**Requirements of the business case**

The database should keep each client's data, including their name, contact number and gender.

We also want to keep track of hairdressers. We want to know their name, the date when they were hired, their salary, and their specialty. Each specialty should have a name and a description, each hairdresser has only one specialty, but there may be several hairdressers with the same specialty. As for salary, we should be able to identify to which grade it belongs, so we need to store information about each grade, the lowest and highest salary that belongs to it.

The database should contain data about all appointments that took place in the hair salon. We should know the date when it happened, a client that visited the salon, and the hairdresser who provided the service to a client. We also should have information about a service provided to a client, its name, duration, price and category. Each category has its own name. A client can have multiple services for appointment.

The database should also store information about paymet for services, amount that client paid and method how he paid. Several clients can have the same method of payment and each method should have its own name. Besides the services client also have opportunity to buy a beauty products available in salon. Each of product has a name, price and a supplier, which can be the same for several products and we should have acces to name and contact number of a supplier. Moreover, a product could have analogous product, we should keep track of it in order to give our clients choice if possible, several products could have the same analogous one. A client can buy a couple of products at once and we should know amount of each.

**Description of entities**

**1. Client:**

Contains information about clients, including a unique client ID, name, gender and contact number.

**2. Gender:**

Defines genders with a unique gender ID and name.

**3. Hairdresser:**

Stores details about hairdressers, including a unique hairdresser ID, hire date, name, specialty and salary.

**4. Specialty:**

Stores information about specialties with a unique specialty ID, name, and description. Each hairdresser is associated with a specialty.

**5. Salary Grade:**

Defines salary grades with a unique grade, highest salary (HiSal), and lowest salary (LoSal).

**6. Appointment:**

Represents salon appointments with a unique appointment ID, date (ADate), and associated hairdresser and client.

**7. Service:**

Describes services offered, including a unique service ID, name, duration, price and category.

**8. Service category:**

Lists service categories with a unique category ID and name.

**9.** **Service for appointment:**

Represents the many-to-many relationship between services and appointments. Associates services with appointments.

**10. Product:**

Contains information about beauty products, including a unique product ID, name, price and a supplier.

**11.** **Supplier:**

Contains details about product suppliers, including a unique supplier ID, name, and contact number.

**12.** **Analogous product:**

Stores pairs of analogous products. Each record contains two product IDs that represent analogous products.

**13.** **Product sale:**

Records sales of products during appointments, including a unique sale ID, product ID, appointment ID, and sale amount.

**14. Payment:**

Represents payments made for appointments, including a unique payment ID, appointment ID, method of payment, and payment amount.

**15.** **Method of payment:**

Lists methods of payment with a unique method ID and name.

**Description of connections**

**1. Client to Appointment (One-to-Many):**

* One client can have multiple appointments over time.
* Each appointment is linked to only one client.

**2. Gender to Client (One-to-Many):**

* One gender can be associated with multiple clients.
* Each client is linked to only one gender.

**3. Hairdresser to Appointment (One-to-Many):**

* One hairdresser can handle multiple appointments.
* Each appointment is assigned to only one hairdresser.

**4. Specialty to Hairdresser (One-to-Many):**

* Many hairdressers can have the same specialty.
* Each hairdresser is associated with only one specialty.

**5. Appointment to Service (Many-to-Many using Service for Appointment entity):**

* A service can be linked to multiple appointments.
* An appointment can involve multiple services.

**6. Service Category to Service (One-to-Many):**

* One service category can be associated with multiple services.
* Each service is linked to only one service category.

**7. Appointment to Product (Many-to-Many using Product Sale entity):**

* A product can be sold in multiple appointments.
* An appointment can involve the sale of multiple products.

**8. Supplier to Product (One-to-Many):**

* One supplier can be associated with multiple products.
* Each product is linked to only one supplier.

**9. Product to Product (Many-to-Many using Analogous Product entity):**

* A product could be analogue to multiple products.
* Each product may have seleral analogues.

**10. Appointment to Payment (One-to-Many):**

* Each payment corresponds to a single appointment.
* Multiple payments can be made for different appointments.

**11. Method of Payment to Payment (One-to-Many):**

* Connects each method of payment to multiple payment transactions.
* Each payment transaction corresponds to only one method of payment.

**Sample functionalities**

1. Show only specialties with more than 2 employees.
2. For each appointment show the product and its amount if it was sold.
3. Show names of clients and dates of appointments where a client was a male.
4. Selecting names of clients who are frequenters of a salon and had more than 5 appointments.
5. Select the names of hairdressers who have at least one appointment with a payment method of 'Cash'.