

Web Flight Booking System

Made for 159.352 Advanced Web Development at Massey University June 2022
by Joshua Pearson.

Demo

Run the docker .tar file locally to host the server. The following docker commands will let you load and run the server from the .tar file

```
docker load -o 20019455.tar.gz
docker run -it --rm --publish 5555:8000 20019455
```

Home page

This page has been merged with the booking page in order to direct a new customer straight to the page where they can search for available flights. There are links across the top of the page for navigation and user management which adapt automatically to the logged in status.



Figure 1: image

Booking page

On this page, a user can find flights matching their filled criteria:

Book a flight

From	To	Flight date	Tickets
<input type="text" value="Dairy Flat: NZNE"/>	<input type="text" value="Dairy Flat: NZNE"/>	<input type="text" value="dd/mm/yyyy"/>	<input type="text" value="1"/>
<div> Search</div>			

This data is pulled from the database, validated and sent to the server when the form is submitted.

Search results are shown allowing users to see 3 days either side of their selected date making it easier to find a matching flight overall.

Selecting 'Book this flight' takes the user to a confirmation page. Once they click confirm booking, the data is revalidated to ensure the seats have not been sold in

Mon 27 June

2 matching flights

Tue 28 June

1 matching flights

Wed 29 June

2 matching flights

Thu 30 June

Fri 01 July

2 matching flights

Sat 02 July

0 matching flights

Sun 03 July

0 matching flights

Available flights

Flight KA10

Dairy Flat
 Rotorua

Thursday 30 June, 2022 at 07:30AM (Pacific/Auckland time).
Thursday 30 June, 2022 at 08:15AM (Pacific/Auckland time).

4 seats remaining at this price
Price per ticket: \$69.30

Book this flight

Flight KA20

Dairy Flat
 Rotorua

Thursday 30 June, 2022 at 04:45PM (Pacific/Auckland time).
Thursday 30 June, 2022 at 05:30PM (Pacific/Auckland time).

4 seats remaining at this price
Price per ticket: \$69.30

Book this flight

Figure 2: image

the time the user was scrolling.

You are about to book flight KA10

Dairy Flat (NZNE) at 07:30AM on Thursday 30 June, 2022 (Pacific/Auckland time).
 Rotorua (NZRO) at 08:15AM on Thursday 30 June, 2022 (Pacific/Auckland time).


2 tickets for \$69.30 each
Total price: \$138.60 (NZD)

Confirm booking for 2 seats

And an invoice page will appear once confirmed:

Your booking has been confirmed.

View invoice



Kulta Air Limited
Booking reference: YXE371

Kulta Air Limited
225 Dairy Flat Road, Auckland, NZ

Veera Amanda Villgren
20019455@massey.ac.nz

Flight KA10
Aircraft Cirrus SF50

Departing from NZNE	Arriving in NZRO
Thu 30 June - 07:30:00	Thu 30 June - 08:15:00
Seats booked	Price per ticket
2	\$69.30

Total to be paid upon checkin: \$138.60

Click [here](#) to go home

Example invoice:

Bonus features

- A fully designed and functioning user registration and login system, which includes password reset functionality and complete validation
- Strong flight validation for stopover flights and simple expansion to add more airports, flights and stopover legs
- Functional from all timezones, no matter where the server is hosted
- Historical bookings system showing all past bookings
- The ability for a logged in user to edit their personal info and update their bookings quickly and easily
- Fully functional HTTPS functionality, including protection from cross-site scripting and password leaks with strong hashing authentication
- A completely systematic migration tool to allow for database model upgrades without losing any data (using alembic)

Tech Stack

- Python 3.10
- Bootstrap JS

- Flask
- WTForms
- Flask-Login
- Bcrypt
- SQLite with FlaskAlchemy

Docker container - Docker version 20.10.14, build a224086 - Docker Desktop 4.7.1 (77678)

Acknowledgements and references

- <https://www.craiyon.com/> - AI generated logo design
- <https://github.com/sparksuite/simple-html-invoice-template> - Invoice template
- <https://fontawesome.com/> - Various icons by Font Awesome Free