

The *Retail Customer Service ERD* represents the relationships between various entities in a retail environment, focusing on customer interactions, employee involvement, and transactions. Below is a detailed explanation of the entities, their attributes, and the relationships between them:

1. Client

The Client entity stores details of retail customers.

Attributes:

- clientID (Primary Key): unique identifier for each client.
- name: name of the client.
- dateOfBirth: date of birth.
- registered: indicates if the client is registered (Boolean).
- registrationDate: date of registration
- accountNo: client's account number.
- email and phoneNumber: Contact details.
- deliveryAddress and billingAddress: Addresses related to orders.

Relationships:

- A client can have multiple Orders (orders).
- A client can initiate multiple Transactions (transactions).
- A client can send multiple ClientRequests (requests).
- A client can provide multiple CustomerFeedback entries (feedbacks).

2. Employee

The Employee entity tracks information about employees handling client requests or managing departments.

Attributes:

- employeeID (Primary Key): unique identifier for each employee.
- name, address, email, phoneNumber, dateOfBirth: personal details.
- department: reference to the department the employee works in.
- grade: employee's rank or position.

Relationships:

- Each employee is associated with a department.
- Employees handle client requests and feedbacks.

3. Department

The Department entity groups employees into organisational units.

Attributes:

- departmentID (Primary Key): unique identifier.
- department: name of the department.
- manager: reference to the employee managing the department.

Relationships:

- A department can have many employees.

4. ClientRequest

The ClientRequest entity logs service requests initiated by clients.

Attributes:

- requestId (Primary Key): unique identifier.
- agentInChargId: employee handling the request.
- clientId, transactionId: links to client and transaction.
- requestType, communicationChannel, status: details of the request.
- openingDate, closingDate: lifecycle dates of the request.
- agentComments: comments by the handling agent.

Relationships:

- A request is linked to one client, handled by one employee, and may refer to one transaction.

5. CustomerFeedback

The CustomerFeedback entity records feedback from clients regarding their experiences.

Attributes:

- customerFeedbackId (Primary Key): unique identifier.
- agentInChargId: employee handling the feedback.
- clientId: reference to the client providing feedback.
- feedbackType, communicationChannel, status: classification details.
- surveyCampaignDate, answerDate: timeline of feedback.
- clientComments, agentComments: comments from clients and agents.

Relationships:

- Feedback is linked to one client and one employee.

6. Order

The Order entity records details of client purchases.

Attributes:

- orderId (Primary Key): unique identifier.
- clientId, transactionId: links to the client and associated transaction.
- orderDate: date of the order.
- billingAddress, deliveryAddress: related addresses.
- comments: additional remarks about the order such as delivery instructions.

Relationships:

- An order belongs to one client and may involve one transaction.

7. Transaction

The Transaction entity logs financial exchanges between the client and the store.

Attributes:

- transactionId (Primary Key): unique identifier.
- transactionDate, amount: transaction details.
- location, paymentMethod: additional metadata.

Relationships:

- Each transaction is linked to one client, can involve one or multiple products, and may have one associated feedback.

8. Product

The Product entity represents items available for purchase.

Attributes:

- productId (Primary Key): unique identifier.
- name, brand, size, color, price: product attributes.
- availableAt: reference to stores where the product is available.

Relationships:

- A product is linked to multiple stores and transactions.

9. Store

The Store entity represents physical or virtual locations of the retail business.

Attributes:

- storeId (Primary Key): unique identifier.
- name, location, speciality: store details.

Relationships:

- A store employs multiple employees.
- A store sells multiple products and handles multiple transactions.

10. Website

The Website entity manages the e-commerce aspect of the retail business.

Attributes:

- websiteId (Primary Key): unique identifier.
- orders, products: list of orders and products handled through the website.

Relationships:

- The website facilitates transactions and order management.

Assumptions for the Retail Customer Service ERD

General Assumptions

- 1) The retail store operates in the UK, and all monetary values (price, amount) are recorded in pounds (£).
- 2) Feedback provided by customers is in the form of close-ended and multiple choice questions, ensuring structured and concise responses.
- 3) Feedback Limit: each transaction can have at most one feedback entry.
- 4) Order Process: orders are exclusively processed through the online store (via the Website entity).

Client Requests

- 1) Employee Assignment: each client request is assigned to one employee within the corresponding department.
- 2) In case of an employee's contract termination or long illness, requests are transferred to another employee in the same department.
- 3) Response deadline: client requests must be resolved within 10 working days.
- 4) If a request exceeds this time frame without resolution, its status automatically changes to *urgent*.
- 5) Request modification: if a client decides to change their initial request, they must create a new request with the appropriate *requestType*.
- 6) Return window: returns are only accepted within 14 working days after the transaction date.

Request Types

Clients can initiate requests based on their dissatisfaction or changing needs:

- **Return:** Return of a product.
- **Refund:** Refund for a purchased product.
 - ✓ Default refund method: a voucher for the equivalent amount.
 - ✓ If the voucher is refused, a bank transfer will be issued.
- **Exchange:** Exchange of a product.

Customer Feedback

- 1) Feedback falls under the following structured *feedbackType* categories:
 - **Complaint:** issues with service or products.
 - **Satisfaction Survey:** evaluation of overall experience.
 - **After-Sale:** comments on post-purchase service.
 - **Request Dealing:** feedback on handling of client requests.
 - **Satisfaction Rating:** customer's overall rating of service.
- 2) Feedback statuses (*feedbackStatus*) progress as follows:
 - **Received:** initial status upon submission.
 - **Processed:** under review or actioned.

- **Reported:** feedback has been escalated or addressed.
 - **No Action Needed:** feedback requiring no further response.
 - **Expired:** feedback submitted too late for action.
- 3) Customer feedback related to general customer service issues (not product-specific) is handled by a specialized *Remediation Department*.

Communication Channels

Clients can communicate with the store through the following channels:

- **Email**
- **Text Message**
- **Website** (online request forms)
- **Phone**

Department Roles

1. A **Department** is a team responsible for specific client needs or situations.
Examples include:
 - **Deliveries:** Handling delivery-related requests.
 - **Client Satisfaction:** Addressing customer experience concerns.
 - **After-Sales Support:** Managing issues after a sale is completed.
 - **Returns:** Processing product returns, refunds, or exchanges.
 - **Remediation:** Resolving customer feedback unrelated to products.

Additional Business Rules

1. If a client is dissatisfied with a product, they can submit a request for a **return**, **refund**, or **exchange**.
2. The *shoppingExperience* (whether online or in-store) is tracked to understand customer behaviour.
3. **Payment Methods** include:
 - **Credit Card**
 - **Cash**
 - **Gift Card**
 - **Voucher**
4. All entities and their statuses are kept up to date to ensure efficient service delivery.
requestStatus includes:
 - **Opened:** Request has been initiated.
 - **In Progress:** Request is being handled.
 - **Closed:** Request has been resolved.
 - **Urgent:** Pending requests exceeding deadlines.