## <ER DIAGRAM>



ISO_Code
Name
Sanctioned
Currency
Billionaires
Country

Team_Id
Employees
Address
Hourly Rate
Manufacturing Te...

Street
Number
Zip

Unit_Id
Cost
Manufacturing Ti...
Material
Volumen
Weight
Unit

is in

manufactures

Customer — buys — Plane — consists of — Unit

has

Minifridges

IS-A

Toilet Unit     Bar Unit

has

Beverage

Customer_Id
Firstname
Street
Number
Zip
Registration
Name
Color
Livery
Seats
Windows

Lastname
Address

Test Protocol

ProtocolNumber
Route
Test
Airport
Pilot
Date

Capacity
Flowrate
Bidet

Bottle_Id
Name
Percentage
Cost

Type
Size

Text is not SVG - cannot display

## <UML DIAGRAM>

**Country**
+ISO_Code: varchar
+Name: varchar
+Sanctioned: boolean
+Currency: varchar
+Tariff: float
+Billionaires: integer

**Manufacturing Team**
+Team_Id: integer
+Employees: integer
+Hourly Rate: float
+Street: varchar
+Housenumber: integer
+Zip: integer

is in — 1 ... m

**Customer**
+Customer_Id: varchar
+Firstname: varchar
+Lastname: varchar
+Birthday: datetime
+Street: varchar
+Housenumber: integer
+Zip: integer

**Plane**
+Registration: varchar
+Name: varchar
+Color: varchar
+Livery: varchar
+Seats integer
+Windows: integer

buys

consist of

manufactures

**Unit**
+Unit_Id: varchar
+Cost: float
+Manufacturing_Time: Time
+Material: varchar
+Volume: float
+Weight: float

has

**Toilet Unit**
+Capacity: float
+Flowrate: float
+Bidet: boolean

**Bar Unit**
+Minifridges: integer

includes

**Test Protocol**
+Protocol_Id: integer
+Date: datetime
+Route: varchar
+Test: varchar
+Airport: varchar
+Pilot: varchar

**Beverage**
+Bottle_Id: varchar
+Percentage: float
+Name: varchar
+Cost: float
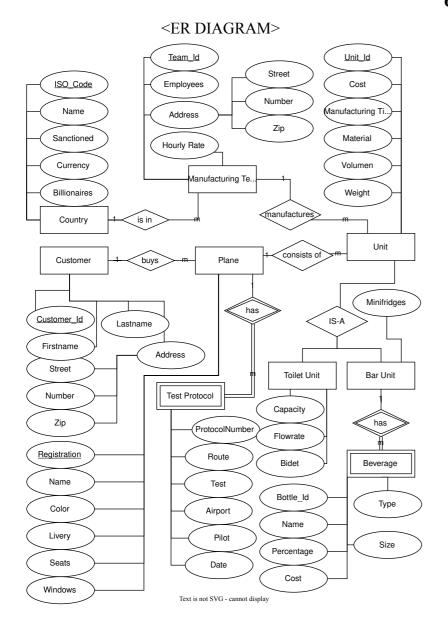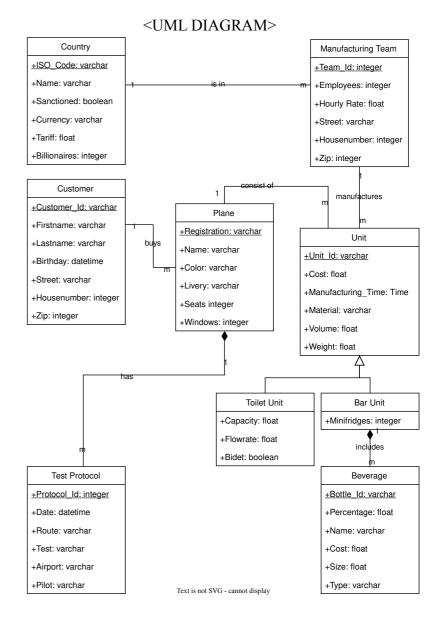+Size: float
+Type: varchar

Text is not SVG - cannot display

**Customer(Customer_Id, Firstname, Lastname, Birthday, Street, Housenumber, Zip)**
> PK: Customer_Id

Customers have a firstname and lastname, an address and a birthday. Customers are able to buy multiple planes.

**Plane(Registration, *Customer_Id*, Name, Color, Livery, Seats, Windows)**
> PK: Registration
> FK: Customer_Id ◊ Customer

Planes have a unique registration and are mapped to one customer. Customers set their planes name, color, livery and decide how many seats and windows the plane is supposed to have.

**Country(ISO_Code, Name, Sanctioned, Currency, Tariff, Billionaires)**
> PK: ISO_Code

Country is just a lookup table, Countries have a name and additionaly we save if the country is sanctioned, their tariffs, currency and amount of billionaires in the country, so we can tell our lobbyists which country are not to be sanctioned by politicians.

**ManufacturingTeam(Team_Id, *ISO_Code*, Employees, Hourly_Rate, Street, Housenumber, Zip)**
> PK: Team_Id
> FK: ISO_Code ◊ Country

Manufacturing Teams build the different units for the airplanes, they are based in different countries, also have an address and additionally the hourly rate and number of employees.

**ToiletUnit(Unit_Id, *Registration, Team_Id*, Cost, Manufacturing_Time, Material, Volume, Weight, Capacity, Flowrate, Bidet)**
> PK: Unit_Id
> FK: Registration ◊ Plane
> FK: Team_Id ◊ ManufacturingTeam

Toilet units are part of an airplane, a plane can have multiple toilet units, they are highly customizable and vary in cost. A toilet unit is made by one manufacturing team for one plane.

**BarUnit(Unit_Id, *Registration, Team_Id*, Cost, Manufacturing_Time, Material, Volume, Weight, Minifridges)**
> PK: Unit_Id
> FK: Registration ◊ Plane
> FK: Team_Id ◊ ManufacturingTeam

Bar units are similar to toilet units, except they have a number of minifridges installed.

**Beverage(*Unit_Id*, Bottle_Id, Percentage, Name, Cost, Size, Type)**
> PK: Unit_Id, Bottle_Id
> FK: Unit_Id ◊ BarUnit

Beverages belong to one single bar and have to be destroyed in case the bar unit is discarded, because the plane building company has no license to store alcohol on their premises.

**TestProtocol(*Registration*, Protocol_Id, Date, Route, Test, Airport, Pilot)**
> PK: Registration, Protocol_Id
> FK: Registration ◊ Pilot

Test protocols are created during each test flight of a specific plane. They include the date, pilot, route, airport and type of test. Test protocols have to be destroyed if a plane is discarded due to regulatory compliance.

Customer

| Customer_Id | Firstname | Lastname | Birthday | Street | Housenumber | Zip |
|---|---|---|---|---|---|---|
| 1 | Paul | Bort | 1.1.1990 | Wallensteinstraße | 124 | 1200 |
| 2 | Jack | Mill | 2.7.1950 | Schottenring | 31 | 1010 |
| 3 | Pill | Clinton | 17.12.1956 | Am Garten | 2 | 60528 |
| 4 | Geoff | Bezos | 1.8.1968 | Kote Avenue | 5146 | 90210 |
| 5 | Steve | Bossniak | 5.2.1988 | 531st Street | 3 | 94510 |

Plane

| Registration | Customer_Id | Name | Color | Livery | Seats | Windows |
|---|---|---|---|---|---|---|
| DE156 | 2 | GenericName | White | Eurowhite | 50 | 30 |
| XX512 | 3 | Blaze Machine | White | Eurowhite | 3 | 60 |
| AT130 | 4 | City Hopper | Green | Jelly Bean | 46 | 54 |
| HG503 | 4 | Looking Down | Taupe | Cheatline | 124 | 80 |
| LA450 | 5 | Humblebrag | Gold | Cheatline | 200 | 100 |

Country

| ISO_Code | Name | Sanctioned | Currency | Tariff | Billionaires |
|---|---|---|---|---|---|
| AT | Austria | False | EUR | 50000 | 3 |
| DE | Germany | False | EUR | 1000 | 10 |
| DK | Denmark | False | EUR | 10 | 2 |
| US | United States of America | False | USD | 500000 | 120 |
| KP | North Korea | True | KPW | 0 | 1 |

Manufacturing Team

| Team_Id | ISO_Code | Employees | Hourly Rate | Street | Housenumber | Zip |
|---|---|---|---|---|---|---|
| 1 | AT | 50 | 1500 | ABC-Gasse | 1 | 1230 |
| 2 | AT | 100 | 3000 | XYZ-Straße | 5 | 1210 |
| 3 | DE | 30 | 1000 | Industriestraße | 50 | 63414 |
| 4 | US | 20 | 8000 | Industrystreet | 6481 | 98101 |
| 5 | US | 50 | 6000 | Plane Boulevard | 6447 | 98208 |

ToiletUnit

| Unit_Id | Registration | Team_Id | Cost | Manufacturing_Time | Material | Volume | Weight | Capacity | Flowrate | Bidet |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | XX512 | 2 | 50000 | 02:50 | Wood | 6500 | 500 | 10 | 5 | True |
| 2 | XX512 | 4 | 60000 | 03:45 | Wood | 8500 | 640 | 20 | 3 | True |
| 3 | LA450 | 1 | 85000 | 04:15 | Chrome | 4500 | 758 | 26 | 6 | False |
| 4 | LA450 | 3 | 134000 | 06:30 | Plastic | 9600 | 587 | 29 | 2 | False |
| 5 | DE156 | 1 | 860000 | 72:00 | Gold | 7800 | 672 | 48 | 1 | True |

BarUnit

| Unit_Id | Registration | Team_Id | Cost | Manufacturing_Time | Material | Volume | Weight | Minifridges |
|---|---|---|---|---|---|---|---|---|
| 1 | XX512 | 2 | 50000 | 02:50 | Wood | 6500 | 500 | 5 |
| 2 | XX512 | 4 | 60000 | 03:45 | Wood | 8500 | 640 | 3 |
| 3 | LA450 | 1 | 85000 | 04:15 | Chrome | 4500 | 758 | 5 |
| 4 | LA450 | 3 | 134000 | 06:30 | Plastic | 9600 | 587 | 10 |
| 5 | DE156 | 1 | 860000 | 72:00 | Gold | 7800 | 672 | 2 |

Beverage

| Unit_id | Bottle_id | Percentage | Name | Cost | Size | Type |
|---------|-----------|------------|------|------|------|------|
| 1 | a | 40 | Stolichnaya | 20 | 1 | Vodka |
| 1 | b | 30 | The Botanist | 40 | 0.75 | Gin |
| 2 | a | 5 | GenericBeer | 50 | 0.33 | Beer |
| 2 | b | 5 | GenericBeer | 80 | 0.5 | Beer |
| 4 | a | 40 | Bombay Sapphire | 25 | 0.75 | Gin |

TestProtocol

| Registration | Protocol_Id | Date | Route | Test | Airport | Pilot |
|--------------|-------------|------|-------|------|---------|-------|
| XX512 | a | 2.7.2021 | Open Sea | High-G | FRA | Jack Mullvad |
| XX512 | b | 1.1.2022 | Alps | Instrument-Test | VIE | Jack Mullvad |
| LA450 | a | 17.12.2021 | Open Sea | High-G | FRA | Jack Mullvad |
| LA450 | b | 1.3.2022 | Alps | Instrument-Test | VIE | Peter Donnerballer |
| DE156 | a | 5.2.2022 | Open Sea | Barrelroll-Test | VIE | Peter Donnerballer |