Airport Database - Phase 2

Brief Description:

The Airport Database System is a comprehensive and integrated information management system designed to efficiently manage various aspects of airport operations. This system encompasses detailed information about employees, passengers - and their baggage, as well as flight and ticket information.

Business rules:

1. **Employees:**
   Each entry in this entity is identified by a unique employee id. Each employee has a name (first, middle and last), department (front desk, security, cabin crew, etc.) - referenced form another entity, job title (CEO, shift manager, etc.) - referenced form another entity, phone number (~~multivalued~~), email and supervisor (represented by a recursive relationship).

2. **Job Title:**
   Identified by a job id, this entity contains the different job titles an employee could have. It holds information about the job salary and shift hours.

3. **Department:**
   An entity containing the department name and identified by an id.

4. **Passengers:**
   The core of the airport, passengers. Records are identified by a passenger id, it holds the passenger's name (first and last names), contact information such as phone number and emails - ~~both could be multivalued~~, ticket and baggage id - referenced form other entities.

5. **Tickets:**
   Each ticket has a unique ticket number which identifies it. This record will also contain two foreign keys - flight and passenger id's, along with a ticket class attribute (first class, business, or economy).

6. **Flights:**
   Identified by a flight id, each record in this entity will have information concerning the departure time, duration of the flight, arrival time (derived attribute), airport gate, ticket price, flight status, airline, and aircraft type.

7. **Baggage:**
   Passengers travel with baggage, each bag will be identified by an id and a foreign key reference to the owning passenger id from the passenger entity, each baggage contains its weight, status, and destination.

Modifications:

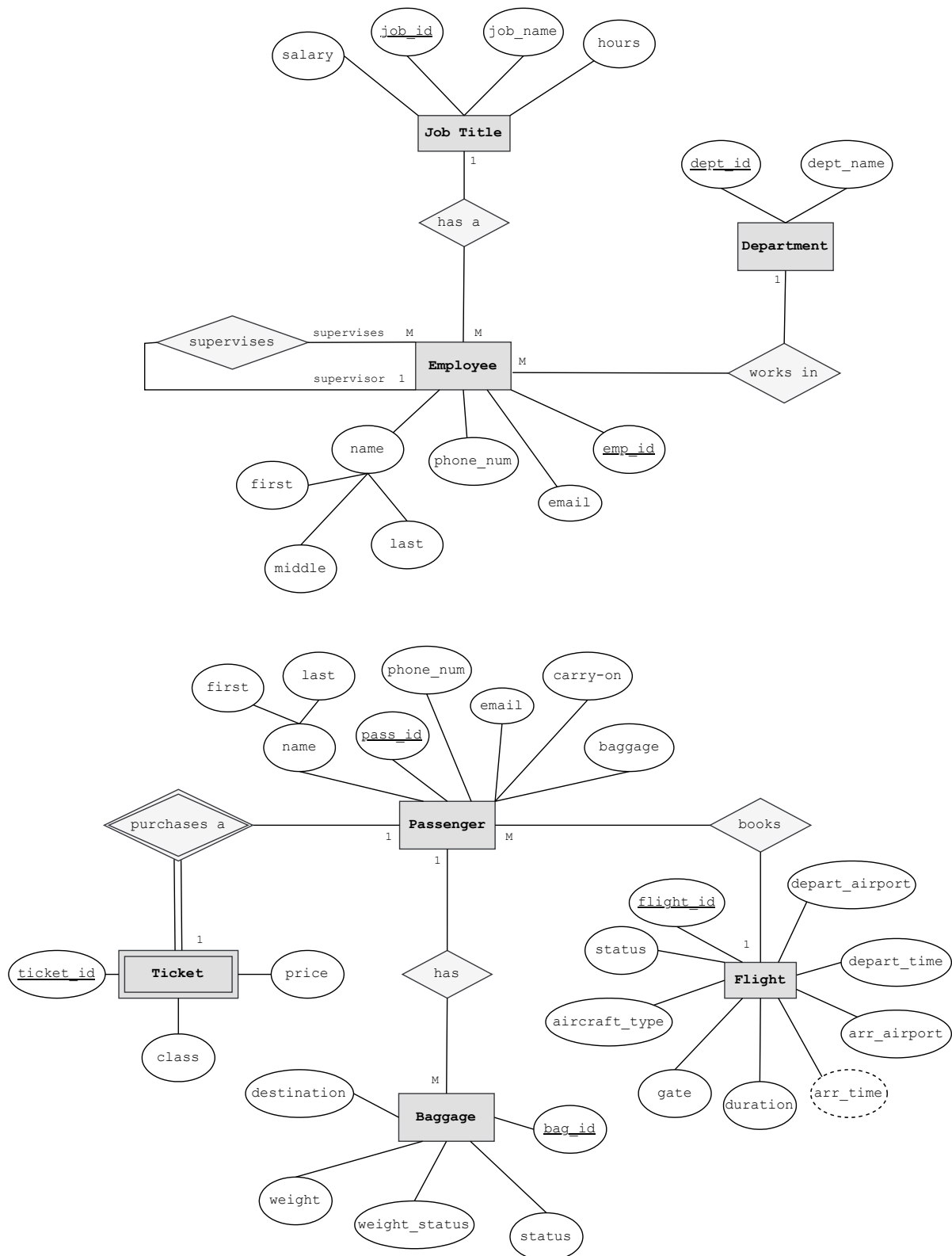- Multivalued attributes were removed as they will cause complications when creating the database tables.

Airport Database - Phase 3

Modifications:

- Weight_status attribute added to Baggage table, indicates whether the bag is overweight or not.

- Carry-on and Baggage attributes (boolean values) added to Passenger table that indicates whether or not the passenger has carry-on/baggage.

New ERD:

New Relational Map:

Employee

emp_id	email	first	middle	last	job_id	mgr_id	dept_id

Job Title

job_id	job_name	salary	hours

Department

dept_id	dept_name

Passengers

pass_id	first_name	last_name	ticket_id	flight_id	phone_number	email	carry-on	baggage

Flight

flight_id	status	aircraft_type	gate	duration	arr_airport	depart_time	depart_airport

Baggage

bag_id	destination	weight	status	pass_id	weight_status

Ticket

ticket_id	pass_id	price	class