Duffel API Walkthrough

**Header Configuration**

Duffel API utilizes an auth token under the bearer notation and also requires a Duffel-version header field:

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**Query Process**

To submit a flight order and purchase tickets, you must:

Flight Offer Requests -> Flight Offer Confirmation -> Create Order

Flight Offers Search

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Description automatically generated***Query Path:** https://api.duffel.com/air/offer\_requests

**Method:** POST

**POST Body:** JSON encapsulated under “data” object

**Key JSON fields:**

*- cabin\_class (enum):* first/business/premium\_economy/economy

*- max\_connections (integer):* Number of connections per slice of an offer

*- slices (REQUIRED, list):* The slices that make up the request. Slices encompass a section of the flight from one location to another.

* *origin (REQUIRED, string*): 3 Letter IATA Code (Airport code)
* *destination (REQUIRED, string)*: 3 Letter IATA Code (Airport code)
* *departure\_date (REQUIRED, date string)*: “YYYY-MM-DD”
* *arrival\_time (nullable, object)*: Holds a time range for a wanted arrival time:

{

“to”: “hh:mm”,

“from”: “hh:mm”

}

* *departure\_time (nullable, object):* Holds a time range for a wanted departure time, same format as arrival\_time

EXAMPLE:

“slices”: [  
 {  
 “origin”: “JFK”,   
 “destination”: “ATL”,   
 “departure\_date”: “2025-02-01”  
 }  
]

*- passengers (REQUIRED, list):* JSON list of objects denoting passenger info

* *given\_name (string)*: first name
* *family\_name (string)*: last name
* *type (REQUIRED, enum)*: adult/child/infant\_without\_seat, 18+ = adult, infant\_without\_seat by FAA regulations is an infant under 2 years of age

**EXAMPLE:**

“passengers”: [  
 {  
 “given\_name”: “Spongebob”,  
 “family\_name”: “Squarepants”,  
 “type”: “adult  
 },  
 {  
 “type”: “adult  
 }  
]

**Returns:** List of offers object encapsulated around **data**

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**Grab/Notable Fields (From each Offer, will need to iterate through offers):**

- id (**CRUCIAL**,Offer ID, for price checking and booking)

- base\_amount (Cost of flight, before tax, float)

- tax\_amount (float)

- total\_amount (float)

- slices.duration (Flight duration, format: TZ:hH:mmM, TZ = Timezone(?), h = Hours, mm = Minutes)

- slices.origin.iata\_code (Origin Airport Code)

- slices.destination.iata\_code (Destination Airport Code)

**Note:** In practice, for list of passengers you can leave it mostly empty, just need type of passenger. For the entire booking process, grab all offers and render to search screen, once user picks one, move on to the next calls

Flight Offer Check

**Query Path:** https://api.duffel.com/air/offers/{id}

**Method:** GET

**URL Params:** {id}, Offer ID (From Flight Offers Search)

**Returns**: JSON object containing specs on the flight offer encapsulated in **data**

**Grab/Notable Fields:**

- passenger.id (**CRUCIAL**, Passenger ID, for booking)

- base\_amount (Cost of flight, before tax, float)

- tax\_amount

- total\_amount (**CRUCIAL**)

- owner.iata\_code (Airline code)

- slices.origin.iata\_code (Origin Airport Code)

- slices.destination.iata\_code (Destination Airport Code)

- slices.segments[0].origin\_terminal (Origin Terminal #)

- slices.segments[0].destination\_terminal (Destination Terminal #)

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Booking

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**Query Path:** https://api.duffel.com/air/orders

**Method:** POST

**POST Body:** JSON data encapsulated under “data”

**Key JSON Fields:**

- *passengers (REQUIRED, list of objects containing passenger data):*

* *id (REQUIRED, passenger ID, from Flight Offer Check)*
* *title (REQUIRED, enum):* mr/ms/mrs/miss/dr
* *phone\_number (REQUIRED, string):* phone number in international E.164 format (including country code with a +)
* *email (REQUIRED, string)*
* *born\_on (REQUIRED, date string)*: YYYY-MM-DD
* *family\_name (REQUIRED, string)*: last name
* *given\_name (REQUIRED, string)*: first name
* *gender (REQUIRED, enum)*: m/f

- *payments (REQUIRED, payment details list holding a single object(?)):*

* *type (REQUIRED, enum, stick to balance for now):* balance/card/arc\_bsp\_cash
* *currency (REQUIRED, should match offer check, in our case should be USD)*
* *amount (REQUIRED, string):* 00:00

- *selected\_offers (REQUIRED, list of string, list of ids)*

**RETURNS**: Confirmation info encapsulated in data

**Grab/Notable Fields:**

- booking\_reference

- total\_amount

- id (Should start with “ord”)