Air Tickets

A Django demo project, using the Django Rest Framework (DRF).

Models:

UserModel (substitutes the default Django User class; derives from AbstractBaseUser)

USERNAME_FIELD = 'email' // REQUIRED_FIELDS = ['name']

Note: emails are write_only in the API and excluded from search fields for privacy reasons.

Aircraft: name

Airline: name, code, country, active

Airport: name, city, country, code, offset, dst

Country: name, nice_name, iso, iso3, code, phone_code

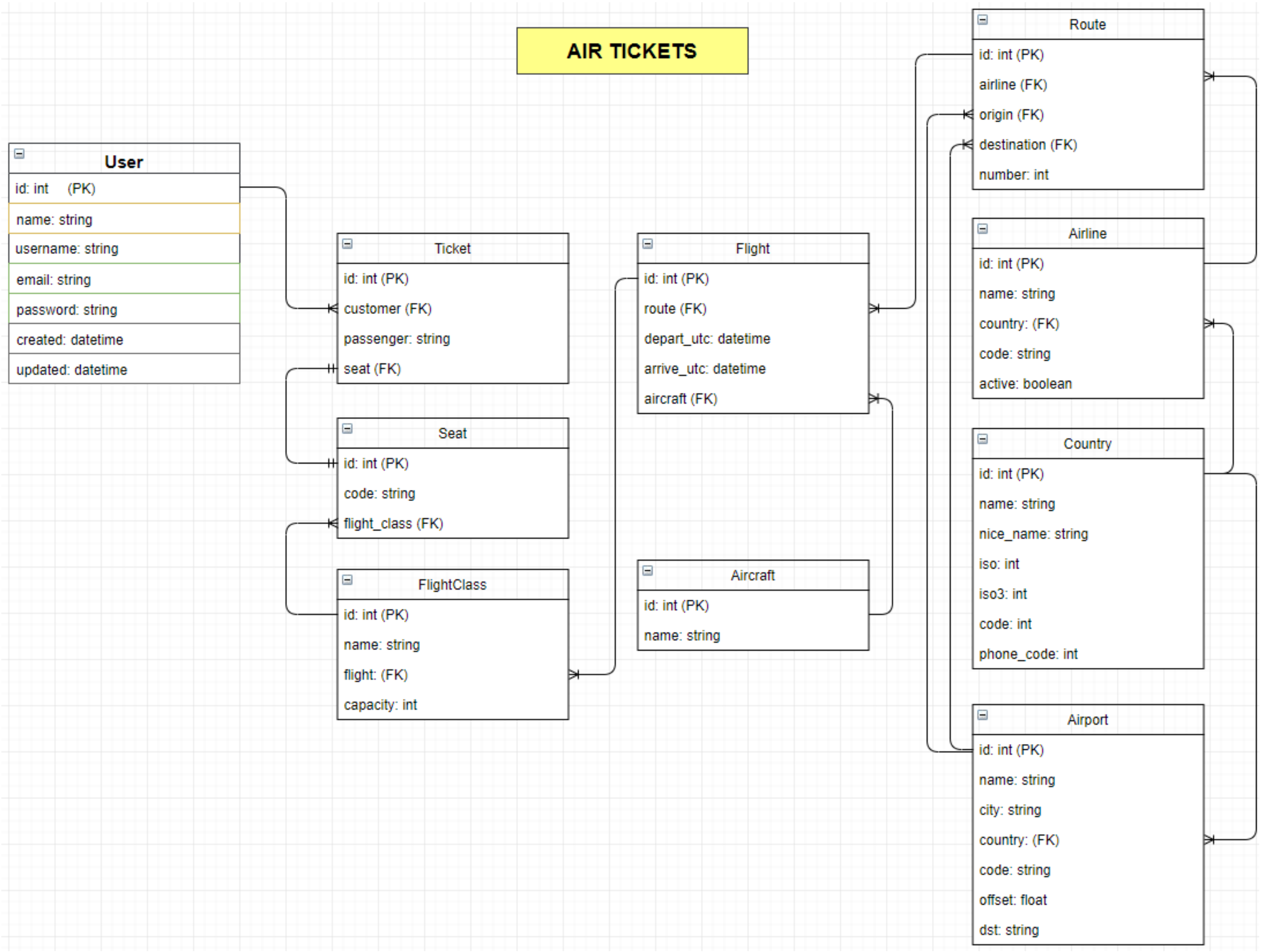
Flight: route, depart_utc, arrive_utc, aircraft

FlightClass: name, flight, capacity

Route: airline, origin, destination, number

Seat: code, flight_class

Ticket: customer, seat, passenger



AIR TICKETS

User
- id: int (PK)
- name: string
- username: string
- email: string
- password: string
- created: datetime
- updated: datetime

Ticket
- id: int (PK)
- customer (FK)
- passenger: string
- seat (FK)

Seat
- id: int (PK)
- code: string
- flight_class (FK)

FlightClass
- id: int (PK)
- name: string
- flight: (FK)
- capacity: int

Flight
- id: int (PK)
- route (FK)
- depart_utc: datetime
- arrive_utc: datetime
- aircraft (FK)

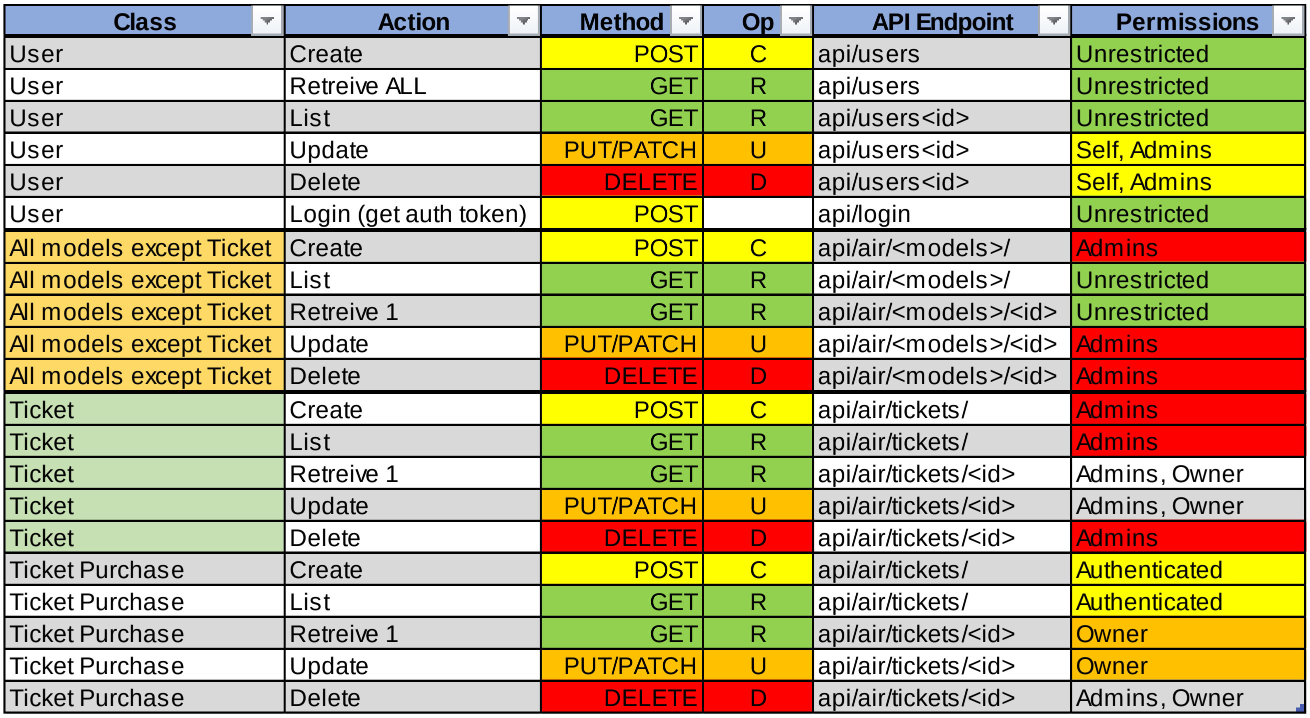
Aircraft
- id: int (PK)
- name: string

Route
- id: int (PK)
- airline (FK)
- origin (FK)
- destination (FK)
- number: int

Airline
- id: int (PK)
- name: string
- country: (FK)
- code: string
- active: boolean

Country
- id: int (PK)
- name: string
- nice_name: string
- iso: int
- iso3: int
- code: int
- phone_code: int

Airport
- id: int (PK)
- name: string
- city: string
- country: (FK)
- code: string
- offset: float
- dst: string



Class	Action	Method	Op	API Endpoint	Permissions
User	Create	POST	C	api/users	Unrestricted
User	Retreive ALL	GET	R	api/users	Unrestricted
User	List	GET	R	api/users<id>	Unrestricted
User	Update	PUT/PATCH	U	api/users<id>	Self, Admins
User	Delete	DELETE	D	api/users<id>	Self, Admins
User	Login (get auth token)	POST		api/login	Unrestricted
All models except Ticket	Create	POST	C	api/air/<models>/	Admins
All models except Ticket	List	GET	R	api/air/<models>/	Unrestricted
All models except Ticket	Retreive 1	GET	R	api/air/<models>/<id>	Unrestricted
All models except Ticket	Update	PUT/PATCH	U	api/air/<models>/<id>	Admins
All models except Ticket	Delete	DELETE	D	api/air/<models>/<id>	Admins
Ticket	Create	POST	C	api/air/tickets/	Admins
Ticket	List	GET	R	api/air/tickets/	Admins
Ticket	Retreive 1	GET	R	api/air/tickets/<id>	Admins, Owner
Ticket	Update	PUT/PATCH	U	api/air/tickets/<id>	Admins, Owner
Ticket	Delete	DELETE	D	api/air/tickets/<id>	Admins
Ticket Purchase	Create	POST	C	api/air/tickets/	Authenticated
Ticket Purchase	List	GET	R	api/air/tickets/	Authenticated
Ticket Purchase	Retreive 1	GET	R	api/air/tickets/<id>	Owner
Ticket Purchase	Update	PUT/PATCH	U	api/air/tickets/<id>	Owner
Ticket Purchase	Delete	DELETE	D	api/air/tickets/<id>	Admins, Owner

The Admin users do all the modeling (CRUD) in the Django Admin for all models except tickets.

The authenticated users can go to api/purchases and list all available seats (that do not have corresponding tickets) and can create (POST) a new ticket for themselves (giving a passenger name).