**Database Design Coursework Template**

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**Scenario Topic Name** (Online Perfume Store)

**Scenario**

The database stores details of an online perfume store, with each perfume having its unique ID, name, gender target, whether it is in stock and the price. Multiple perfumes can appear in multiple orders, where each order has a reference number, order status and gift option. The collection date for customers to collect at the local post office, and quantity of perfumes in the order is stored. The refund policy only allows for one refund request for that specific order; this can cover all the perfumes in that order (partial refunds are not allowed). The database stores details of each refund. One customer can make many orders and refunds over time (while one refund is tied to one customer). The email address, password, first and last name, address, the payment type used, and phone number is stored for customers. It is optional for customers to be a member, giving them benefits of loyalty points and exclusive offers. The database also stores the start and renewal date of the membership subscription. Many perfumes can have many allergy warnings, with each allergy having its own allergy type and severity level. Other vital details are stored regarding each allergy.

**Example queries** (Minimum 5 – list, who, which, how many, most, fewest etc. - check that your models have the attributes needed to answer the queries)

1. List the first and last names of customers whose address is in London.
2. How many perfumes have a price greater than £80.00?
3. List the email addresses of the top 3 customer members who have the highest loyalty points
4. Which reference numbers have an Order Status of “pending”?
5. List the names of the perfumes which have run out of stock.
6. List the allergy types with the highest severity level of 5.
7. How many orders need collecting on the 22nd November 2024? (221124)

**Entity Relationship Model** (insert a jpg image of your model exported from Visual Paradigm in the space below).

Insert your jpg image here

A screenshot of a computer screen

Description automatically generated

**Relational Model Tables**

* Copy and paste the table below for as many relational tables as you need
* Replace the placeholder names (table-name1, attribute-name5 etc) with the table and attribute names you derived from your ER model
* List primary key attributes first
* Add new rows to the tables (in the correct place) as needed
* Delete any unnecessary rows (attribute rows and foreign key rows if not used)
* Primary keys are to be specified in the format PRIMARY KEY (attribute-name1, attribute-name2, etc)
* Foreign keys are to be specified in the format ‘FOREIGN KEY (attribute-name) REFERENCES table-name (attribute-name)

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| Perfume |  |
| **Attributes** |  |
| PerfumeID |  |
| Perfume\_Name |  |
| GenderTarget |  |
| InStock |  |
| Price |  |
| **PRIMARY KEY** (PerfumeID) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| OrderItem |  |
| **Attributes** |  |
| PerfumeID |  |
| Reference\_Number |  |
| Quantity |  |
| CollectionDate |  |
| **PRIMARY KEY** (PerfumeID, Reference\_Number) |  |
| **FOREIGN KEY** (PerfumeID) REFERENCES Perfume (PerfumeID) |  |
| **FOREIGN KEY** (Reference\_Number) REFERENCES Orders (Reference\_Number) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Orders |  |
| **Attributes** |  |
| Reference\_Number |  |
| EmailAddress |  |
| OrderStatus |  |
| GiftOption |  |
| **PRIMARY KEY** (ReferenceNumber) |  |
| **FOREIGN KEY** (EmailAddress) REFERENCES Customer (EmailAddress) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Refund |  |
| **Attributes** |  |
| RefundCode |  |
| EmailAddress |  |
| Reference\_Number |  |
| RefundReason |  |
| RefundAmount |  |
| Refund\_Approved |  |
| **PRIMARY KEY** (RefundCode) |  |
| **FOREIGN KEY** (EmailAddress) REFERENCES Customer (EmailAddress) |  |
| **FOREIGN KEY** (Reference\_Number) REFERENCES Orders (Reference\_Number) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Customer |  |
| **Attributes** |  |
| EmailAddress |  |
| Password |  |
| FName |  |
| LName |  |
| Address |  |
| Payment\_Type |  |
| PhoneNumber |  |
| **PRIMARY KEY** (EmailAddress) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** Member |  |
| **Attributes** |  |
| EmailAddress |  |
| Loyalty\_Points |  |
| Membership\_Renewal\_Date |  |
| Membership\_Start\_Date |  |
| Exclusive\_Offers |  |
| **PRIMARY KEY** (EmailAddress) |  |
| **FOREIGN KEY** (EmailAddress) REFERENCES Customer (EmailAddress) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** AllergyWarning |  |
| **Attributes** |  |
| AllergyType |  |
| Severity\_Level |  |
| Description |  |
| Side\_Effects |  |
| Certification\_Source |  |
| **PRIMARY KEY** (AllergyType, Severity\_Level) |  |

|  |  |
| --- | --- |
| **Relational table specification** | **Marker’s corrections (Do not write in this column)** |
| **Table name:** AllergyWarning\_Perfume |  |
| **Attributes** |  |
| AllergyType |  |
| Severity\_Level |  |
| PerfumeID |  |
| Concentration\_Percentage |  |
| **PRIMARY KEY** (AllergyType,Severity\_Level,PerfumeID) |  |
| **FOREIGN KEY** (AllergyType) REFERENCES AllergyWarning (AllergyType) |  |
| **FOREIGN KEY** (Severity\_Level) REFERENCES AllergyWarning (Severity\_Level) |  |
| **FOREIGN KEY** (PerfumeID) REFERENCES Perfume (PerfumeID) |  |

**Marker’s Comments** (Do not write in this section)

**Important:** Please note that marker’s corrections to your relational tables are there to help you construct a working database for the second coursework. They are not the determinant of your mark. For more information on how your work is assessed see the coursework specification and grade related criteria.

**Coursework Mark** (100 marks available):