# API Documentation and Database Relationships

## API Documentation

### Authentication

• POST /api/login/ - Authenticate employees and return a JWT token along with employee and team information.

### Teams

• GET /api/teams/ - List all teams.

• POST /api/teams/ - Create a new team.

• GET /api/teams/<int:pk>/ - Retrieve details of a specific team.

• GET /api/teams/<int:team\_id>/parts/ - List parts managed by a specific team.

### Employees

• GET /api/employees/ - List all employees.

• POST /api/employees/ - Add a new employee.

• GET /api/employees/<int:pk>/ - Retrieve details of a specific employee.

• GET /employee-parts/<int:employee\_id>/ - List all parts and aircraft assigned to the employee's team.

### Production

• GET /api/production/ - List all production records.

• POST /api/production/ - Add a new production record for a specific team and part.

### Assembly

• GET /api/assembly/ - List all assembly operations.

• POST /api/assembly/ - Record a new assembly operation.

### Inventory Alerts

• GET /api/inventory-alerts/ - List all missing parts and their quantities.

### Parts

• GET /api/teams/<int:team\_id>/parts/ - Retrieve the list of parts managed by a specific team.

• POST /api/parts/recycle/ - Recycle a part and adjust its stock.

• POST /api/parts/reduce-stock/ - Reduce the stock of a specific part by a given quantity.

### Aircrafts

• GET /api/produced-aircrafts/ - List all produced aircraft and their associated parts.

• GET /api/aircrafts/<aircraft\_id>/production/ - List all parts required for the production of a specific aircraft.

• POST /api/aircrafts/<aircraft\_id>/assemble/ - Assemble an aircraft by consuming its required parts.

• GET /api/aircrafts/<aircraft\_id>/missing-parts/ - Identify missing parts required to assemble a specific aircraft.

### Team Members

• GET /api/team-members/<int:employee\_id>/ - List all team members of the employee's team.

## Database Relationships

### Key Models and Their Relationships

#### 1. Employees

• Fields: id, first\_name, last\_name, team\_id

• Relationships: Each employee belongs to a team (Many-to-One relationship with Teams).

#### 2. Teams

• Fields: id, name, responsible\_part\_id

• Relationships:

- A team is responsible for managing one or more parts (One-to-Many relationship with Parts).

- Linked with employees (One-to-Many relationship).

#### 3. Parts

• Fields: id, name, stock, aircraft\_id

• Relationships:

- Each part is linked to a specific aircraft (Many-to-One relationship with Aircrafts).

- Each part is managed by a specific team.

#### 4. Aircrafts

• Fields: id, name

• Relationships:

- An aircraft requires multiple parts (One-to-Many relationship with Parts).

- Production logs are linked to specific aircrafts.

#### 5. Production

• Fields: id, team\_id, part\_id, quantity

• Relationships:

- A production record is tied to a specific team (Many-to-One relationship).

- A production record is tied to a specific part (Many-to-One relationship).

#### 6. Assembly

• Fields: id, aircraft\_id, part\_id, quantity

• Relationships: An assembly record links an aircraft and the parts used.

#### 7. Inventory Alerts

• Fields: id, part\_id, quantity

• Relationships: Alerts are tied to specific parts.