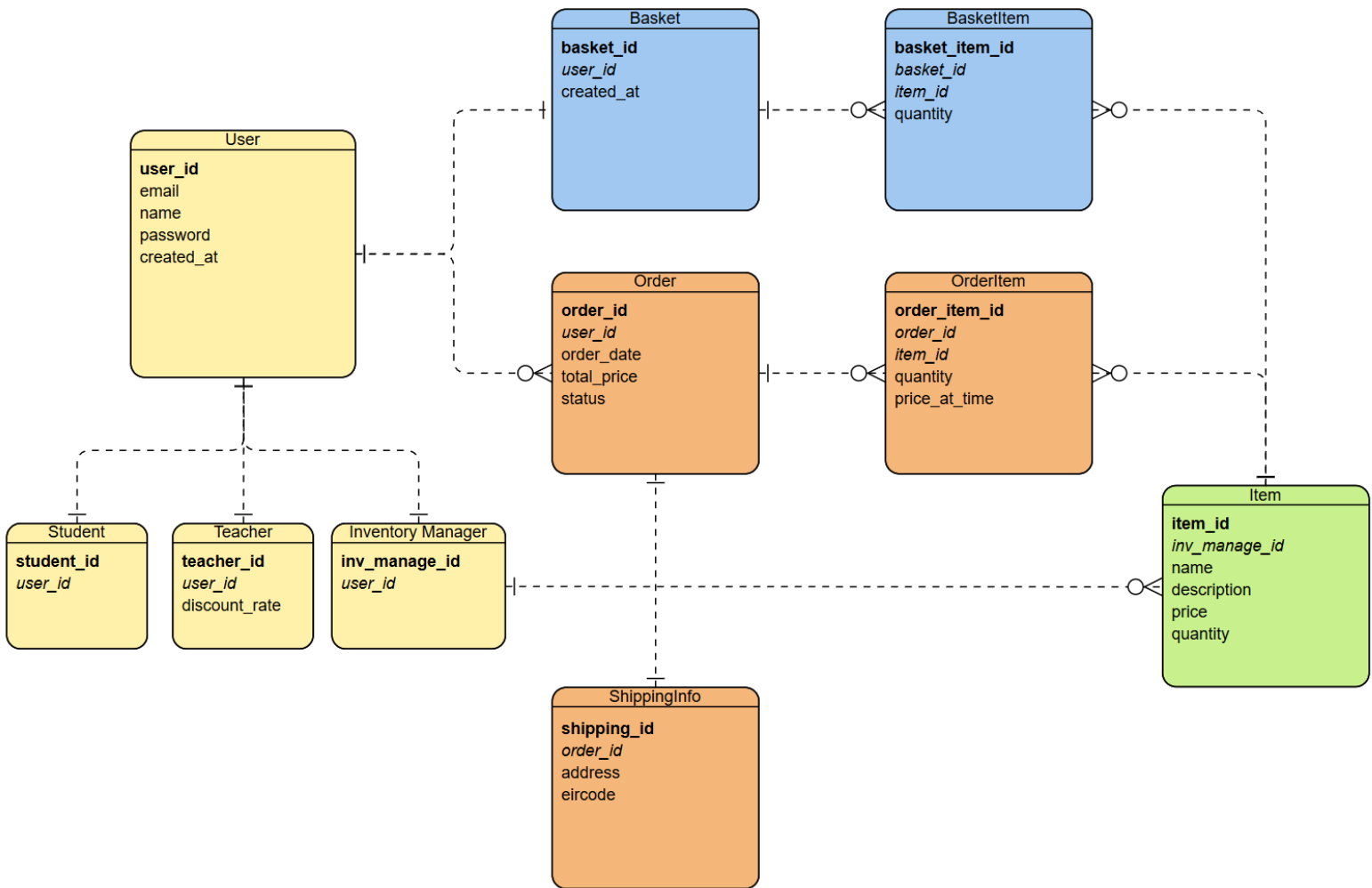


# Web Framework Development

## Deliverable 2: ER Diagram

### ER Diagram



# ER Diagram Explanation

## User (Abstract Base)

Base table used for authentication and general user information. Other specific user types relate to this table.

### Attributes:

- **user\_id (PK):** unique identifier
- **email:** user's email address (String data type)
- **password:** user's password (String data type)
- **name:** user's full name (String data type)
- **created\_at:** datetime account was created (Datetime data type)

## Student

Table that represents student users who can browse, and purchase items.

### Attributes:

- **student\_id (PK):** unique identifier
- **user\_id (FK):** reference to an entry in the User table (1-to-1 relationship)

## Teacher

Table that represents teacher users who can browse, and purchase items, has a one-to-one relationship with users' table. A default discount rate is added to each entry that is calculated when a teacher buys in bulk (rate can be adjusted by system administrator)

### Attributes:

- **teacher\_id (PK):** unique identifier
- **user\_id (FK):** reference to an entry in the User table (1-to-1 relationship)

## Inventory Manager

Table that represents inventory manager users who manages inventory and item data. Not intended to make purchase. This account is created by a system administrator.

### Attributes:

- **inv\_manager\_id (PK):** unique identifier
- **user\_id (FK):** reference to an entry in the User table (1-to-1 relationship)

## Item

Table that contains all items available to purchase by users.

### Attributes:

- **item\_id (PK):** unique identifier
- **inv\_manage\_id (FK):** reference to an entry in the InventoryManager table (1-to-Many relationship)
- **name:** name of the item (String data type)
- **description:** description of the item (String data type)
- **price:** current price of the item (double data type)
- **quantity:** units available for purchase (int data type)

## Basket

Table that behaves as a temporary storage for a user's selected items before ordering.

### Attributes:

- **basket\_id (PK):** unique identifier
- **user\_id (FK):** reference to an entry in the User table (1-to-1 relationship)
- **created\_at:** timestamp for datetime basket was created (Datetime data type)

## BasketItem

Intermediate table between basket and items that contains individual items present in a users' basket.

### Attributes:

- **basket\_item\_id (PK):** unique identifier
- **basket\_id (FK):** reference to an entry in the Basket table (1-to-many relationship)
- **item\_id (FK):** reference to an entry in the Item table (1-to-many relationship)
- **quantity:** units of the item (int data type)

## Order

Table that represents a confirmed purchase placed by a user.

### Attributes:

- **order\_id (PK):** unique identifier
- **user\_id (FK):** reference to an entry in the User table (1-to-many relationship)
- **order\_date:** timestamp for datetime the order was placed (Datetime data type)
- **total\_price:** Total price for the order (float data type)
- **status:** status of the order (String data type)

## OrderItem

Intermediary table between Order and Item table. Contains reference to individual items placed in an order.

### Attributes:

- **order\_item\_id (PK):** unique identifier
- **order\_id (FK):** reference to an entry in the Order table (1-to-many relationship)
- **item\_id (FK):** reference to an entry in the Item table (1-to-many relationship)
- **quantity:** units of the item (int data type)
- **price\_at\_time:** price of item at time of purchase (float data type)

## ShippingInfo

Table that contains delivery information in relation to an order placed by a user

### Attributes:

- **shipping\_id (PK):** unique identifier
- **order\_id (FK):** reference to an entry in the Order table (one-to-one relationship)
- **address:** delivery address of an order (text data type)
- **Eircode:** delivery Eircode of an order (String data type)