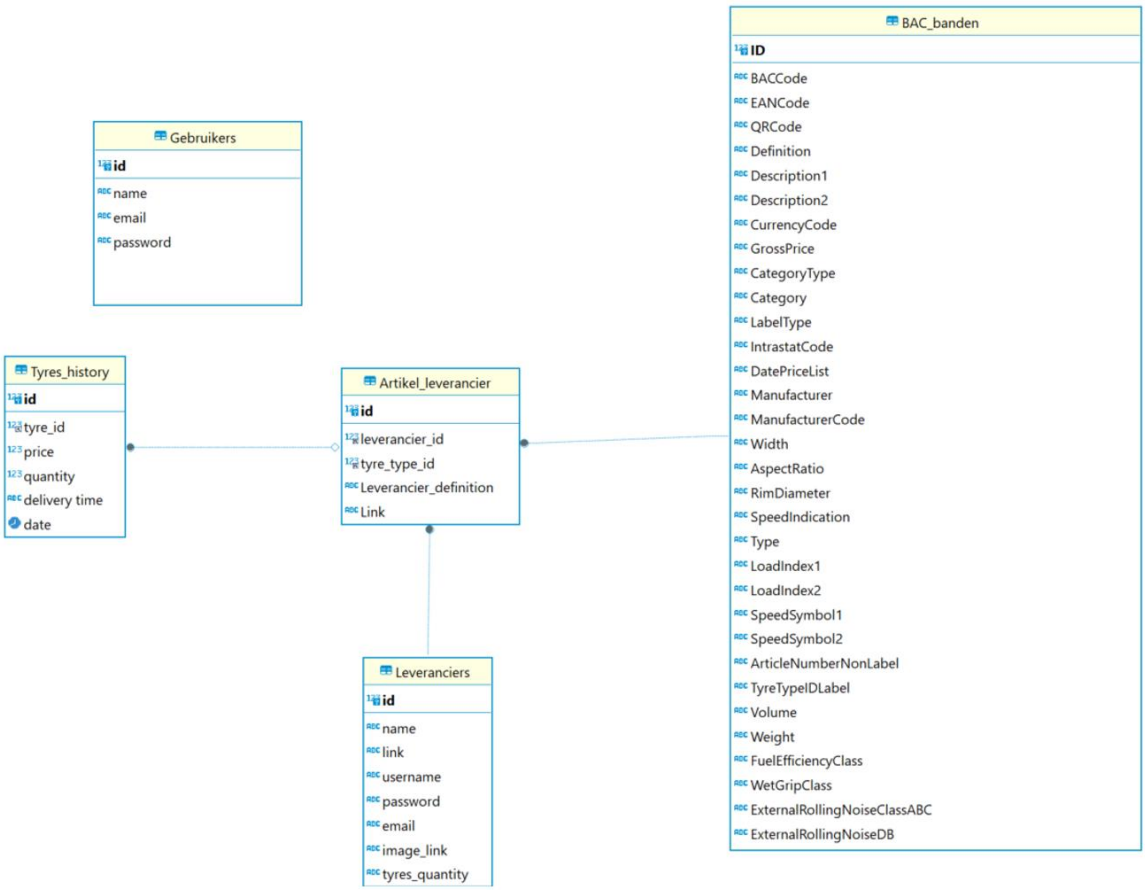
# Database Design Document



## INTRODUCTION

This document provides a detailed overview of the database design for the tire procurement dashboard project. The database is designed to store and manage data related to users, tire history, suppliers, and tire attributes, ensuring efficient data retrieval and storage.

## DATABASE OVERVIEW

The database consists of six primary tables:

1. **Gebruikers**: Stores user information.
2. **Tyres_history**: Stores historical data of tire prices and quantities.
3. **Artikel_leverancier**: Links suppliers to specific tire types and their definitions.
4. **Leveranciers**: Stores information about suppliers.
5. **BAC_banden**: Stores detailed attributes of tires.
6. **BAC_banden**: Stores detailed attributes of tires.

## TABLES AND RELATIONSHIPS

1. **Gebruikers**
    - **Description**: This table stores user information including name, email, and password.
    - **Fields**:
        - `id`: Primary key, unique identifier for each user.
        - `name`: Name of the user.
        - `email`: Email address of the user.
        - `password`: Password for user authentication.
2. **Tyres_history**
    - **Description**: This table stores the historical data of tire prices and quantities.
    - **Fields**:
        - `id`: Primary key, unique identifier for each record.
        - `tyre_id`: Foreign key linking to the `BAC_banden` table.
        - `price`: Price of the tire.
        - `quantity`: Quantity of the tires.
        - `delivery_time`: Delivery time for the tires.
        - `date`: Date when the data was recorded.
3. **Artikel_leverancier**
    - **Description**: This table links suppliers to specific tire types and their definitions.
    - **Fields**:
        - `id`: Primary key, unique identifier for each record.
        - `leverancier_id`: Foreign key linking to the `Leveranciers` table.
        - `tyre_type_id`: Foreign key linking to the `BAC_banden` table.
        - `Leverancier_definition`: Definition provided by the supplier.
        - `Link`: Additional link or reference.
4. **Leveranciers**
    - **Description**: This table stores information about suppliers.
    - **Fields**:
        - `id`: Primary key, unique identifier for each supplier.
        - `name`: Name of the supplier.
        - `link`: Website or link to the supplier.
        - `username`: Username for accessing supplier services.
        - `password`: Password for accessing supplier services.
        - `email`: Email address of the supplier.
        - `image_link`: Link to the supplier's image or logo.
        - `tyres_quantity`: Quantity of tires available from the supplier.
5. **BAC_banden**

- **Description**: This table stores detailed attributes of tires.
- **Fields**:
  - `ID`: Primary key, unique identifier for each tire.
  - `BACCode`: Code for the tire.
  - `EANCode`: European Article Number code.
  - `QRCode`: QR code for the tire.
  - `Definition`: General definition of the tire.
  - `Description1`: First description field.
  - `Description2`: Second description field.
  - `CurrencyCode`: Currency code for pricing.
  - `GrossPrice`: Gross price of the tire.
  - `CategoryType`: Type of category the tire belongs to.
  - `Category`: Specific category of the tire.
  - `LabelType`: Label type for the tire.
  - `IntrastatCode`: Intrastat code for statistical purposes.
  - `DatePriceList`: Date of the price list.
  - `Manufacturer`: Manufacturer of the tire.
  - `ManufacturerCode`: Code for the manufacturer.
  - `Width`: Width of the tire.
  - `AspectRatio`: Aspect ratio of the tire.
  - `RimDiameter`: Diameter of the rim.
  - `SpeedIndication`: Speed indication for the tire.
  - `Type`: Type of tire.
  - `LoadIndex1`: First load index.
  - `LoadIndex2`: Second load index.
  - `SpeedSymbol1`: First speed symbol.
  - `SpeedSymbol2`: Second speed symbol.
  - `ArticleNumberNonLabel`: Non-label article number.
  - `TyreTypeDLabel`: Tire type label.
  - `Volume`: Volume of the tire.
  - `Weight`: Weight of the tire.
  - `FuelEfficiencyClass`: Fuel efficiency class.
  - `WetGripClass`: Wet grip class.
  - `ExternalRollingNoiseClassABC`: External rolling noise class (ABC).
  - `ExternalRollingNoiseDB`: External rolling noise in decibels.

## RELATIONSHIPS

- **Gebruikers** is a standalone table with no direct relationships to other tables.
- **Tyres_history** is linked to the **BAC_banden** table through the `tyre_id` field.
- **Artikel_leverancier** is linked to the **Leveranciers** table through the `leverancier_id` field and to the **BAC_banden** table through the `tyre_type_id` field.
- **Leveranciers** is linked to the **Artikel_leverancier** table and indirectly to the **BAC_banden** table through **Artikel_leverancier**.

## ENTITY-RELATIONSHIP DIAGRAM (ERD)

The ERD visually represents the relationships between the tables. Here is a brief explanation of the diagram:

- **Gebruikers** table stands alone.
- **Tyres_history** is related to **BAC_banden** through the `tyre_id`.
- **Artikel_leverancier** connects **Leveranciers** and **BAC_banden** via `leverancier_id` and `tyre_type_id` respectively.
- **Leveranciers** connects to **Artikel_leverancier** which further links to **BAC_banden**.