

Hack To Hire

1. I have completed all the requirements as outlined in the case study.
2. I have implemented role-based access control, allowing administrators to create flights and update flight statuses.
3. Users can register to receive notifications via email, SMS, or in-app notifications.
4. When a flight is updated, all users will receive notifications through their selected channels.
5. Real-time data updates are implemented so that any changes to flight information are immediately reflected on the users' screens.
6. Authentication has been implemented using JWT (JSON Web Tokens).



Sign in to your account

Email address

Password

Sign in

Don't Have an Account? [Create Your Account](#)



Create Your Account

Name

Email address

Phone Number

Password

Sign Up

Already Have an Account? [Sign In](#)

Once the user logs in, they will be presented with a list of available flights.

FlightWatch

Add Flight

Logout

Flight ID	Airline	Status	Departure Gate	Scheduled Departure	Get Notified	Update Status
BA 143	British Airways	Delayed	E5	7/26/2024, 10:00:00 PM	Get Notified	Update Status
QF 12	Qantas	Cancelled	J2	7/26/2024, 10:00:00 PM	Get Notified	Update Status
6E 2341	Indigo	Cancelled	A13	7/16/2024, 2:56:00 AM	Get Notified	Update Status
UA 89	United Airlines	Cancelled	G8	7/26/2024, 10:00:00 PM	Get Notified	Update Status
UP 81	Indigo	Delayed	T20	7/31/2024, 2:56:00 PM	Get Notified	Update Status
BH 178	Indigo	On Time	H10	7/31/2024, 4:03:00 PM	Get Notified	Update Status
HJ78	Ethihad	Delayed	Y20	7/31/2024, 3:40:00 PM	Get Notified	Update Status

Only administrators have the permission to create flights.

Add

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STATUS

Airways

Delayed

s

Cancelled

Cancelled

Airlines

Cancelled

Delayed

On Time

d

Delayed

Flight ID

Flight Id

Airline

Airline

Status

Status

Departure Gate

Departure Gate

Arrival Gate

Arrival Gate

Scheduled Departure

dd-mm-yyyy --:--

Scheduled Arrival

dd-mm-yyyy --:--

Cancel

Add Flight

GET NOTIFIED

UPD

Get Notified

Upda

Get Notified

Upda

Get Notified

Upda

Get Notified

Upda

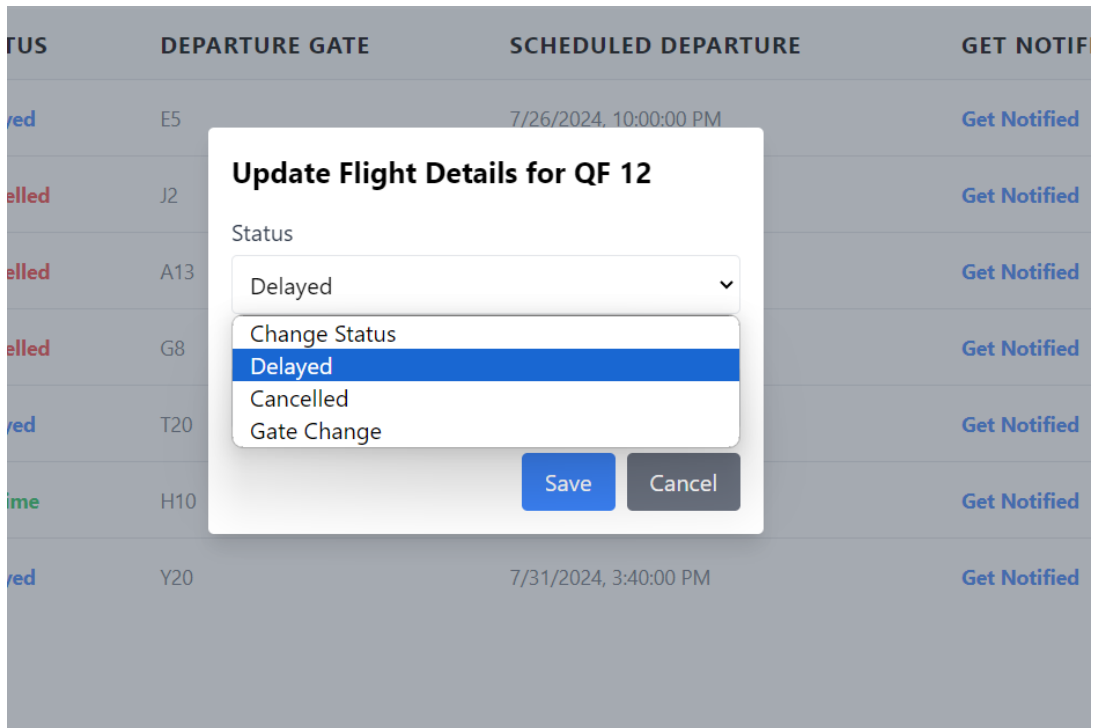
Get Notified

Upda

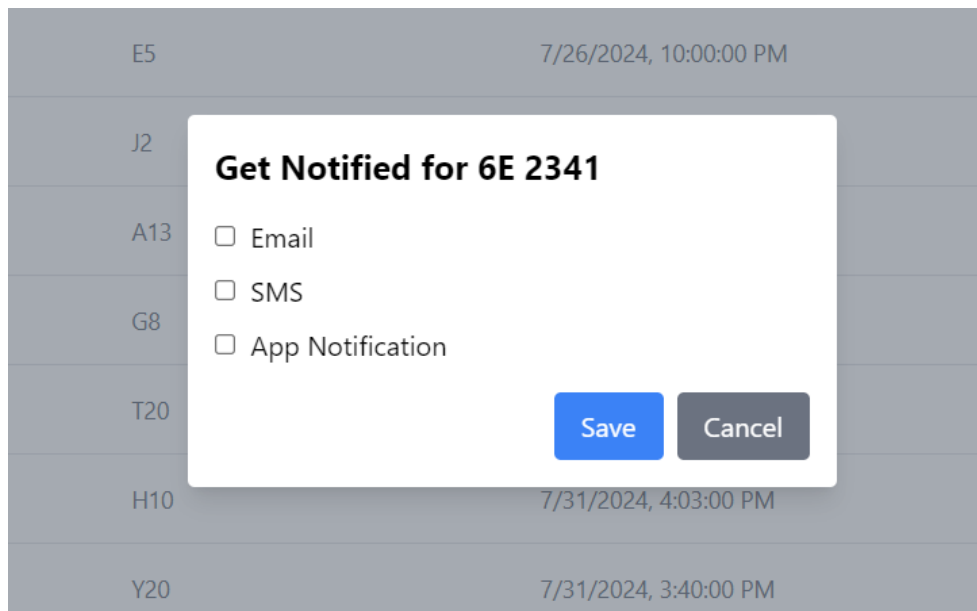
Get Notified

Upda

Administrators have the ability to update the status of a flight, including changes such as "Delayed," "Cancelled," or "Gate Change," among others.



Users can select multiple modes to receive notifications, allowing them to choose from options such as email, SMS, and in-app notifications.



This page is what a regular user sees, who does not have permissions to add or update flights. They can only subscribe to flights and receive notifications based on their selected preferences.

FlightWatch 🔔 Logout					
FLIGHT ID	AIRLINE	STATUS	DEPARTURE GATE	SCHEDULED DEPARTURE	GET NOTIFIED
BA 143	British Airways	Delayed	E5	7/26/2024, 10:00:00 PM	Get Notified
QF 12	Qantas	Cancelled	J2	7/26/2024, 10:00:00 PM	Get Notified
6E 2341	Indigo	Cancelled	A13	7/16/2024, 2:56:00 AM	Get Notified
UA 89	United Airlines	Cancelled	G8	7/26/2024, 10:00:00 PM	Get Notified
UP 81	Indigo	Delayed	T20	7/31/2024, 2:56:00 PM	Get Notified
BH 178	Indigo	On Time	H10	7/31/2024, 4:03:00 PM	Get Notified
HJ78	Ethihad	Delayed	Y20	7/31/2024, 3:40:00 PM	Get Notified

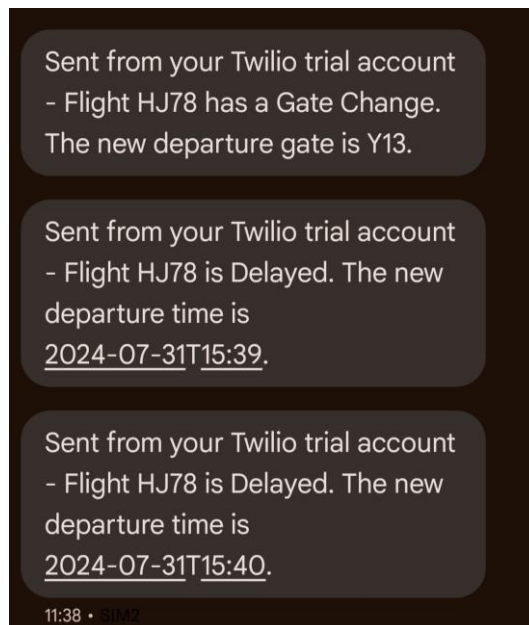
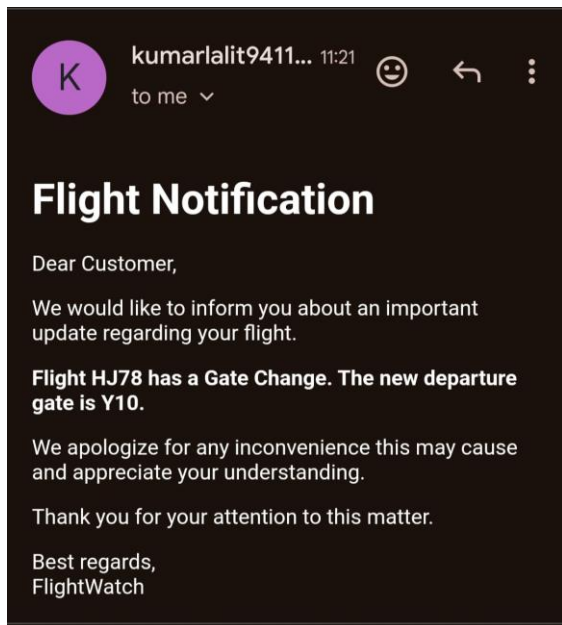
Users can view notifications of recent updates by clicking on the bell icon.

FlightWatch 🔔 Add Flight Logout					
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When a user clicks on the bell icon, the notifications are displayed, and the notification count is reset.

FlightWatch 🔔 Add Flight Logout					
Flight HJ78 has a Gate Change. The new departure gate is Y25.					
FLIGHT ID	AIRLINE	STATUS	DEPARTURE GATE	SCHEDULED DEPARTURE	GET NOTIFIED
					UPDATE STATUS

Here are sample structures for Email and SMS notifications:



Here's a formal overview of your tech stack and its components:

- **Frontend:** React.js
- **Backend:** Node.js
- **Message Queue:** RabbitMQ (used to send SMS and email notifications asynchronously)
- **Real-time Communication:** Socket.IO (used for real-time updates on flight status and notifications)
- **Database:** PostgreSQL
- **SMS Service:** Twilio

Here is a formal description of your database tables:

Flight Table

- **flight_id** (Primary Key): Unique identifier for each flight.
- **airline:** The airline operating the flight.
- **status:** Current status of the flight (e.g., OnTime, Delayed, Cancelled).
- **departure_gate:** Gate from which the flight departs.
- **arrival_gate:** Gate at which the flight arrives.
- **scheduled_departure:** Scheduled departure time.
- **scheduled_arrival:** Scheduled arrival time.
- **actual_departure:** Actual departure time.
- **actual_arrival:** Actual arrival time.

Notification Table

- **notification_id** (Primary Key): Unique identifier for each notification.
- **flight_id** (Foreign Key): Reference to the related flight.
- **message**: Content of the notification.
- **timestamp**: Time when the notification was sent.
- **method**: Method of notification (Enum: Email, SMS, App).
- **recipient**: Recipient of the notification (Email address, Phone number, or User ID).

Passenger Table

- **user_id** (Primary Key): Unique identifier for each passenger.
- **name**: Name of the passenger.
- **role**: Role of the passenger (Admin, User).
- **email**: Email address of the passenger.
- **password_hash**: Hashed password for authentication.
- **phone_number**: Contact phone number of the passenger.

Notification Preference Table

- **id** (Primary Key): Unique identifier for each preference entry.
- **user_id** (Foreign Key): Reference to the related user.
- **flight_id** (Foreign Key): Reference to the related flight.
- **notificationMode**: Bitmask indicating user preferences for notification methods.
- **isDeleted**

First Bit: Represents Email notifications.

Second Bit: Represents SMS notifications.

Third Bit: Represents In-app notifications.

For example:

7 (Binary 111): Indicates that the user wants notifications via all mediums (Email, SMS, and App).

5 (Binary 101): Indicates that the user wants notifications via Email and App only.