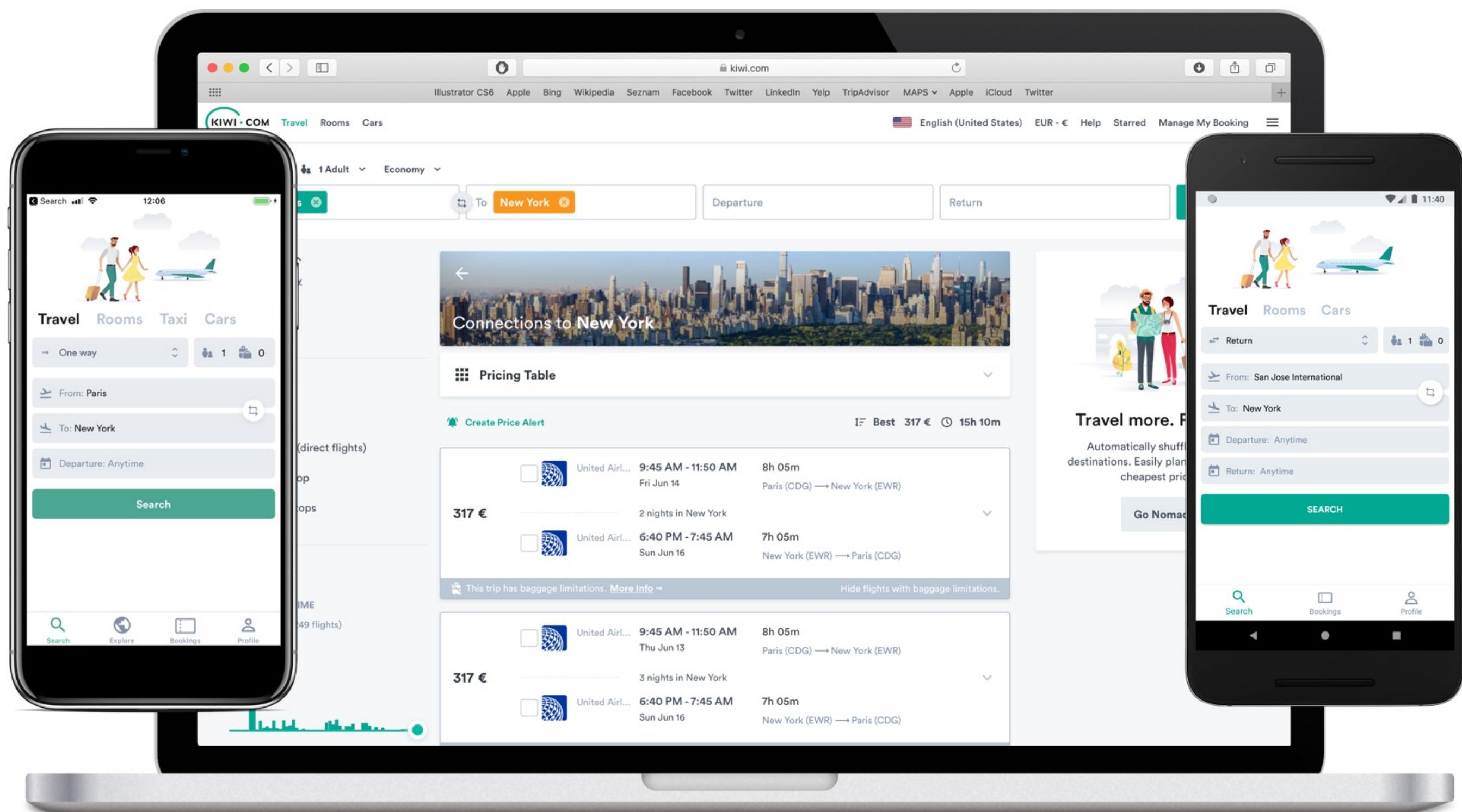


# MULTIPLATFORM UI

MICHAL SÄNGER

michal.sanger@kiwi.com

**KIWI.COM WANTS TO  
MAKE TRAVEL BETTER**



A screenshot of the Kiwi.com travel search interface on a Mac OS X desktop. The window title is "kiwi.com". The search parameters are set to "Return", "1 Adult", "Economy", "From Paris" (green button), "To New York" (orange button), "Departure" (empty field), "Return" (empty field), and a green "Search >" button.

**Transport** filters (checked): Flight only, Bus only, Train only.

**Stops** filter: Any (selected), Nonstop (direct flights), Up to 1 stop, Up to 2 stops.

**Duration** filter: MAX TRAVEL TIME, any (1249 of 1249 flights). A histogram shows flight times.

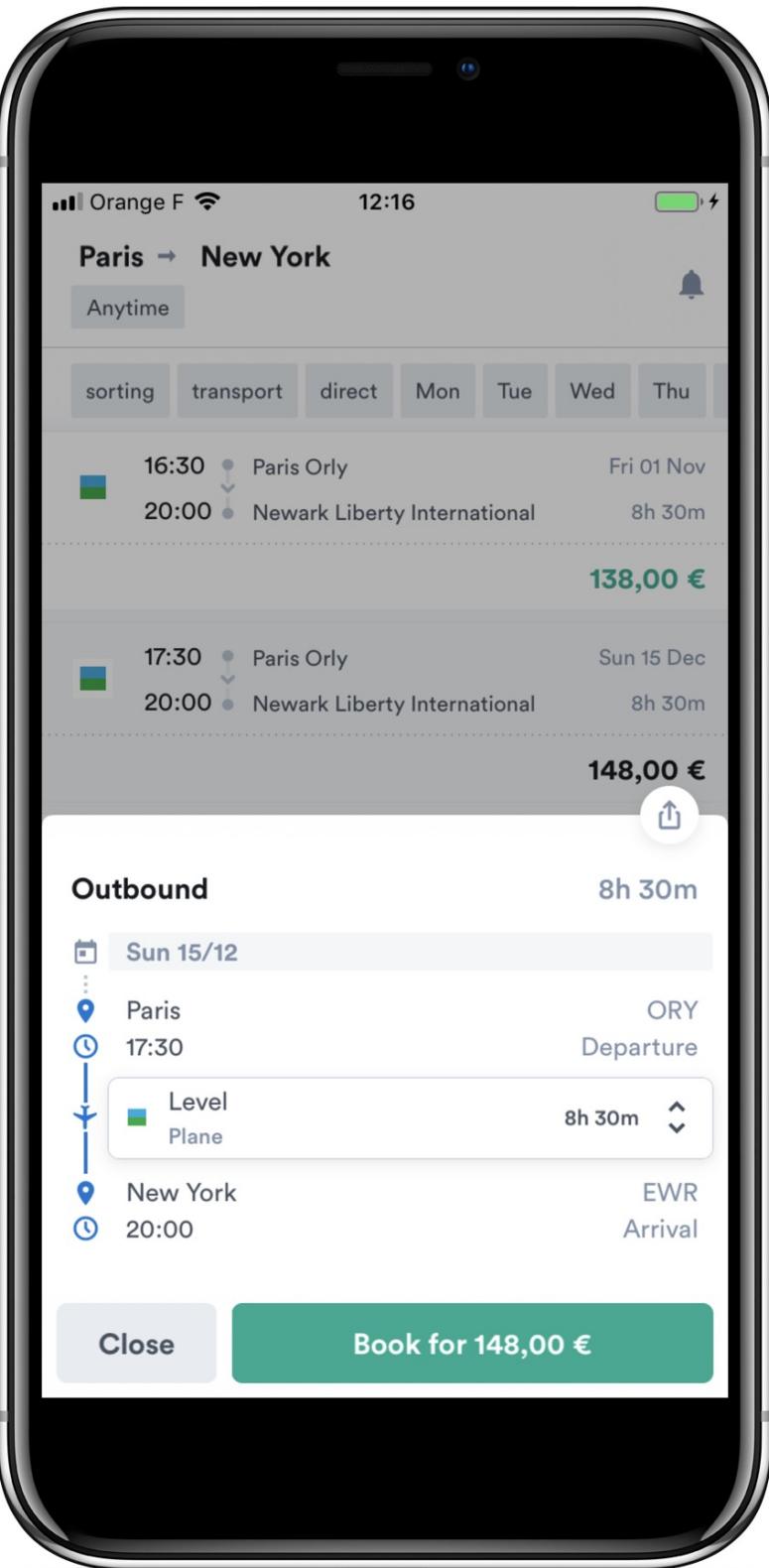
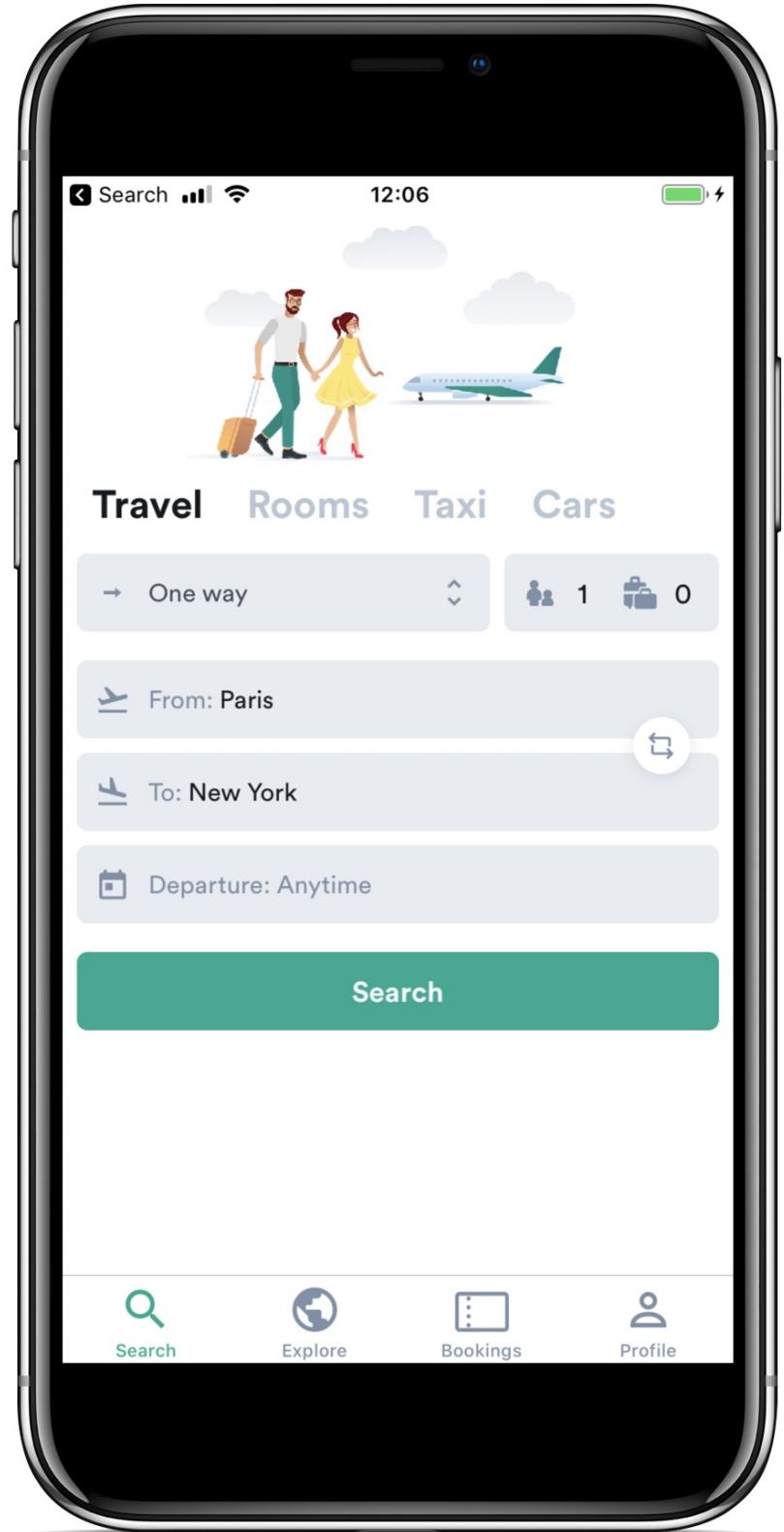
**Pricing Table** section:

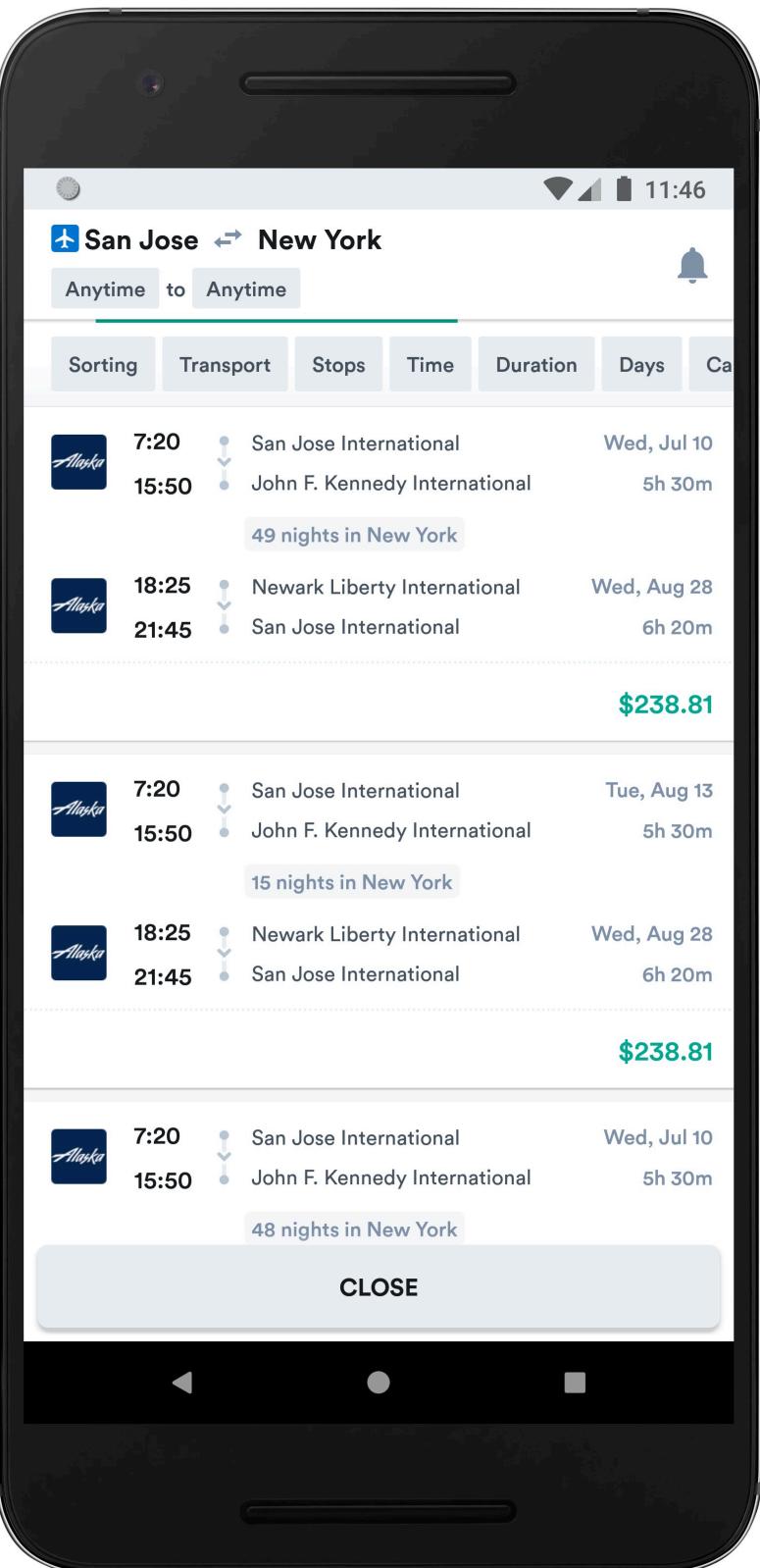
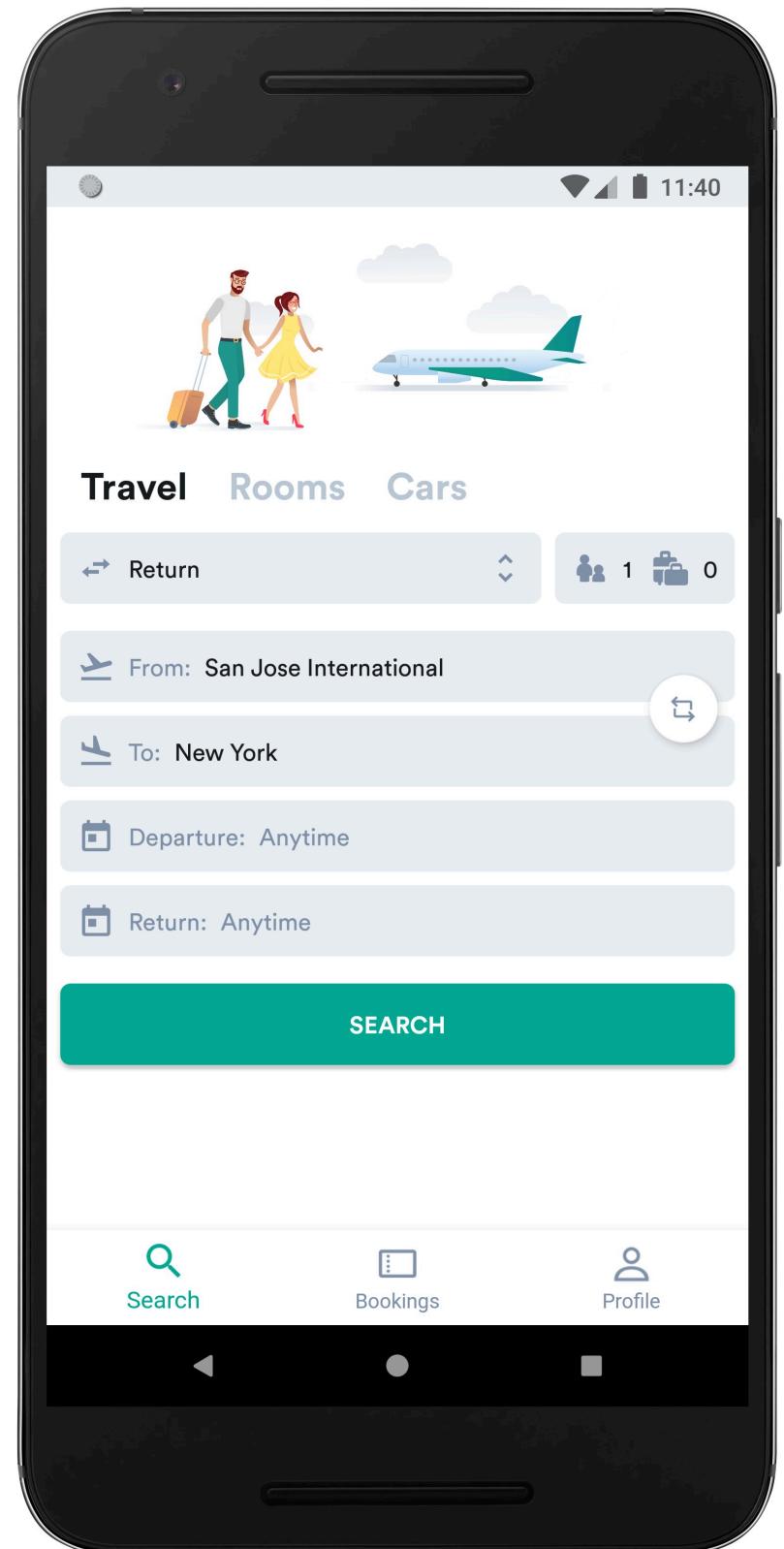
	Flight	Arrival	Departure	Duration	Price	Notes
1	United Airline	9:45 AM - 11:50 AM	Fri Jun 14	8h 05m	317 €	Paris (CDG) —> New York (EWR)
2	United Airline	6:40 PM - 7:45 AM	Sun Jun 16	7h 05m		New York (EWR) —> Paris (CDG)
<small>This trip has baggage limitations. <a href="#">More Info</a> → Hide flights with baggage limitations.</small>						

	Flight	Arrival	Departure	Duration	Price	Notes
1	United Airline	9:45 AM - 11:50 AM	Thu Jun 13	8h 05m	317 €	Paris (CDG) —> New York (EWR)
2	United Airline	6:40 PM - 7:45 AM	Sun Jun 16	7h 05m		New York (EWR) —> Paris (CDG)

**Connections to New York** banner with a city skyline image.

**Travel more. Pay less.** Callout with an illustration of two people traveling and the text: "Automatically shuffle multiple destinations. Easily plan trips with the cheapest prices." Includes a "Go Nomad" button.





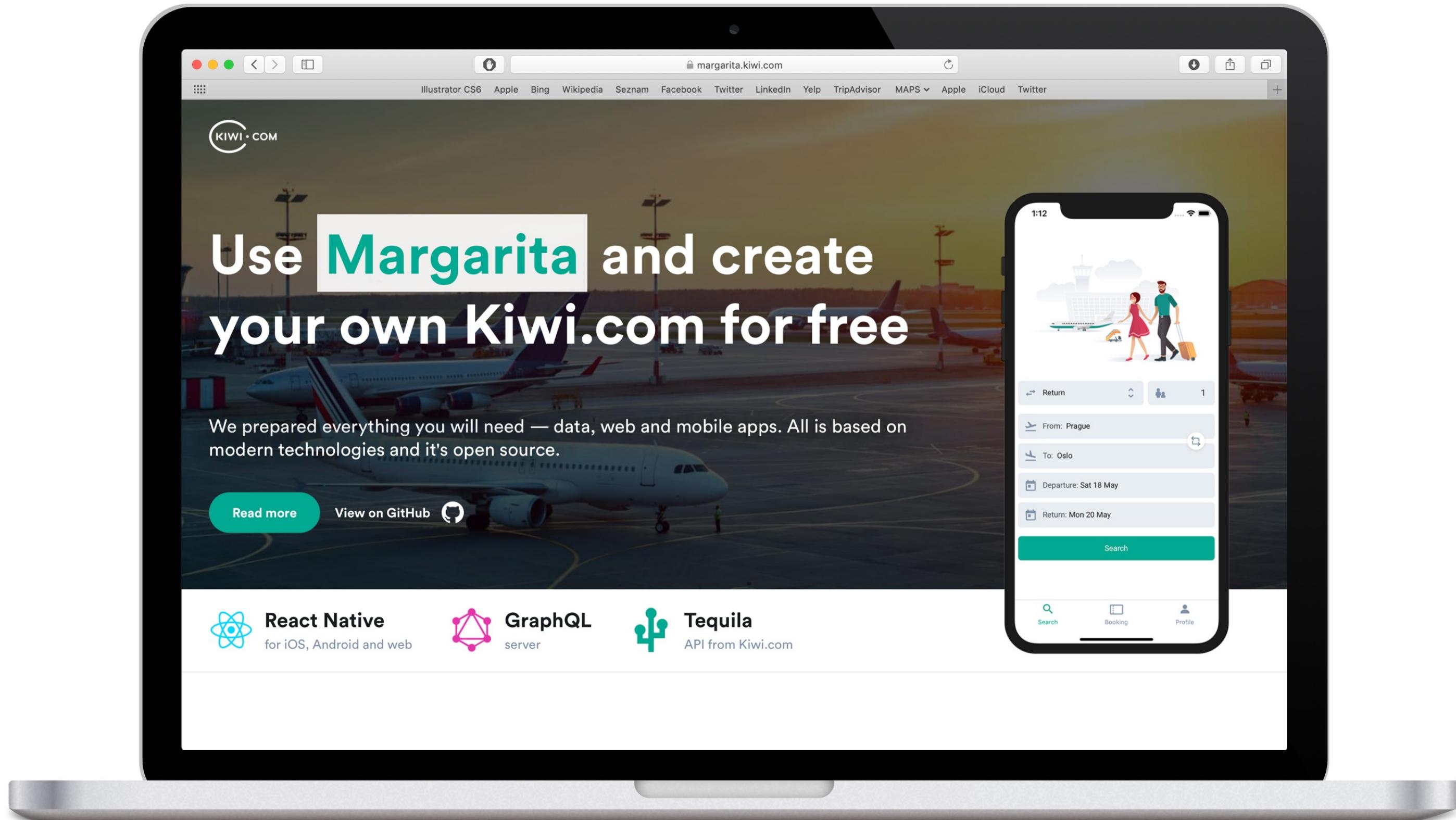
**3 PLATFORMS**

**3 FE TEAMS**

**3 ISOLATED ISLANDS**

NEW PROJECT

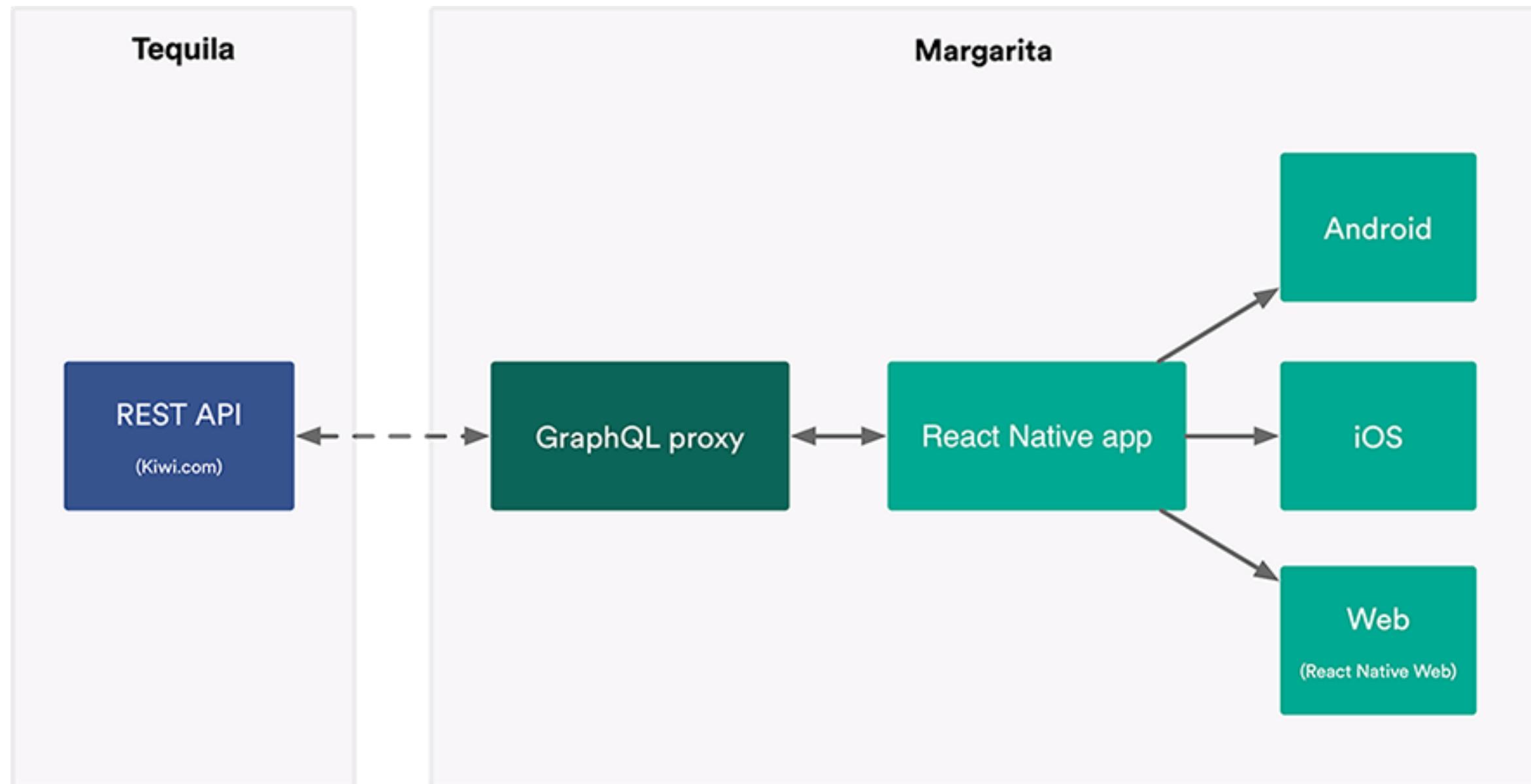
MARGARITA.KIWI.COM



OPENSOURCE

GITHUB.COM/KIWICOM/MARGARITA

# MARGARITA



# WE HANDLE

- > BACKEND
- > PAYMENTS
- > CUSTOMER SUPPORT

# YOU ENJOY

- > **GRAPHQL**
- > **MULTIPLATFORM UI COMPONENTS**
- > **PROFIT**

# HOW TO **MULTIPLATFORM UI**

**REACT NATIVE FIRST**

**REACT NATIVE WEB  
FOR BROWSER**

# PLATFORM TWEAKS

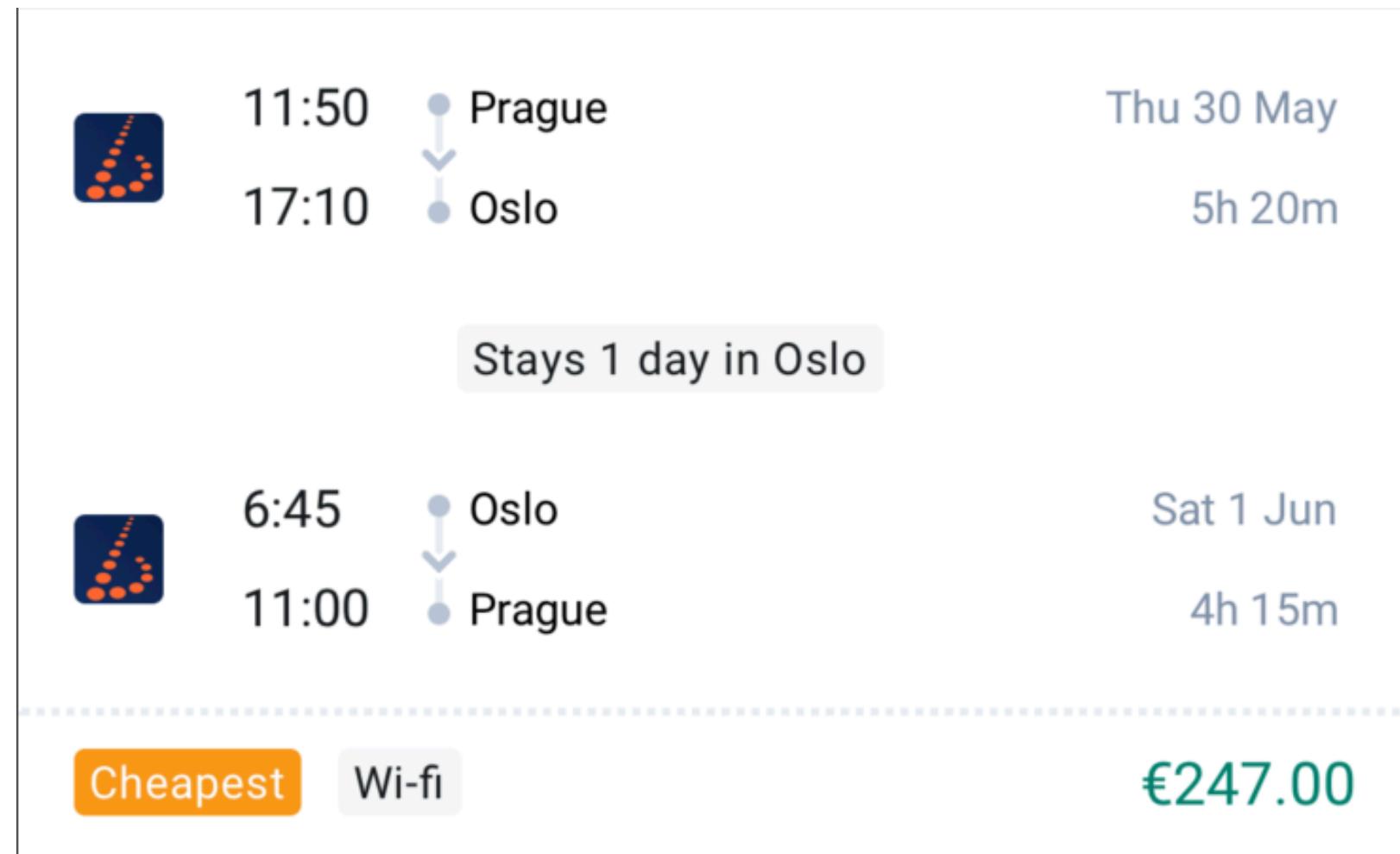
```
<CarrierLogo  
  size={Platform.OS === 'web' ? 'large' : 'medium'}  
  carriers={carriers}  
/>
```

# PLATFORM TWEAKS

```
const styles = StyleSheet.create({
  text: {
    ios: {
      color: 'pink'
    },
    android: {
      color: 'deepink'
    },
    web: {
      color: 'salmon'
    }
  }
});
```

# PLATFORM TWEAKS

## ItineraryCard.native.js



# PLATFORM TWEAKS

## ItineraryCard.web.js



11:50 - 17:10

Prague → Oslo

Thu 30 May

5h 20m

**€247.00**

.....

Stays 1 day in Oslo



6:45 - 11:00

Oslo → Prague

Sat 1 Jun

4h 15m

localhost:3000

localhost:3000

KIWI.COM Travel Manage My Booking Profile



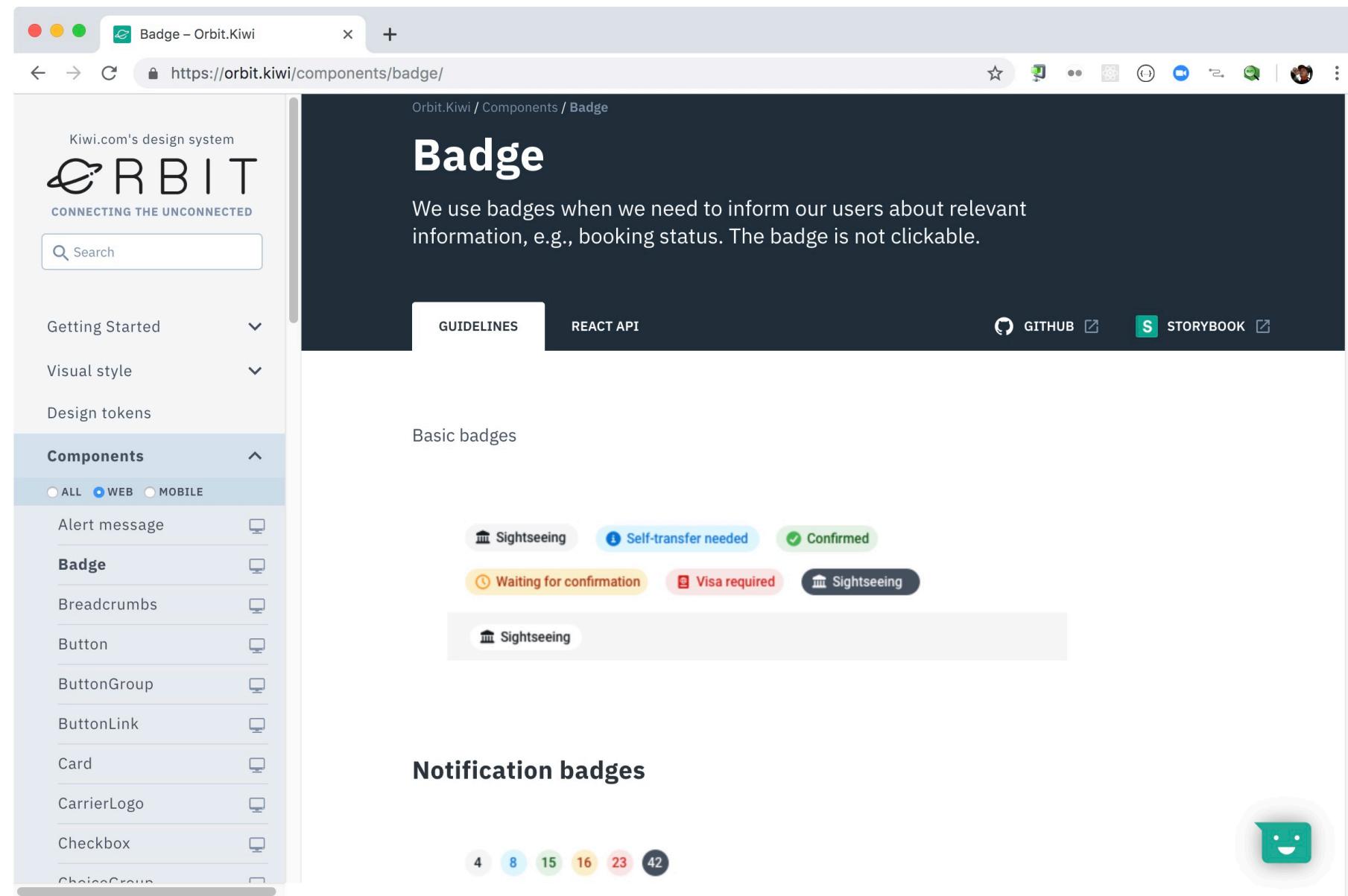
RETURN ONE WAY 1 Adult ▾

From: Prague To: Oslo

Departure: 2019-04-02 No return

Search >

# REWORK HTTPS://ORBIT.KIWI



**SHARED UI**  
**SHARED KNOW-HOW**

MULTIPLATFORM ORBIT  
NPM PACKAGE SOON™

MARGARITA.KIWI.COM

GITHUB.COM/KIWICOM/MARGARITA

**LEARN RELAY**

**GITHUB.COM/KIWICOM/RELAY-EXAMPLE**

# LEARN RELAY

- > **GRAPHQL FRAGMENTS**
  - > **SIMPLE FETCHING**
  - > **ENDLESS PAGINATION**
- > **BI-DIRECTIONAL PAGINATION**



# Relay pagination showcase

## Bi-directional pagination

See: [Refetch Container](#)

1. Rome
2. Paris
3. Barcelona
4. San Francisco
5. Boston
6. Washington, D.C.
7. Denver
8. Las Vegas
9. Atlanta
10. Miami
11. Tampa
12. Orlando
13. Manila
14. New York
15. London
16. Los Angeles
17. Chicago
18. Athens International
19. Hartsfield–Jackson Atlanta International
20. Barcelona–El Prat

< Previous page

Next page >

## Incremental pagination 1

See: [Refetch Container](#)

1. Rome
2. Paris
3. Barcelona
4. San Francisco
5. Boston
6. Washington, D.C.
7. Denver
8. Las Vegas
9. Atlanta
10. Miami
11. Tampa
12. Orlando
13. Manila
14. New York
15. London
16. Los Angeles
17. Chicago
18. Athens International
19. Hartsfield–Jackson Atlanta International
20. Barcelona–El Prat

Load more!

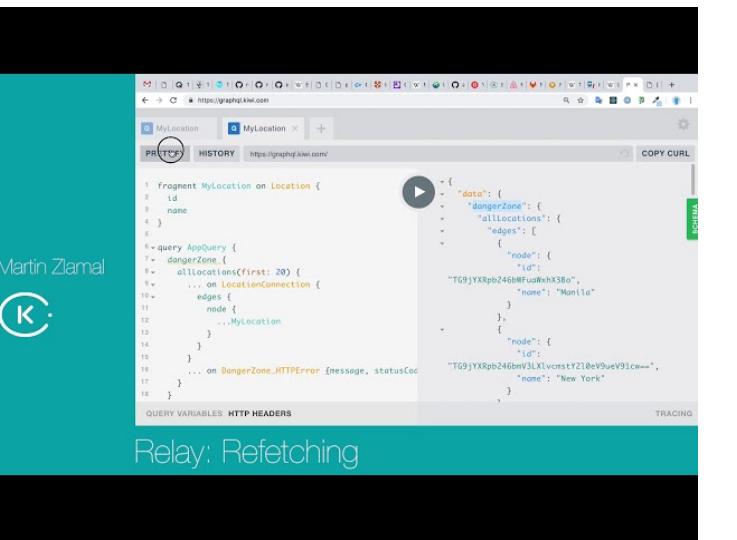
## Incremental pagination 2

See: [Pagination Container](#)

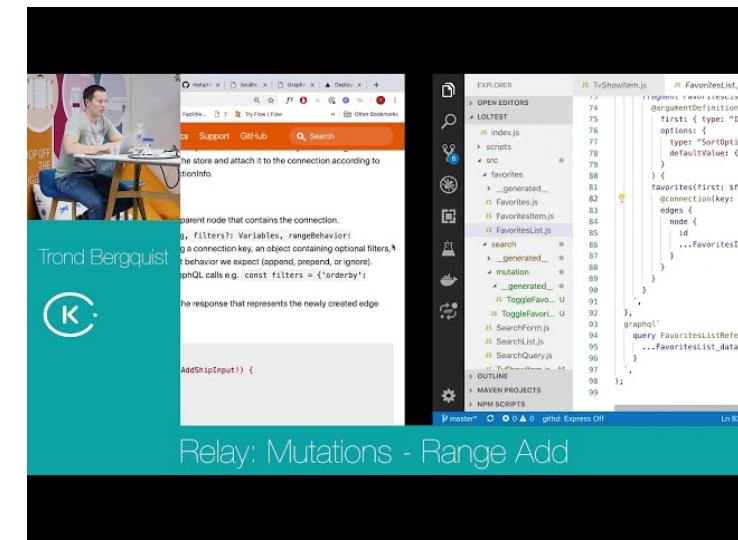
1. Rome
2. Paris
3. Barcelona
4. San Francisco
5. Boston
6. Washington, D.C.
7. Denver
8. Las Vegas
9. Atlanta
10. Miami
11. Tampa
12. Orlando
13. Manila
14. New York
15. London
16. Los Angeles
17. Chicago
18. Athens International
19. Hartsfield–Jackson Atlanta International
20. Barcelona–El Prat

Load more!

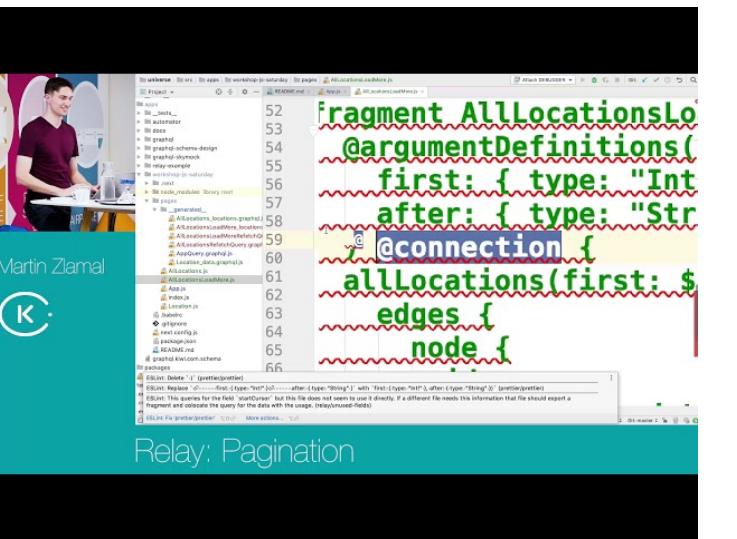
# RELAY TALKS



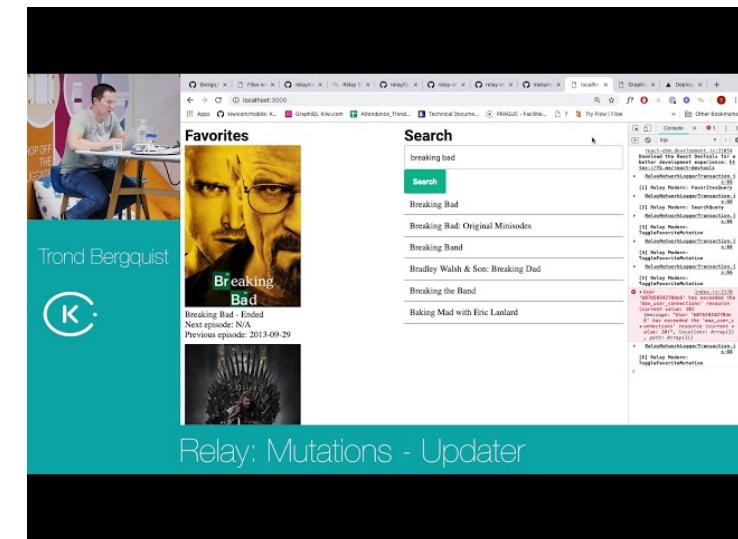
Relay: Refetching



Relay: Mutations - Range Add



Relay: Pagination



Relay: Mutations - Updater

BETTER FETCH LIBRARY

@KIWICOM/FETCH

# KIWI FETCH

- > RETRIES
- > TIMEOUTS
- > ERROR HANDLING

# FETCH - TIMEOUT, RETRIES

```
import fetchWithRetries from '@kiwicom/fetch';

fetchWithRetries(
  'https://example.api',
  {
    fetchTimeout: 15000,
    retryDelays: [1000, 3000],
    // ... standard Fetch options
  },
);
```

# FETCH - ERROR HANDLING

```
import fetchWithRetries, { TimeoutError, ResponseError } from '@kiwicom/fetch';

try {
  const response = await fetchWithRetries('://localhost');
} catch (error) {
  if (error instanceof TimeoutError) {
    console.error('request timed out');
  } else if (error instanceof ResponseError) {
    console.error('unsuccessful response', error.response);
  } else {
    console.error('unknown error');
  }
}
```

# OPINIONATED ESLINT RULES

[@KIWICOM/ESLINT-CONFIG](#)

# KIWI ESLINT CONFIG

- > REACT, RN, HOOKS, RELAY
  - > PRETTIER, JEST
  - > FLOW, NODE
  - > EXTENDABLE

# ESLINT - SETUP

```
//.eslintrc.js
module.exports = {
  root: true,
  extends: [
    '@kiwicom/eslint-config',
  ],
};
```

# ESLINT RUNNER

- > PARALLEL EXECUTION
- > ONLY CHANGED FILES
  - > AUTO FIX

michal at Michals-MacBook-Pro-2 in ~/projects/kiwi/graphql on master

```
$ yarn lint
yarn run v1.15.2
$ eslint --print-config . | yarn run eslint-config-prettier-check && yarn run jest --config=.jest-eslint.config.js
$ /Users/michal/projects/kiwi/graphql/node_modules/.bin/eslint-config-prettier-check
No rules that are unnecessary or conflict with Prettier were found.
$ /Users/michal/projects/kiwi/graphql/node_modules/.bin/jest --config=.jest-eslint.config.js
PASS  lint  src/packages/monorepo-shipit/src/__tests__/requireAndValidateConfig.test.js
PASS  lint  src/packages/monorepo-shipit/src/iterateConfigs.js
PASS  lint  src/packages/monorepo-shipit/bin/importit.js
PASS  lint  src/packages/monorepo-shipit/config/__tests__/vault2env.test.js
PASS  lint  src/packages/monorepo-shipit/bin/shipit.js
PASS  lint  src/packages/monorepo-shipit/config/__tests__/graphql-resolve-wrapper.test.js
PASS  lint  src/packages/monorepo-shipit/config/__tests__/example-relay.test.js
PASS  lint  src/packages/monorepo-shipit/config/__tests__/graphql-bc-checker.test.js
PASS  lint  src/packages/monorepo-shipit/config/__tests__/monorepo-shipit.test.js
PASS  lint  src/packages/monorepo-shipit/config/__tests__/graphql-global-id.test.js
PASS  lint  src/packages/monorepo-shipit/config/__tests__/testExportedPaths.js
PASS  lint  src/packages/monorepo-shipit/config/__tests__/babel-preset-kiwicom.test.js

RUNS  lint  src/packages/monorepo-shipit/config/__tests__/monorepo-npm-publisher.test.js
RUNS  lint  src/packages/monorepo-shipit/config/__tests__/relay.test.js
RUNS  lint  src/packages/monorepo-shipit/config/__tests__/babel-preset-kiwicom.test.js

Test Suites: 53 skipped, 11 passed, 11 of 890 total
Tests:      53 skipped, 11 passed, 64 total
Snapshots:  0 total
Time:       5s
```

BABEL PRESET

@KIWICOM/BABEL-PRESET-KIWICOM

# BABEL PRESET

- > FLOW, JSX
- > CLASS PROPERTIES
- > RELAY FRAGMENTS
- > SYNTACTIC SUGAR

GITHUB.COM / KIWICOM

SHOW YOUR ❤

