

Milestone 2 Backend Fast API Endpoints Output (Dynamic Pricing Engine)

Swagger UI – Open in Browser: <http://127.0.0.1:8000/docs>.

The screenshot shows the Swagger UI interface for the Flight Booking Simulator. At the top, it displays the title "Flight Booking Simulator" and the version "1.0.0 OAS 3.1". Below this, under the "default" group, there are several API endpoints listed:

- 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
- GET /api/flights/{flight_id}/price Get Dynamic Price For Flight
- GET /api/flights/{flight_id}/history Get Fare History

Below the endpoints, there is a section titled "Schemas" which lists "FareHistoryOut" and "FlightOut" schemas.

ENDPOINTS

1. Health Check

The screenshot shows the details for the "GET /api/health Health Check" endpoint. It includes sections for "Parameters" (No parameters), "Responses", and "Code".

Responses

Curl:

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

Request URL:

```
http://127.0.0.1:8000/api/health
```

Server response:

Code Details

200 Response body

```
{
  "status": "ok",
  "message": "Backend running",
  "server_time": "2025-12-09T06:54:13.734152Z"
}
```

Response headers

```
content-length: 87
content-type: application/json
```

2. Get All Flights

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/docs#/default/get_all_flights_api_flights_get

GET /api/flights Get All Flights

Parameters

Name	Description
sort_by	duration
string	(query)
sort_order	desc
string	(query)

Responses

Curl

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

Request URL

```
http://127.0.0.1:8000/api/flights?sort_by=duration&sort_order=desc
```

Server response

Code Details

02:26 PM 09-12-2025

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/docs#/default/get_all_flights_api_flights_get

Server response

Code Details

200 Response body

```
[  
  {  
    "id": 3,  
    "flight_no": "FB201",  
    "airline_name": "IndiGo",  
    "origin": "Chennai",  
    "destination": "Mumbai",  
    "departure_time": "2025-11-25T09:30:00",  
    "arrival_time": "2025-11-25T12:15:00",  
    "duration_minutes": 165,  
    "total_seats": 200,  
    "seats_available": 182  
  },  
  {  
    "id": 4,  
    "flight_no": "FB202",  
    "airline_name": "IndiGo",  
    "origin": "Chennai",  
    "destination": "Chennai",  
    "departure_time": "2025-11-25T16:00:00",  
    "arrival_time": "2025-11-25T18:45:00",  
    "duration_minutes": 185,  
    "total_seats": 200,  
    "seats_available": 189  
  }  
,  
  Response header:  


```
content-length: 1525
content-type: application/json
date: Tue, 09 Dec 2025 08:56:24 GMT
server: uvicorn
```



Responses



Code Description Links



200 Successful Response No links



02:27 PM 09-12-2025


```

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/docs#/default/get_all_flights_api.flights_get

Server response

Code	Details	Links						
200	Response body <pre>{ "flights": [{ "id": 5, "flight_no": "FB302", "airline_name": "AirIndia", "origin": "Bangalore", "destination": "Mumbai", "departure_time": "2025-11-25T18:00:00", "arrival_time": "2025-11-25T20:20:00", "duration_minutes": 140, "base_fare": 6000, "total_seats": 150, "seats_available": 131 }, { "id": 6, "flight_no": "FB301", "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": 5500, "total_seats": 150, "seats_available": 144 }, { "id": 7, ... }] } </pre> Response headers <pre>content-length: 1525 content-type: application/json date: Tue, 09 Dec 2025 08:56:24 GMT server: unicorn</pre>	Download						
Responses	<table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> <th>Links</th> </tr> </thead> <tbody> <tr> <td>200</td> <td>Successful Response</td> <td>No links</td> </tr> </tbody> </table>	Code	Description	Links	200	Successful Response	No links	
Code	Description	Links						
200	Successful Response	No links						

Top Stories Japan hit by po...

02:27 PM 09-12-2025

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/docs#/default/get_all_flights_api.flights_get

Server response

Code	Details	Links						
200	Response body <pre>[{ "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": 150, "seats_available": 130 }, { "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": 5800, "total_seats": 150, "seats_available": 132 }] } </pre> Response headers <pre>content-length: 1525 content-type: application/json date: Tue, 09 Dec 2025 08:56:24 GMT server: unicorn</pre>	Download						
Responses	<table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> <th>Links</th> </tr> </thead> <tbody> <tr> <td>200</td> <td>Successful Response</td> <td>No links</td> </tr> </tbody> </table>	Code	Description	Links	200	Successful Response	No links	
Code	Description	Links						
200	Successful Response	No links						

Top Stories Japan hit by po...

02:27 PM 09-12-2025

3. Search Flights

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/doc#/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) Delhi
travel_date * required	Travel date in YYYY-MM-DD string(\$date) (query) 2025-11-25
sort_by	price
sort_order	asc

Execute Clear

Responses

Curl

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

Request URL

```
http://127.0.0.1:8000/api/flights/search?origin=Chennai&destination=Delhi&travel_date=2025-11-25&sort_by=price&sort_order=asc
```

Server response

Code Details

200 Response body

```
[  
  {  
    "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_fare": 7200,  
    "seats_available": 104,  
    "dynamic_price": 7568  
  }  
]
```

Download

Responses

29°C Mostly sunny

Search

02:29 PM 09-12-2025

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/doc#/default/search_flights_api_flights_search_get

Responses

Curl

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

Request URL

```
http://127.0.0.1:8000/api/flights/search?origin=Chennai&destination=Delhi&travel_date=2025-11-25&sort_by=price&sort_order=asc
```

Server response

Code Details

200 Response body

```
[  
  {  
    "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_fare": 7200,  
    "seats_available": 104,  
    "dynamic_price": 7568  
  }  
]
```

Download

Responses

29°C Mostly sunny

Search

02:30 PM 09-12-2025

Flight Booking Simulator - Swagger UI

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

Responses

Curl

```
curl -X 'GET' \
  'http://127.0.0.1:8000/api/flights/search?origin=Chennai&destination=Delhi&travel_date=2025-11-26&sort_by=price&sort_order=asc' \
  -H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8000/api/flights/search?origin=Chennai&destination=Delhi&travel_date=2025-11-26&sort_by=price&sort_order=asc
```

Server response

Code Details

404 Error: Not Found
Undocumented

Response body

```
{ "detail": "No flights found from Chennai to Delhi on 2025-11-26" }
```

Download

Response headers

```
content-length: 65
content-type: application/json
date: Tue, 09 Dec 2025 09:01:07 GMT
server: uvicorn
```

Responses

Code Description Links

200 Successful Response No links

Media type

application/json

Controls Accept header.

29°C Mostly sunny

Search

02:31 PM 09-12-2025

Flight Booking Simulator - Swagger UI

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

GET /api/flights/search Search Flights

Cancel

Parameters

Name	Description
origin * required	Origin city (e.g., Mumbai) string (query)
destination * required	Destination city (e.g., Delhi) string (query)
travel_date * required	Travel date in YYYY-MM-DD string(\$date) (query)
sort_by	price
sort_order	asc

Execute Clear

Responses

29°C Mostly sunny

Search

02:32 PM 09-12-2025

The screenshot shows a browser window titled "Flight Booking Simulator - Swagger UI". The URL is `127.0.0.1:8000/docs#/default/search_flights_api.flights_search_get`. The "Responses" section for a 400 Bad Request error shows a curl command and a request URL. The response body contains the JSON object:

```
{"detail": "Origin and destination must be different"}
```

. The response header includes: `content-length: 53`, `content-type: application/json`, `date: Tue, 09 Dec 2025 09:02:11 GMT`, and `server: uvicorn`. The "Responses" section for a 200 Successful Response shows a media type dropdown set to `application/json` and a note about controlling the Accept header.

4. External Airline Schedule

The screenshot shows a browser window titled "Flight Booking Simulator - Swagger UI". The URL is `127.0.0.1:8000/docs#/default/mock_airline_schedule_api_external_mock_schedule_get`. The "GET /api/external/mock-schedule MockAirline Schedule" section shows no parameters. Below it is a "Responses" section. The curl command and request URL are shown. The response body contains the following JSON object:

```
{ "provider": "Arun", "generated_at": "2025-12-09T09:03:12.369Z", "flights": [ { "flight_no": "FB401", "airline": "IndiGo", "origin": "Kolkata", "destination": "Chennai", "departure_time": "2025-11-25 06:00:00", "arrival_time": "2025-11-25 08:10:00" } ] }
```

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/docs#/default/mock_airline_schedule_api_external_mock_schedule_get

Server response

Code Details

200 Response body

```
{"provider": "Arun", "generated_at": "2025-12-09T09:03:12.369255Z", "flights": [ {"flight_no": "F8401", "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": 100}, {"flight_no": "F8402", "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": 6600, "total_seats": 120, "seats_available": 67} ]}
```

Response headers

```
content-length: 588  
content-type: application/json
```

29°C Mostly sunny

Search

02:34 PM 09-12-2025

5. Get Dynamic Price for a Single Flight

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/docs#/default/get_dynamic_price_for_flight_api_flights_flight_id_price_get

GET /api/flights/{flight_id}/price Get Dynamic Price for Flight

Parameters

Name Description

flight_id * required integer (path) 4

Execute Clear

Responses

Curl

```
curl -X 'GET' \ 'http://127.0.0.1:8000/api/flights/4/price' \ -H 'accept: application/json'
```

Request URL

```
http://127.0.0.1:8000/api/flights/4/price
```

Server response

Code Details

200 Response body

```
{ "id": 4, "flight_no": "F8202", }
```

29°C Mostly sunny

Search

02:34 PM 09-12-2025

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/docs#/default/get_dynamic_price_for_flight_api_flights_flight_id_price_get

Server response

Code Details

200 Response body

```
{ "id": 6, "flight_no": "98202", "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": 7300, "total_fare": 7455, "seats_available": 195, "dynamic_price": 7455 }
```

Download

Response headers

```
content-length: 274
content-type: application/json
date: Tue, 09 Oct 2025 09:04:57 GMT
server: unicorn
```

Responses

Code Description Links

200 Successful Response No links

Media type application/json

Controls Accept header.

Example Value | Schema

```
{ "id": 6, "flight_no": "string", "airline_name": "string", "origin": "string", "destination": "string", "departure_time": "string", "arrival_time": "string", "duration_minutes": 165, "base_fare": 7300, "total_fare": 7455, "seats_available": 195, "dynamic_price": 7455 }
```

29°C Mostly sunny

6. Get Fare History for a Single Flight (Tracking the Changes Over Time)

Flight Booking Simulator - Swagger UI

127.0.0.1:8000/docs#/default/get_fare_history_api_flights_flight_id_history_get

GET /api/flights/{flight_id}/history Get Fare History

Parameters

Name Description

flight_id * required integer (path) 6

Execute Clear

Responses

Curl

```
curl -X 'GET' \
'http://127.0.0.1:8000/api/flights/6/history' \
-H 'Accept: application/json'
```

Request URL

```
http://127.0.0.1:8000/api/flights/6/history
```

Server response

Code Details

200 Response body

```
[ { "recorded_at": "2025-12-09T09:06:14", "fare": 7455 } ]
```

29°C Mostly sunny

Flight Booking Simulator - SwiftUI

127.0.0.1:8000/docs#/default/get_fare_history_api_flights_flight_id_history_get

Server response

Code Details

200 Response body

```
[  
  {  
    "recorded_at": "2025-12-09T09:06:14",  
    "dynamic_price": 6000,  
    "seats_available": 150,  
    "demand_level": null  
  },  
  {  
    "recorded_at": "2025-12-09T09:05:14",  
    "dynamic_price": 6000,  
    "seats_available": 147,  
    "demand_level": null  
  },  
  {  
    "recorded_at": "2025-12-09T09:04:13",  
    "dynamic_price": 5700,  
    "seats_available": 146,  
    "demand_level": null  
  },  
  {  
    "recorded_at": "2025-12-09T09:03:13",  
    "dynamic_price": 7200,  
    "seats_available": 147,  
    "demand_level": null  
  },  
  {  
    "recorded_at": "2025-12-09T09:02:13",  
    "dynamic_price": 5700,  
    "seats_available": 146,  
    "demand_level": null  
  }]
```

Response headers

29°C Mostly sunny

Search

ENG IN 02:37 PM 09-12-2025

Flight Booking Simulator - SwiftUI

127.0.0.1:8000/docs#/default/get_fare_history_api_flights_flight_id_history_get

Server response

Code Details

200 Response body

```
{  
  {  
    "recorded_at": "2025-12-08T19:42:57",  
    "dynamic_price": 5700,  
    "seats_available": 133,  
    "demand_level": null  
  },  
  {  
    "recorded_at": "2025-12-08T19:41:57",  
    "dynamic_price": 7200,  
    "seats_available": 138,  
    "demand_level": null  
  },  
  {  
    "recorded_at": "2025-12-08T19:40:57",  
    "dynamic_price": 6000,  
    "seats_available": 135,  
    "demand_level": null  
  },  
  {  
    "recorded_at": "2025-12-08T19:39:56",  
    "dynamic_price": 7200,  
    "seats_available": 131,  
    "demand_level": null  
  },  
  {  
    "recorded_at": "2025-12-08T19:38:56",  
    "dynamic_price": 5700,  
    "seats_available": 133,  
    "demand_level": null  
  }]
```

Response headers

29°C Mostly sunny

Search

ENG IN 02:38 PM 09-12-2025

Terminal Output:

```
C:\Windows\System32\cmd.exe x + v
Microsoft Windows [Version 10.0.26200.7171]
(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: Muli watch for changes in these directories: ['E:\\ARUN\\\\flight-booking-m1']
INFO: Uvicorn running on http://127.0.0.1:8000 (Press CTRL+C to quit)
INFO: Started reload daemon [1092] using StatReload
INFO: Started server process [13696]
INFO: Waiting for application startup...
INFO: Application startup complete.
INFO: 127.0.0.1:54367 - "GET /docs HTTP/1.1" 200 OK
INFO: 127.0.0.1:54367 - "GET /openapi.json HTTP/1.1" 200 OK
INFO: 127.0.0.1:55973 - "GET /api/health HTTP/1.1" 200 OK
INFO: 127.0.0.1:55022 - "GET /api/flights?sort_by=duration&sort_order=desc HTTP/1.1" 200 OK
INFO: 127.0.0.1:59835 - "GET /api/flights/search?origin=Chennai&destination=Delhi&travel_date=2025-11-25&sort_by=price&sort_order=asc HTTP/1.1" 200 OK
INFO: 127.0.0.1:63876 - "GET /api/flights/search?origin=Delhi&destination=Chennai&travel_date=2025-11-26&sort_by=price&sort_order=asc HTTP/1.1" 404 Not Found
INFO: 127.0.0.1:52058 - "GET /api/flights/search?origin=Chennai&destination=Chennai&travel_date=2025-11-26&sort_by=price&sort_order=asc HTTP/1.1" 400 Bad Request
INFO: 127.0.0.1:57901 - "GET /api/external/mock-schedule HTTP/1.1" 200 OK
INFO: 127.0.0.1:59849 - "GET /api/flights/4/price HTTP/1.1" 200 OK
INFO: 127.0.0.1:53591 - "GET /api/flights/4 HTTP/1.1" 200 OK
INFO: 127.0.0.1:64064 - "GET /api/flights/4/price HTTP/1.1" 200 OK
INFO: 127.0.0.1:64064 - "GET /api/flights/4 HTTP/1.1" 200 OK
INFO: 127.0.0.1:50796 - "GET /api/flights/4/price HTTP/1.1" 200 OK
INFO: 127.0.0.1:57540 - "GET /api/flights/4/price HTTP/1.1" 200 OK
INFO: 127.0.0.1:51518 - "GET /api/flights/4/price HTTP/1.1" 200 OK
INFO: 127.0.0.1:53839 - "GET /api/flights/6/history HTTP/1.1" 200 OK
```