

Swagger UI – For testing APIs

The screenshot shows the Swagger UI interface for the Flight Booking Simulator - Milestone 1. At the top, it displays the title "Flight Booking Simulator - Milestone 1" with version 1.0.0 and OAS 3.1. Below the title, it says "Core flight search & data management APIs". The main area is titled "default" and lists four GET requests:

- `GET /api/health` Health Check
- `GET /api/flights` Get All Flights
- `GET /api/flights/search` Search Flights
- `GET /api/external/mock-schedule` Mock Airline Schedule

Below the endpoints, there is a section titled "Schemas" which contains three definitions:

- `FlightOut` > Expand all `object`
- `HTTPValidationError` > Expand all `object`
- `ValidationError` > Expand all `object`

The bottom of the window shows a standard Windows taskbar with various icons and system status information.

Result (Screenshot) of testing all APIs:

1. /api/health (Health Check):

The screenshot shows the "Try it out" interface for the `GET /api/health` endpoint. It includes sections for "Parameters" (No parameters), "Responses", "Curl" (curl command), "Request URL" (http://127.0.0.1:8000/api/health), "Server response", "Code" (200), "Details", "Response body" (JSON object with status: "ok", message: "Milestone 1 backend running", server_time: "2025-11-30T14:31:23.046633Z"), and "Response headers" (Content-Length: 99, Content-Type: application/json, Date: Sun, 30 Nov 2025 14:31:21 GMT, Server: Unicorn). There is also a "Download" button for the response body.

2. /api/flights (Get All Flights):

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GET /api/flights GetAllFlights

Parameters

Name	Description
sort_by	price
sort_order	asc

Responses

Curl

```
curl -X 'GET' \
'http://127.0.0.1:8000/api/flights?sort_by=price&sort_order=asc' \
-H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8000/api/flights?sort_by=price&sort_order=asc
```

Server response

Code Details

200 Response body

```
[{"id": 5, "flight_no": "F8301", "airline_name": "AirIndia", "origin": "Mumbai", "destination": "Bangalore", "departure_time": "2025-11-25T11:00:00", "arrival_time": "2025-11-25T13:15:00", "duration_minutes": 135, "base_fare": 6000, "total_seats": 150, "seats_available": 140}, {"id": 6, "flight_no": "F8302", "airline_name": "AirIndia", "origin": "Delhi", "destination": "Mumbai", "departure_time": "2025-11-25T18:00:00", "arrival_time": "2025-11-25T20:00:00", "duration_minutes": 120, "base_fare": 6000, "total_seats": 150, "seats_available": 150}], Response headers
```

content-length: 1525
content-type: application/json
date: Sun, 30 Nov 2025 14:35:07 GMT
server: uvicorn

Responses

Code	Description	Links
200	Successful Response	No links

Media type

application/json

26°C Mostly cloudy

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GET /api/flights GetAllFlights

Parameters

Name	Description
sort_by	price
sort_order	asc

Responses

Curl

```
curl -X 'GET' \
'http://127.0.0.1:8000/api/flights?sort_by=price&sort_order=asc' \
-H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8000/api/flights?sort_by=price&sort_order=asc
```

Server response

Code Details

200 Response body

```
[{"id": 5, "flight_no": "F8301", "airline_name": "AirIndia", "origin": "Mumbai", "destination": "Bangalore", "departure_time": "2025-11-25T11:00:00", "arrival_time": "2025-11-25T13:15:00", "duration_minutes": 135, "base_fare": 6000, "total_seats": 150, "seats_available": 140}, {"id": 6, "flight_no": "F8302", "airline_name": "AirIndia", "origin": "Delhi", "destination": "Mumbai", "departure_time": "2025-11-25T18:00:00", "arrival_time": "2025-11-25T20:00:00", "duration_minutes": 120, "base_fare": 6000, "total_seats": 150, "seats_available": 150}], Response headers
```

content-length: 1525
content-type: application/json
date: Sun, 30 Nov 2025 14:35:07 GMT
server: uvicorn

Responses

Code	Description	Links
200	Successful Response	No links

Media type

application/json

26°C Mostly cloudy

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Code Details

200 Response body

```
{
  "id": 2,
  "flight_no": "FB102",
  "airline_name": "SpiceJet",
  "origin": "Delhi",
  "destination": "Mumbai",
  "departure_time": "2025-11-25T13:00:00",
  "arrival_time": "2025-11-25T15:10:00",
  "duration_minutes": 130,
  "base_fare": 6200,
  "total_seats": 180,
  "seats_available": 180
},
{
  "id": 3,
  "flight_no": "FB101",
  "airline_name": "SpiceJet",
  "origin": "Mumbai",
  "destination": "Delhi",
  "departure_time": "2025-11-25T08:00:00",
  "arrival_time": "2025-11-25T10:05:00",
  "duration_minutes": 125,
  "base_fare": 6500,
  "total_seats": 180,
  "seats_available": 160
}
```

Response headers

```
content-length: 1525
content-type: application/json
date: Sun, 30 Nov 2025 14:35:07 GMT
server: unicorn
```

Responses

Code	Description	Links
200	Successful Response	No links

Media type application/json

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Code Details

200 Response body

```
{
  "id": 4,
  "flight_no": "FB202",
  "airline_name": "IndiGo",
  "origin": "Delhi",
  "destination": "Chennai",
  "departure_time": "2025-11-25T16:00:00",
  "arrival_time": "2025-11-25T18:45:00",
  "duration_minutes": 165,
  "base_fare": 7100,
  "total_seats": 200,
  "seats_available": 200
},
{
  "id": 3,
  "flight_no": "FB201",
  "airline_name": "IndiGo",
  "origin": "Chennai",
  "destination": "Delhi",
  "departure_time": "2025-11-25T09:30:00",
  "arrival_time": "2025-11-25T12:15:00",
  "duration_minutes": 165,
  "base_fare": 7200,
  "total_seats": 200,
  "seats_available": 185
}
```

Response headers

```
content-length: 1525
content-type: application/json
date: Sun, 30 Nov 2025 14:35:07 GMT
server: unicorn
```

Responses

Code	Description
200	Successful Response

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3. /api/flights/search (Search Flights):

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127.0.0.1:8000/docs#/default/search_flights_api.flights_search_get

GET /api/flights/search Search Flights

Parameters

Name	Description
origin * required	Origin city (e.g., Mumbai) string (query) Chennai
destination * required	Destination city (e.g., Delhi) string (query) Mumbai
travel_date * required	Travel date in YYYY-MM-DD string(\$date) (query) 2025-11-25
sort_by	duration
sort_order	desc

Responses

Code **Responses** **Links**

Curl

```
curl -X 'GET' \
'http://127.0.0.1:8000/api/flights/search?origin=Chennai&destination=Mumbai&travel_date=2025-11-25&sort_by=duration&sort_order=desc' \
-H 'accept: application/json'
```

Request URL

http://127.0.0.1:8000/api/flights/search?origin=Chennai&destination=Mumbai&travel_date=2025-11-25&sort_by=duration&sort_order=desc

Server response

Code **Details**

404 *Undocumented* Error: Not Found

Response body

```
{
  "detail": "No flights found from Chennai to Mumbai on 2025-11-25"
}
```

Download

Response headers

```
content-length: 66
content-type: application/json
date: Sun, 30 Nov 2025 14:40:50 GMT
server: uvicorn
```

Responses

Code **Description** **Links**

200 Successful Response *No links*

Media type

application/json

Controls Accept header.

Example Value | Schema

Rainy days ahead 25°C

Search

ENG IN 08:10 PM 30-11-2025

Rainy days ahead 25°C

Search

ENG IN 08:11 PM 30-11-2025

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GET /api/flights/search Search Flights

Parameters

Name	Description
origin * required	Origin city (e.g., Mumbai) string (query) Mumbai
destination * required	Destination city (e.g., Delhi) string (query) Bangalore
travel_date * required	Travel date in YYYY-MM-DD string(\$date) (query) 2025-11-25
sort_by	duration
sort_order	desc

Responses

Rainy days ahead 25°C

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GET /api/flights/search?origin=Mumbai&destination=Bangalore&travel_date=2025-11-25&sort_by=duration&sort_order=desc

Responses

Curl

```
curl -X 'GET' \
'http://127.0.0.1:8000/api/flights/search?origin=Mumbai&destination=Bangalore&travel_date=2025-11-25&sort_by=duration&sort_order=desc' \
-H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8000/api/flights/search?origin=Mumbai&destination=Bangalore&travel_date=2025-11-25&sort_by=duration&sort_order=desc
```

Server response

Code Details

200 Response body

```
[
  {
    "id": 5,
    "flight_no": "F8301",
    "airline_name": "AirIndia",
    "origin": "Mumbai",
    "destination": "Bangalore",
    "departure_time": "2025-11-25T11:00:00",
    "arrival_time": "2025-11-25T13:15:00",
    "duration_minutes": 135,
    "base_fare": 6000,
    "total_seats": 100,
    "seats_available": 100
  }
]
```

Response headers

```
content-length: 528
content-type: application/json
date: Sun, 26 Nov 2025 14:42:17 GMT
server: unicorn
```

Responses

Code Description

Rain coming in about 1.5 hours

Links

The image shows two screenshots of a REST API documentation interface, likely Swagger or Postman, demonstrating the search flights endpoint.

Screenshot 1: API Request Form

This screenshot shows the 'Parameters' section of the API request form:

- origin** (required, string, query): Mumbai
- destination** (required, string, query): Mumbai
- travel_date** (required, string(\$date), query): 2025-11-25
- sort_by** (string, query): duration
- sort_order** (string, query): desc

Buttons at the bottom include 'Execute' and 'Clear'.

Screenshot 2: API Response Details

This screenshot shows the 'Responses' section for a 400 Bad Request error:

- Curl**: curl -X 'GET' 'http://127.0.0.1:8000/api/flights/search?origin=Mumbai&destination=Mumbai&travel_date=2025-11-25&sort_by=duration&sort_order=desc' -H 'accept: application/json'
- Request URL**: http://127.0.0.1:8000/api/flights/search?origin=Mumbai&destination=Mumbai&travel_date=2025-11-25&sort_by=duration&sort_order=desc
- Server response** (Code: 400, Details: Error: Bad Request):


```
{
  "detail": "Origin and destination must be different"
}
```
- Response headers**:


```
content-length: 53
Content-Type: application/json
Date: Sun, 30 Nov 2025 14:44:06 GMT
Server: unicorn
```
- Responses** (Code: 200, Description: Successful Response, Media type: application/json):
 - Accept header: application/json
 - Links: No links

4. /api/external/mock-schedule (Mock Airline Schedule):

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127.0.0.1:8000/docs#/default/mock_airline_schedule_api_external_mock_schedule_get

GET /api/external/mock-schedule Mock Airline Schedule

Parameters

No parameters

Responses

Curl

```
curl -X 'GET' \
'http://127.0.0.1:8000/api/external/mock-schedule' \
-H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8000/api/external/mock-schedule
```

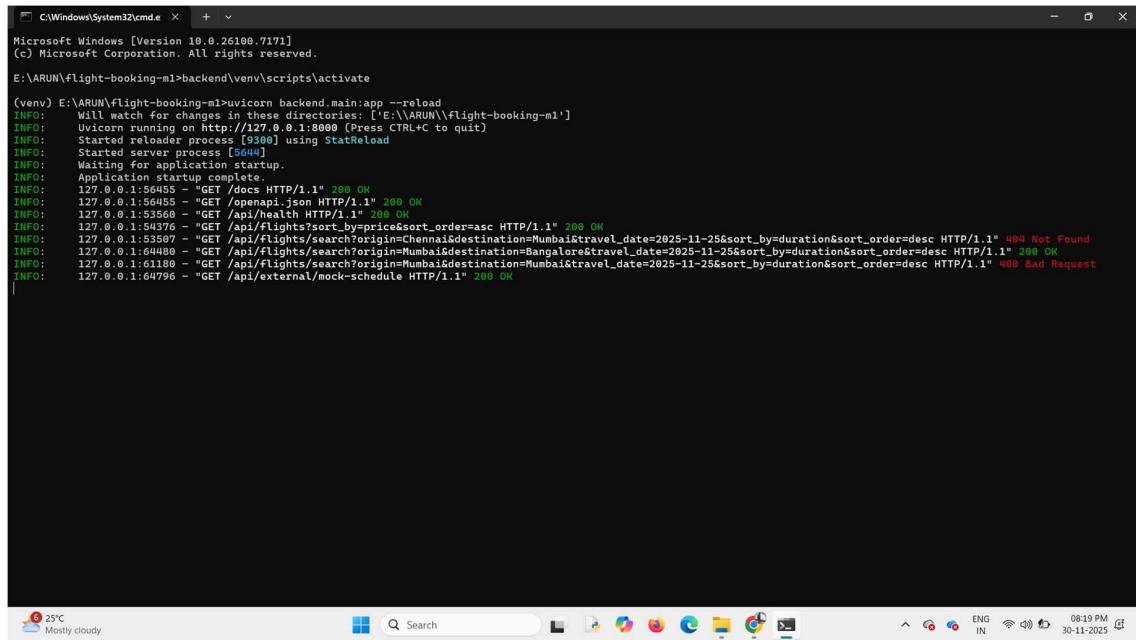
Server response

Code	Details
200	Response body <pre>{ "provider": "Arun", "generated_at": "2025-11-30T14:45:50.755856Z", "flights": [{ "flight_no": "FB401", "airline_name": "AirIndiaExpress", "origin": "Kolkata", "destination": "Chennai", "departure_time": "2025-11-25 06:00:00", "arrival_time": "2025-11-25 08:10:00", "duration_minutes": 130, "base_fare": 6425, "total_seats": 180, "seats_available": 160 }, { "flight_no": "FB402", "airline_name": "AirIndiaExpress", "origin": "Hyderabad", "destination": "Mumbai", "departure_time": "2025-11-25 09:30:00", "arrival_time": "2025-11-25 12:05:00", "duration_minutes": 155, "base_fare": 6670, "total_seats": 120, "seats_available": 67 }] }</pre> Response headers <pre>content-length: 588 content-type: application/json date: Sun, 30 Nov 2025 14:45:50 GMT server: uvicorn</pre>

Responses

Code	Description
200	Success

Terminal Output:



```
C:\Windows\System32\cmd.exe + - Microsoft Windows [Version 10.0.26100.7171] (c) Microsoft Corporation. All rights reserved. E:\ARUN\Flight-booking-m1>backend\venv\scripts\activate (venv) E:\ARUN\Flight-booking-m1>uvicorn backend.main:app --reload INFO: Will watch for changes in these directories: ['E:\\ARUN\\Flight-booking-m1'] INFO: Unicorn running on http://127.0.0.1:8000 (Press CTRL+C to quit) INFO: Started reloader process [9300] using StatReload INFO: Started server process [5644] INFO: Using configuration: app:backend.main:app, workers: 2 INFO: Application startup complete. INFO: 127.0.0.1:56455 - "GET /docs HTTP/1.1" 200 OK INFO: 127.0.0.1:56455 - "GET /openapi.json HTTP/1.1" 200 OK INFO: 127.0.0.1:53566 - "GET /api/health HTTP/1.1" 200 OK INFO: 127.0.0.1:54376 - "GET /api/flight?sort_by=price&sort_order=asc HTTP/1.1" 200 OK INFO: 127.0.0.1:53507 - "GET /api/flight/search?origin=Chennai&destination=Mumbai&travel_date=2025-11-25&sort_by=duration&sort_order=desc HTTP/1.1" 404 Not Found INFO: 127.0.0.1:63188 - "GET /api/flight/search?origin=Mumbai&destination=Bangalore&travel_date=2025-11-25&sort_by=duration&sort_order=desc HTTP/1.1" 200 OK INFO: 127.0.0.1:63189 - "GET /api/flight/search?origin=Mumbai&destination=Mumbai&travel_date=2025-11-25&sort_by=duration&sort_order=desc HTTP/1.1" 400 Bad Request INFO: 127.0.0.1:64796 - "GET /api/external/mock-schedule HTTP/1.1" 200 OK
```

How to run the backend server and test all APIs?

First go to the project folder in your file explorer. Next follow the below steps:

1. Activate the Virtual Environment by typing the following command in terminal:
backend\venv\scripts\activate
2. Then type **unicorn backend.main:app --reload**
3. Now, backend server is running. You can now open Swagger UI to test all APIs. In your browser, go to: <http://127.0.0.1:8000/docs> .