



# **Requirements - Flight Booking System**

## **The Rubber Duckies**

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## Introduction

This document describes the specification for Flytr, a flight booking system. The goal of Flytr is to be light-weight, easy to use, and the best at one thing: booking flights. Many flight booking sites have expanded to the point, where they not only handle flights, but hotel reservations, cruises, and rental cars. This "clutter" leads to many features not being used on the website and therefore wasted space.

Flytr aims to solve this problem by making every feature and part of the system designed to make the flight booking experience for the end user the best that it can be. Administrators and maintainers of Flytr should not have to worry about making a lot of mediocre systems when a single well-made feature can be used.

## Stakeholders

There are various stakeholders in our flight booking application.

These include:

- Infrequent Flyers:
  - Users not affiliated with a business or organization who travel infrequently (< 3 times per year). This user may be more budget/discount oriented.
- Frequent Flyers:
  - Users not affiliated with a business or organization who travel frequently and may wish to use a reward program to obtain free flights for their loyalty.
- Business Flyers:
  - Users affiliated with a business or organization who may or may not be the individual the flight is being booked for. This is likely a high-volume customer and may wish to have a bulk/wholesale yearly discount for flights. This may include travel agents, office managers, independent contractors, or other high-volume organizations.
- Airlines:
  - The airlines we sell tickets for, either through partnership or by interfacing with their own booking systems.
  - They will need the information of the ticket purchaser and the ticket that we have sold. There will have to be an interface between our platform and the airline to obtain the ticket and any tracking information for our customer. Airlines may additionally need partner/analyst access to our application for statistics and accounting information.

- Funding Manager:
  - The fund manager over our flight booking startup.
  - They will be invested financially in the success of our application in the innovation we provide through our system, a controlled and reasonable burn rate, a timely product release, and a strong go-to-market strategy.

## Personas



**PROFILE**

Bradley is a student at the University of South Carolina. He is studying Computer Science and is a Junior. He is from Old Greenwich, CT. He played soccer and tennis in high school and came to South Carolina to escape the cold climate and snow of the Northeast. He is a diehard Buffalo Bills fan and goes to several games a year. Bradley flies frequently. He flies back and forth between Columbia and Old Greenwich. He also is planning on going abroad this year and will be flying to Liverpool for his semester abroad. Bradley is not experienced at traveling and looking for a better way of booking flights and travelling.

**CONTACT**

PHONE:  
867-5309

EMAIL:  
student@email.sc.edu

**HOBBIES**

NFL Fan  
Sailing enthusiast  
Cook  
Avid reader

# BRADLEY GREENE

## DEMOGRAPHICS

Gender: Male  
Age: 20  
Occupation: Student  
Location: Columbia SC

## WORK EXPERIENCE

### Frequency

Flies home 1-2 times per semester, short term routine flights.  
Occasional long distance flights for vacations, trips abroad, where he needs reliable flights to his school abroad.

### Goals

Travel back and forth between home and school.  
Take trips abroad.  
Book flights with fellow students or family.  
Get good deals on flights.

### Needs

Easy UI to book flights.  
Be able to pay online securely.  
Be able to book flights with family members so they can take flights together.  
Compare flight for the best times and deals.

## SCENARIOS

Bradley wants to fly home for spring break. Bradley logs into his account on the Flight Booker website and searches for flights on the day of his departure. Bradley selects a flight at the time he wants. He selects business class to save money. His ticket code is sent to his phone and he relaxes knowing he has a way to go see his family.

Bradley is going abroad for spring semester. Bradley needs to book flights for his trip. He wants to book flights for multiple days at once, one flight there and one flight home. Unfortunately, his trip is cancelled due to COVID, so he needs to refund his flights because he is no longer taking his trip.

Bradley and his family are going on vacation. Bradley and his parents and sister all want to travel to Texas on the same flight, so Bradley buys four tickets on the same plane. He books round trip tickets so he can fly there and home.



## PROFILE

Josh was born in the beautiful Appalachian mountains near Pigeon Forge, Tennessee. He grew up a devoted NBA fan and majored in Sports Management at the University of Tennessee. He landed a job as a sports broadcaster with a local news station after graduation. He eventually was offered a job as an administrative assistant for the Charlotte Hornets NBA Team. He is primarily responsible for booking flights for team personnel to follow the team around the country during basketball season. The team travels on a private jet or bus, but many publicists, sponsors, and other staff need to be flown individually across the country. Josh is looking for a way to streamline his work and needs a platform that serves his flight booking needs.

## CONTACT

PHONE:  
867-5308

EMAIL:  
josh@charlottehornets.com

## HOBBIES

Basketball  
Football  
Cycling  
Cooking

# JOSH HORNIG

## DEMOGRAPHICS

Gender: Male  
Age: 32  
Occupation: Administrative Assistant-Charlotte Hornets  
Location: Charlotte, NC

## WORK EXPERIENCE

### Frequency

Books dozens of flights weekly.  
During the NBA Finals he may book 100+ flights in a day.

### Goals

Get the best rate for flights as he can.  
Looking for convenience in booking.  
Wants to keep track of the flights he has scheduled.

### Needs

Be able to book flights for other people.  
To cancel or change reservations if necessary.  
To get a corporate discount when booking flights on a mass scale.

## SCENARIOS

Josh is booking flights for team staff for an upcoming game. Josh logs onto his corporate account to book flights for several team staff. A few days before the game, Josh needs to cancel two of the tickets because two staff members have COVID, but doesn't want to cancel his entire order. He sends everyone their electronic ticket and they fly to the game.

The Charlotte Hornets finally make it to the NBA Finals. Because it's a best of 7 series, Josh doesn't know if the series will only last 4 games or all 7. It turns out Charlotte wins the series, 4 games to 1. Josh needs to cancel the flight reservations for the final 2 games.

Josh, having finally earned a promotion, starts training his replacement on how to use the flight booker website. The website is straightforward to use, so this isn't hard. His replacement changes the password of the account for security reasons and starts booking new flights for upcoming games.



## PROFILE

Lindsey grew up wanting to travel. She started an Instagram page that documented her family vacations, but it wasn't very successful. She gave up on her dreams of being a social media influencer and majored in Data Analytics at the University of Vermont. She landed a job with Delta as a Data analyst. She now processes data both ways through third party ticket sellers. She gives the flight Booker website flight info and collects statistics of the bookings for Delta.

## CONTACT

PHONE:  
867-5307

EMAIL:  
Lindsey@delta.com

## HOBBIES

Travel  
Cooking  
Hiking

# LINDSEY BAIR

## PROFILE

Gender: Female  
Age: 42  
Occupation: Data Analytics-Delta.  
Location: Charleston, SC

## Frequency

Lindsey monitors the uploading of flight information to the flight Booker website. Lindsey uses this app daily and logs in to correct mistakes when the wrong times are sent by the airlines, or when flights are delayed or cancelled.

## Goals

Ensure correct sending of data to the website from her airline.  
View flight booking data such as popular destinations, average flights per day, and most popular booking times.

## Needs

Confirmation that data has been received.  
A portal to stream data from her airline database to the flight Booker website.  
Method of payment so her airline gets paid through the website by the customer.  
Method to view when, to where, and how often flights are booked.

## SCENARIO

Delta makes a new route from Charleston International to Atlanta International. Lindsey adds this route to the database of flights that the flight Booker app uses to offer ticket sales.

Delta books a record 30 million flights over Christmas. 3 million of these flights are through our flight Booker app. Lindsey receives payment for the tickets and processes them. Lindsey monitors the transfer of funds from the flight Booker website to Delta's account.

Lindsey wants to see what flights are the most popular so Delta can expand service on these flights and reduce the number of unprofitable flights. She goes online and sees the number of flights between each airport and when the most popular flying times are.

## Constraints

The flight booking project comes with several constraints that must be accounted for. A primary constraint with the developer team is in conflicting schedules that interfere with the time the developers can meet to discuss and collaborate on the project. Correlating to this constraint is that the team are all full-time University students with other responsibilities, classes, and assignments.

Additionally, the developer team works remotely, which introduces collaboration difficulties. Another constraint is the possibility of a finite budget available for the project. If this is the case, there may need to be consideration for developer salary, integration/partner fees, and royalty fees for design elements. There is also the need for a server to handle server-side processing, storage, and credential validation. This is a financial and logistic cost. It also introduces a data management constraint of storing a large amount of data securely and being able to export that info to external systems (Ex. Moving ticket to apple wallet) along with importing data (Ex. External bank information). A final constraint is the limited technology and tools that the developer team has access to in their remote workspaces.

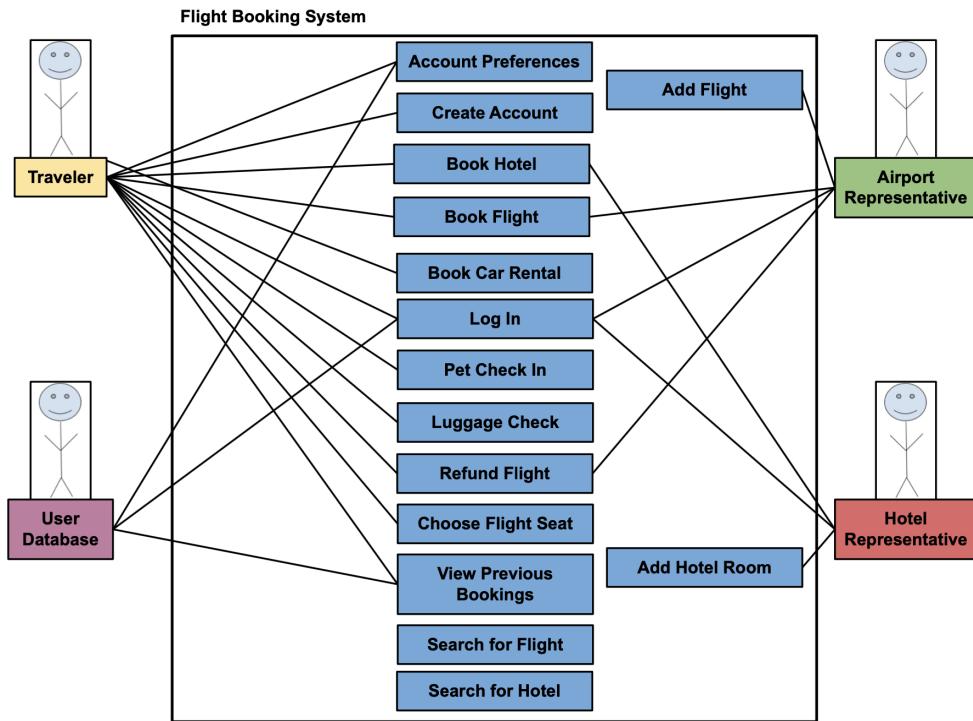
## **Overall Description**

This document contains both the conveniences and inconveniences of popular travel booking websites. A new travel booking software will be created to improve on competitors mishaps while creating a great user experience. It also contains a list of stakeholders for the prospective software solution. The document emphasizes the demands and wants of each of the stakeholders for this new software. It further describes the constraints, requirements, and use cases for the new software.

For the software portion, the system will need to interface with airline flight information to obtain all flight departure and arrival times, prices for flights, etc. It will need to be able to obtain ticket information from each airline and handle purchasing tickets through the airline selected by the user. We will also implement other software such as email clients for account making, integration with popular purchase methods, possibly including PayPal and Apple Pay, and giving access for the user to add their ticket to a virtual phone wallet for the ease of boarding. The system will need to be able to interface with airline tracking systems to provide flight status checking and flight tracking. If the client wishes to include a reward system, we will need to implement that functionality or interface with an existing one.

For hardware requirements, the software will be accessible via laptop, PC, phone, and tablet. A backend server would be needed for server-side processing, secure storage, and credential validation. This will need to have adequate specifications for the scale of the market and continual uptime to ensure the user can book flights at any time. A backend database will be required to store information. A backup server and backup storage would likely be beneficial, if not necessary for product release.

## **Use Cases**



## Functional Requirements

[Functional Requirements Document](#)

## Non-Functional Requirements

[Non-Functional Requirements Document](#)

## Definitions and Acronyms

The System - The Flyter flight booking program and all of its included classes, interfaces, databases, and other files.

The User - A potential customer of the Flyter system who would book a flight through Flytr

UML - Unified Modeling Language - a standardized method of describing the design of a program and the relation of all of the classes, methods and interfaces.

## Competitive Analysis

We conducted a competitive analysis of three flight booking websites with three distinct market objectives. These three capture a wide swath of the flight booking marketshare.

Review Conducted By: Daniel Gleaves

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## **Expedia**

The first competitor we consider is Expedia. Expedia assumes a central position in the travel booking market, with the 23 distinct travel-related corporations under the Expedia Group banner. Many of these booking sites share similar to identical interfaces, so considering the main Expedia site will provide a glimpse at them all.

Before going into the website itself, the first thing to consider is that Expedia has the top advertisement on Google search currently for flight related searches. This will bring in lots of users seeking to book a flight and puts them ahead of the other two competitors in terms of user acquisition.

### **Audience**

- First-time flyers who clicked their ad on Google search
- Budget flyers
- Individuals looking for a cheap vacation destination
- Customer checking on flight information

### **Screenshots**

### **Home Page**



More travel ▾



English

List your property

Support

Trips

Sign in

## Search flights

Roundtrip

One-way

Multi-city

1 traveler ▾

Economy ▾

Leaving from

Going to

Departing  
Feb 4Returning  
Feb 5

Search



Romantic getaways you'll both love

From rustic to luxe, these destinations provide the perfect setting for romance.



Time to get away?

Grab a deal on last-minute travel



Stays with flexibility

See hotels with free cancellation

## Explore, discover, and save



Vacation package deals just for you

Save on your next trip! Bundle flights and hotels for under \$499 per person

editorial.undefined.click

Plan your trip in a snap on the app

EXPEDIA

## Search Results Page

Stays Flights Cars Packages Things to do More travel ▾

Roundtrip ▾ 1 traveler ▾ Economy ▾ Any airline ▾ More options ▾

Flying from Columbia, SC (CAE-Columbia Met... Flying to Charlotte, NC (CLT-Charlotte-Doug...) Departing Feb 4 Returning Feb 5 Search

**Filter by**

Flexible dates		Departure →							Return ↓
From	To	Tue, Feb 1	Wed, Feb 2	Thu, Feb 3	Fri, Feb 4	Sat, Feb 5	Sun, Feb 6	Mon, Feb 7	
Nonstop (8)	\$402	Search	Search	-	-	-	-	-	Wed, Feb 2
1 Stop (25)	\$522	Search	Search	Search	-	-	-	-	Thu, Feb 3
2+ Stops (4)	\$566	Search	Search	Search	Search	-	-	-	Fri, Feb 4
Delta (26)	\$536	Search	Search	Search	-	-	-	-	Sat, Feb 5
American Airlines (8)	\$402	Search	Search	Search	Search	-	-	-	Sun, Feb 6
United (4)	\$522	Search	Search	Search	Search	-	-	-	Mon, Feb 7
Travel and baggage	From	Search	Search	Search	Search	Search	Search	Search	Tue, Feb 8
Seat choice included	\$402	Search	Search	Search	Search	Search	Search	Search	Sat, Feb 5
Carry-on bag included	\$402	Search	Search	Search	Search	Search	Search	Search	Sun, Feb 6
No cancel fee	\$502	Search	Search	Search	Search	Search	Search	Search	Mon, Feb 7
No change fee	\$402	Search	Search	Search	Search	Search	Search	Search	Tue, Feb 8

Choose departing flight > Choose returning flight > Review your trip

Stops From **Flexible dates** Compare prices for nearby days

Airlines From **Departure →**

Travel and baggage From **Return ↓**

Prices displayed include taxes and may change based on availability. You can review any additional fees before checkout. Prices are not final until you complete your purchase.

Sort by **Price (Lowest)**

5:20am - 6:14am 54m (Nonstop) **\$402**  
Columbia (CAE) - Charlotte (CLT)  
American Airlines • American Airlines 5219 operated by PSA Airlines  
As American Eagle  
2 cleaning and safety practices

4:08pm - 5:11pm 1h 3m (Nonstop) **\$402**  
Columbia (CAE) - Charlotte (CLT)  
American Airlines • American Airlines 6212 operated by Piedmont  
Airlines As American Eagle  
2 cleaning and safety practices

Arrival time in Charlotte

Departure time in Columbia

## Flight Selected Page

**Expedia**

Stays Flights Cars Packages Things to do More travel ▾

Roundtrip ▾ 1 traveler Economy Any airline More options ▾

Flying from Columbia, SC (CAE-Columbia Met... Flying to Charlotte, NC (CLT-Charl...)

**Filter by**

From	To	Flight Type	Price
Nonstop (8)	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 5219 open	\$402
1 Stop (25)	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 6212 open	\$522
2+ Stops (4)	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 6066 open	\$566

**Airlines**

From	To	Flight Type	Price
Delta (26)	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 5219 open	\$536
American Airlines (8)	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 6212 open	\$402
United (4)	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 6066 open	\$522

**Travel and baggage**

From	To	Flight Type	Price
Seat choice included	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 6212 open	\$402
Carry-on bag included	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 6212 open	\$402
No cancel fee	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 6212 open	\$502
No change fee	Columbia (CAE) - Charlotte (CLT)	American Airlines • American Airlines 6212 open	\$402

**Departure time in Columbia**

Morning (5:00am - 11:59pm)	Afternoon (12:00pm - 5:59pm)	Evening (6:00pm - 11:59pm)
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**Arrival time in Charlotte**

Morning (5:00am - 11:59pm)	Afternoon (12:00pm - 5:59pm)
----------------------------	------------------------------

**Choose departing flight > Choose return flight**

**5:20am - 6:14am (Nonstop)**

American Airlines

Show details ▾

**\$402**  
\$401.69 roundtrip for 1 traveler

Main Cabin  
Cabin: Economy

Seat  
✓ Seat choice included

Bags  
✓ Personal item included  
✓ Carry-on bag included  
1st checked bag: \$30

Flexibility  
✗ Cancellation not allowed  
✓ No change fees

Select

**\$502**  
\$501.71 roundtrip for 1 traveler

Main Cabin Flexible  
Cabin: Economy

Seat  
✓ Seat choice included

Bags  
✓ Personal item included  
✓ Carry-on bag included  
1st checked bag: \$30

Flexibility  
✗ Cancellation included  
✓ No change fees

Select

Baggage fees reflect the airline's standard fees based on the selected fare class. Fees may vary based on size and weight restrictions as well as loyalty programs and other promotions. For more information, check with American Airlines. You can purchase checked bags from American Airlines or through the link in your confirmation or check-in emails.

Visit the American Airlines website to find out more about their sustainability initiatives.

**4:08pm - 5:11pm**  
Columbia (CAE) - Charlotte (CLT)  
American Airlines • American Airlines 6212 open  
Airlines As American Eagle  
2 cleaning and safety practices

**6:11pm - 7:14pm**  
Columbia (CAE) - Charlotte (CLT)  
American Airlines • American Airlines 6066 open  
Airlines As American Eagle

Unlock trip savings up to \$362 when you add a hotel to your trip and save.

**11:05am - 12:12pm**  
Columbia (CAE) - Charlotte (CLT)  
American Airlines • American Airlines 6189 open  
Airlines As American Eagle

## Cart Page

No change fees for all flights  
You can change these flights without paying a fee if plans change. Because flexibility matters.

### Columbia to Charlotte

American Airlines • Fri, Feb 4

5:20am - 6:14am  
54m (Nonstop)

Show details

Fare: Main Cabin  
Your selection applies to all flights  
[Change fare](#)

[Change flight](#)

### Charlotte to Columbia

American Airlines • Sat, Feb 5

7:27am - 8:23am  
56m (Nonstop)

Show details

Fare: Main Cabin  
Your selection applies to all flights  
[Change fare](#)

[Change flight](#)

### Book a car with your flight and save

Total trip price will be reflected in checkout. Trip savings include any individual item discounts, as well as savings from reduced taxes and service fees.



### Price summary

Traveler 1: Adult	\$401.69
Flight	\$347.90
Taxes and fees	\$53.79

**Trip total** **\$401.69**

Rates are quoted in US dollars

[Check out](#)

### Checkout Page

## Secure booking - only takes a few minutes!

**⚠ Check COVID-19 restrictions.**  
[Find out more](#)

**Sign in to earn 80 Expedia Rewards points**

**Who's traveling?**  
Traveler names must match government-issued photo ID exactly.

First name\* Middle name Last name\*

Country/Territory Code\*  
United States of America +

Phone number\*  
In case we need to reach you

Receive text alerts about this trip. Message and data rates may apply.

Gender\*  
 Male  Female

Date of birth\*  
Month Day Year

Seat selection  
**Choose seats**

Frequent flyer, TSA PreCheck, redress and more

**Protect your flight** Recommended

**Important:** Trip cancellation due to government travel advisories, fear of travel, or change of mind is not covered. Travel insurance may provide coverage for COVID-19 diagnosed illness. COVID-19 is a foreseen event and certain other coverages will not apply. [Learn more](#)

**Roundtrip flight**  
1 ticket: 1 adult

Columbia (CAE) to Charlotte (CLT)  
**Fri, Feb 4**  
5:20am - 6:14am (0h 54m)  
American Airlines 5219

Charlotte (CLT) to Columbia (CAE)  
**Sat, Feb 5**  
7:27am - 8:23am (0h 56m)  
American Airlines 6093

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**Your price summary**

Traveler 1: Adult	\$401.69
Total: \$401.69	

All prices quoted in US dollars.

## Navigation

### Main Navigation

The main navigation presents a simple, clean interface for searching for flights and an area for promotions.

Contains: Flight Search, Promoted Destinations, Promoted Deals, and a promotion for their app.

### Header Left Navigation

The upper left navigation provides a drop-down menu for their other travel-related booking websites.

Contains: More Travel drop-down and options.

### Header Right Navigation

The upper right navigation provides standard language selection, support, account sign-in, and more. It does not seem necessary to include a property listing button on a flight booking page, and having a "Trips" button seems repetitive with also having a log-in button.

Contains: English (language select - 3 languages), List your property, Support, Trips, and Sign in.

### Footer Navigation

The footer contains all common and necessary footer elements. It is very expansive, and contains repetitive elements and possibly unnecessary categories as well that could be removed. However, at the footer it is less of an issue to have too many options.

Contains: Company (About, Jobs, Partnerships, etc.), Explore (Travel guides), Terms and Policies (Privacy policy, Terms of use, Accessibility), and Help (Support, Cancel booking, and travel documents).

### **Visual Audit**

- On the flight home page, they use the lower portion of the screen for promotion. While this could inspire users to travel for vacation to one of these destinations, if the user is on the site, they likely already have a destination in mind. With this in mind, they could remove the promotions or move them to a sub-page called "Explore" to greatly clean up and simplify the main landing/search page.
- The departing and returning date selection provides a two-month view. This seems clunky and takes up a lot of screen space. It would be easier and to have a single month view with a buffer of ~7 days after each month grayed out and simply page through each month one month at a time.
- The website displays an error when attempting to book 6+ people at a time. Instead, they could simply prevent more from being selected and display (Max capacity reached - 6) or something similar.

### **Special Features and Supported Tasks**

- Purchase flight tickets from any airline for up to 6 people
- Drop-down for flexible date searches
- Sort and Filter search results
- Select Departing and Returning flights individually
- The search box has a search history drop-down
- Account usage for trip status checking

### **Design and Usability Notes**

- Their search area uses a very nice color scheme, and it is very easy to tell what information needs to be filled out and can be clicked on.
- On the search results page, if you look at the flexible date selection, it is just a table full of search options. While this is acceptable, it may be more beneficial from a user standpoint to be shown the cheapest flight with their current options. This will give the user a price comparison, instead of manually searching each day.
- Once a flight is selected, a half-page horizontal scrolling page comes up with ticket options. This is not visually appealing and is not immediately clear that there are more options off-screen to the right. They would benefit by replacing this with either a dedicated page or use vertical scrolling.

### **Considerations for Final Project**

- Expedia had the most modern and intuitive search boxes. Their interface will be the most important to make sure we improve upon and use the same design principles.
- Having a flexible date calendar view could be useful, but we should make it more usable by having it show the lowest ticket price for the ticket type the user has searched for.

### **Delta**

The Delta flight booking website is the website to book flights for Delta Air Lines. We selected this to gain insight into how a single-airline booking service differed from other booking services.

## Audience

- Brand-loyal flyers
- Repeat flyers with Delta
- Business flyers with a partnership with Delta
- Budget flyers who shop around themselves

## Screenshots

### Home Page

The screenshot shows the Delta Air Lines website homepage. At the top, there's a navigation bar with links for Book, Check-In, My Trips, Flight Status, Travel Info, SkyMiles, Need Help?, Sign Up, Log In, and a search icon. A "CHANGE OR CANCEL FLIGHT" button is also visible. Below the navigation, there's a flight search bar with "SEA" as the departure city and "To" as the destination placeholder. The search criteria are set for a Round Trip, Depart - Return, 1 Passenger, and a red arrow indicating the search button. Underneath the search bar, there are search options for "Shop with Miles", "Refundable Fares", and "My dates are flexible". A large promotional banner features a woman holding a blue scarf against a backdrop of white buildings and a blue sky, with the text "NO CHANGE FEES: IT'S THAT SIMPLE" and "Book your next trip now and enjoy peace of mind." A "BOOK TODAY" button is prominent. At the bottom of the page, there are links for Vacation Deals, Shop Hotels, Rent a Car, and Gift Cards, along with an "Updated Bag & Travel Fees" link.

### Search Results Page

# One Way CLT - CVG

Show Price In:  
\$ USD Miles Miles + Cash

Sort & Filter ▾

## It's Simple: No Change Fees

Book your next trip now and enjoy more peace of mind with no change fees. Excludes Basic Economy travel that departs after December 31, 2021.

Terms apply.



Sat, Feb 5, 2022

Price includes taxes and fees. Baggage fee may apply. Services and amenities may vary or change.

Basic

Main

Comfort+

First



Flight	Arrival	Departure	Duration	Basic (E)	Main (U)	Comfort+ (W)	First (Z)
DL1611, DL2246	2:27pm	6:17pm	3h 50m	\$155 One Way	\$172 One Way	Sold Out	\$277 One Way 1 left at this price
DL1680, DL1686	10:01am	1:54pm	3h 53m	\$155 One Way	\$172 One Way	\$207 One Way 5 left at this price	\$277 One Way 3 left at this price

## Flight Popup

Traveling With Others and Want to Choose Your Seats? Consider Main Cabin

### Basic

- No seat(s) assigned until after check-in, not together<sup>1</sup>
- No changes allowed<sup>2</sup>
- Cancel for partial eCredit (ticket minus \$99/person)<sup>3</sup>
- Last to board & not eligible for upgrades<sup>4</sup>
- No miles earned; no credit toward SkyMiles Medallion Status<sup>5</sup>

**\$ 155**

### Main Cabin

- Select & change seats at any time
- Changes allowed with no change fees
- Cancel for full value
- Earlier access to overhead bins & eligible to purchase upgrades
- Miles & credit for SkyMiles Medallion Status on paid tickets

**\$ 172**

For **\$ 17 more**, add freedom to choose seats and earn miles in Main Cabin.

**MOVE TO MAIN**

[Terms and Conditions](#)

[Accept Restrictions](#) | [Continue with Basic](#)

## Cart Page

 Book Better. Fly Better.

 **Book Confidently Now with No Change Fees Later**  
Book your next trip now and enjoy more peace of mind with no change fees. Excludes Basic Economy travel that departs after December 31, 2021.  
Terms apply.

**One Way** DL1611, DL2246  
Change Flight CLT → CVG Sat, Feb 5 2:27pm - 6:17pm 1 stop, 3h 50m Basic ▾

Cancelable/ Nonrefundable



**Main**

-  Changes Allowed with No Change Fees
-  Select & Change Seats at Any Time
-  Receive eCredit Upon Cancellation

\$17.00 Per Person\* **UPGRADE**



**Refundable Main Cabin**

-  All the Benefits of Main Cabin, plus...
-  Fully Refundable
-  Free Same Day Domestic Ticket Changes

\$57.00 Per Person\* **UPGRADE**

## Checkout Page

 Book Better. Fly Better.

**Review and Pay**

**Book Confidently Now with No Change Fees Later**  
 Book your next trip now and enjoy more peace of mind with no change fees. Excludes Basic Economy travel that departs after December 31, 2021.  
 Terms apply.

<b>One Way</b> <a href="#">Change Flight</a>	DL1611, DL2246 CLT → CVG	Sat, Feb 5	2:27pm - 6:17pm	1 stop, 3h 50m Basic	
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Cancelable/ Nonrefundable

 [View Seats](#)

Remember, your Basic Economy fare includes some restrictions [UPGRADE TO SELECT SEATS](#)

 **Baggage Allowance (Per Passenger)**

Outbound CLT - CVG	Carry-On Free	1st Bag \$30.00 USD (50lbs/23kg)	2nd Bag \$40.00 USD (50lbs/23kg)
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 Traveling with multiple bags or have special items like golf clubs or overweight/oversized baggage? [CALCULATE ESTIMATE](#)

See what's classified as a Special Item and how Modifying Medallion/Credit Card Status or how your baggage allowance is affected by an Active Military Status.

Checked baggage must not exceed 62 inches (157cm) when you total Length + Width + Height. Your allowance is based on the highest Medallion® Status AND/OR Delta SkyMiles® Amex Card Membership within your reservation plus up to 8 travel companions when traveling on a Delta-operated flight and is subject to change based on Status or Card Membership at check in. Additional allowance details are available in our [Baggage and Travel Fees](#) and [First Checked Bag Terms & Conditions](#).

## Navigation

### Main Navigation

The main navigation includes the flight search box and Delta blog posts.

Contains: Flight Search, Promotion, Blog Posts, and Delta App.

### Header Left Navigation

The upper left of the header contains important flight-related navigation.

Contains: Book, Check-In, My Trips, and Flight Status.

### Header Middle Navigation

The middle header contains navigation to Delta-specific programs.

Contains: Travel Info, SkyMiles, and Need Help? drop-down menus.

### Header Right Navigation

The upper right of the header contains account and notification information.

Contains: Sign Up, Log In, Notification Bell, Search (blog posts).

### Footer Navigation

The footer contains the common footer information, support, and customer service links.

Contains: About Delta, Customer Service, Site Support, and Policies.

### **Visual Audit**

- The color scheme used for the flight search is too dark for the thin font used.
- It is difficult to tell what items are clickable as they are not outlined and seem like simply text on the page.
- The flight search results are presented more like an info-graphic than something a user is supposed to scroll through and interact with.

### **Special Features and Supported Tasks**

- Flight Status Checking
- Book a Delta flight
- Book flight using SkyMiles
- Sort and Filter search results
- Select Departing and Returning flights individually
- Flexible dates with lowest price view

### **Design and Usability Notes**

- It is not immediately clear what is clickable on the home page with everything being the same color.
- You are able to select a return date before the departing date.
- The date selection is difficult to use as it takes the first selected date as the departure date and the second date chosen as the return date, but does not show that there will be a return date until after the first date is chosen. It should display each separately to be more intuitive.
- It has a more limited selection as it is only Delta flights.
- There is a large section of the home page dedicated to a No Change Fees advertisement with a "Book Today" button. However, when clicked it simply takes you to another page with the same search bar as the home page. They could remove this button, as it is a redundant page.
- The only way to change the site language is to scroll to the bottom and find the small piece of text for it.

### **Considerations for Final Project**

- The interface should be minimal at each stage.
- Every page should be designed with intuitive user interaction in mind and user tested.
- It would likely be beneficial to have a flight status checker.
- Changing the site language, if we had multiple languages, should be in the right side of the header.
- This website does not include hotel or other travel-related booking, so the navigation we use would benefit from considering theirs to fill the space and have useful links.
- One of the benefits of using Delta would be using the SlyMiles with the specific air line. This might be something to integrate or have our own system for.

### **Booking.com**

Booking is a large-scale travel booking website. While a focus may now be or have previously been on hotel booking, they offer a mixed variety of travel booking options, including flights. We selected Booking to get a secondary budget option not owned by Expedia Group and consider how important integration with other travel booking is.

### **Audience**

- Users looking to make all travel bookings through the same website
- Budget flyers
- Business travelers
- First time travelers/flyers

## Screenshots

### Landing Page

The screenshot shows the Booking.com homepage with a dark blue header. The header includes the Booking.com logo, currency selection (USD), a help icon, and links for 'List your property', 'Register', and 'Sign in'. Below the header, there are navigation links for 'Stays', 'Flights', 'Flight + Hotel', 'Car rentals', 'Attractions', and 'Airport taxis'. The main banner features the text 'Find deals for any season' and 'From cozy bed & breakfasts to luxury hotels'. Below the banner is a search bar with fields for destination ('Las Vegas'), dates ('Mon, Jan 24 — Fri, Jan 28'), and guest count ('2 adults · 0 children · 1 room'). A checkbox for 'I'm traveling for work' is also present. A COVID-19 information box encourages users to check restrictions before travel. The 'Your Recent Searches' section shows a recent search for Las Vegas from Jan 24-Jan 28 for 2 people. The 'Discover Early 2022 Deals' section offers 15% off stays with a 'Find deals' button. At the bottom, there's a 'Browse by property type' section with thumbnails for various accommodation types.

### Flight Home Page

Booking.com

Stays Flights Flight + Hotel Car Rentals Attractions Airport Taxis

Coronavirus (COVID-19) may affect your travel plans. [Learn more](#)

## Compare and book flights with ease

Discover your next dream destination

Round-trip One-way Multi-city Economy 1 adult

CLT Charlotte Douglas International Where to? Depart Return Search

Direct flights only

### Popular flights near you

Find deals on domestic and international flights

[International](#) [Domestic](#)



**Charlotte to San Juan**  
Jan 28 - Feb 4 · Round trip



**Charlotte to Cancún**  
Jan 24 - Jan 31 · Round trip



**Charlotte to Montego Bay**  
Jan 27 - Feb 3 · Round trip



**Charlotte to Punta Cana**  
Jan 28 - Feb 4 · Round trip

### Trending cities

Book flights to a destination popular with travelers from the United States

### Search Results Page

Booking.com

Stays Flights Flight + Hotel Car Rentals Attractions Airport Taxis

Round-trip One-way Multi-city Economy 1 adult

CLT Charlotte Douglas International HNL Honolulu International Airport Fri, Feb 4 Sun, Mar 13 Search

Direct flights only

### Filters

Showing 1427 results

#### Stops

- Any From \$462.28
- 1 stop max From \$682.18

#### Duration

Maximum travel time  
46 hours

#### Flight times

##### Outbound flight

##### Return flight

#### Departs from Charlotte Douglas International Airport

<input type="checkbox"/> 12:00 AM - 5:59 AM	58
<input type="checkbox"/> 6:00 AM - 11:59 AM	646
<input type="checkbox"/> 12:00 PM - 5:59 PM	66
<input type="checkbox"/> 6:00 PM - 11:59 PM	569

#### Arrives to Honolulu International Airport

<input type="checkbox"/> 12:00 AM - 5:59 AM	0
<input type="checkbox"/> 6:00 AM - 11:59 AM	26
<input type="checkbox"/> 12:00 PM - 5:59 PM	894
<input type="checkbox"/> 6:00 PM - 11:59 PM	481

Best	Cheapest	Fastest
------	----------	---------

Prices may change if there are [additional baggage fees](#)

 <b>2:54 PM</b> CLT · Feb 4	11h 51m	<b>9:45 PM</b> HNL · Feb 4	 Included: carry-on bag, personal item
 <b>12:45 PM</b> HNL · Mar 13	11h 05m	<b>5:50 AM</b> CLT · Mar 14	<b>\$914.78</b> Total price for all travelers <a href="#">See flight</a>

 <b>2:54 PM</b> CLT · Feb 4	11h 51m	<b>9:45 PM</b> HNL · Feb 4	 Included: carry-on bag, personal item
 <b>9:43 PM</b> HNL · Mar 13	11h 06m	<b>2:49 PM</b> CLT · Mar 14	<b>\$914.78</b> Total price for all travelers <a href="#">See flight</a>

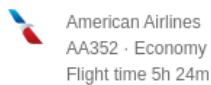
<b>Genius</b> Trip savings <b>Save 10% on your stay</b> Once you book your flights, enjoy a 10% discount at participating Genius properties worldwide by signing in to your account.	
--	---

 <b>11:16 AM</b> CLT · Feb 4	12h 20m	<b>6:36 PM</b> HNL · Feb 4	 Included: carry-on bag, personal item
--	---------	-------------------------------	--

## Flight Preview

1 stop · 11h 51m

- Fri, Feb 4 · 2:54 PM  
**CLT · Charlotte**
- Fri, Feb 4 · 5:18 PM  
**LAX · Los Angeles International Apt**



⌚ Layover 39m

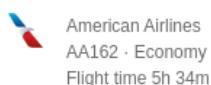
- Fri, Feb 4 · 5:57 PM  
**LAX · Los Angeles International Apt**
- Fri, Feb 4 · 9:45 PM  
**HNL · Honolulu International Apt**



### Flight to Charlotte

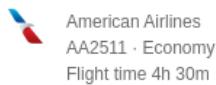
1 stop · 11h 05m

- Sun, Mar 13 · 12:45 PM  
**HNL · Honolulu International Apt**
- Sun, Mar 13 · 9:19 PM  
**LAX · Los Angeles International Apt**



⌚ Layover 1h 01m

- Sun, Mar 13 · 10:20 PM  
**LAX · Los Angeles International Apt**
- Mon, Mar 14 · 5:50 AM  
**CLT · Charlotte**



### Included baggage

The total baggage included in the price



Must go under the seat in front of you

**Included**



**Included**

Baggage policies: [American Airlines](#)

**Genius** Trip savings

### Save 10% on your stay

Once you book your flights, enjoy a 10% discount at participating Genius properties worldwide by signing in to your account.



**\$914.78** ⓘ

Total price for all travelers

Select

**Checkout Page**



Round-trip · 1 traveler · Fri, Feb 4 - Sun, Mar 13

## Charlotte ← Honolulu

### Select your ticket type

Standard ticket

- Cheapest price
- No need for flexibility – you're sure about your plans

Total price	<b>\$914.78</b>
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Flexible ticket

- Switch flights up to 24 hours before your departure time – with no penalties
- Change your flight to another with the same airline for free, subject to availability
- Only pay the difference if the new flight costs more than the original

Total price	<b>\$1,042.96</b>
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Flexible tickets are only available when you book your flight. See section 7 for [terms and conditions](#).

Ticket (1 adult)	<b>\$914.78</b>
Flight fare	\$820.30
Taxes and airline fees	\$94.48
<b>Total</b>	<b>\$914.78</b>
Includes taxes and charges	
<a href="#">View price breakdown</a>	

**Genius** Trip savings  
**Save 10% on your stay**  
Once you book your flights, enjoy a 10% discount at participating Genius properties worldwide by signing in to your account.

[Back](#)  [Next](#)

**Give feedback**  
Tell us how we're doing and what could be better

## Navigation

### Main Navigation

The main navigation bar provides links to each of their other travel-related booking services.

Contains: Stays, Flights, Flight + Hotel, Car Rentals, Attractions, and Airport Taxis.

### Header Right Navigation

The upper right navigation has standard language selection and account options.

Contains: Language, Help and Support, Register, and Sign in.

### Footer Navigation

The main footer options provide standard footer information and navigation links.

Contains: About Booking.com, Terms & Conditions, Privacy and Cookie Statement, and Flights Help.

## Visual Audit

- The color scheme is beneficial for usability. It is not the most visually appealing, but it is usable.
- The overall interface is very blocky, which seems to be an outdated style. They could switch to rounded corners with a bit more colorful accent colors and have a more visually appealing interface.

## Special Features

- Purchase flight ticket from any airline
- Flight preview page to see stops and times for each step of flight.
- Dedicated main-page button for direct flights
- A "best" flight search sorting

- A website feedback button
- Sort and Filter search results
- Allows searching for multiple destination airports at once
- Account usage for easy check-out and trip checking

### **Design and Usability Notes**

- The language select does not have any accompanying text, it is just a circle with an American flag icon. This is not immediately identifiable as language selection, and would be better if it had text identifying it as the language selection box.
- Similarly, the help and support button is only an icon, but this is not as difficult to understand. It still could benefit from being a Support button, however. It does not allow for selecting departing and returning flights separately.

### **Considerations for Final Project**

- It would likely be beneficial to include a flight preview page, either optionally or otherwise.
- Something consistent across each is having promotions underneath the main search box. We might consider either removing these to clean up the space, or follow Booking and have it show popular flights in the user's area or the most popular destinations across the app.
- We should have selecting departing and returning flights separately. This cleans up the search results considerably and makes it more intuitive to use.

## **Summary**

### **Product Comparison**

Feature	Expedia	Delta	Booking.com
Book Hotel	x		x
Book Flight	x	x	x
Multiple Airlines	x		x
Search Multiple Destinations			x
Flexible Dates	x	x	
Flexible Tickets	x	x	x
Flight Preview Page			x
Flight Status Check		x	
Round-trip Flight	x	x	x
One-way Flight	x	x	x
Multi-city Flight	x	x	x
Main Page Promotions	x	x	x
Pay with Credit Card	x	x	x
Rewards Program	x	x	x

### **Analysis**

The biggest takeaway from considering each of the competitors is that we need to have a minimal, streamlined process for booking a flight. We may consider following Delta in only providing flight booking instead of hotels and other travel bookings. In order to deliver a product within the desired timeline, we should focus on creating a modern, minimal, and intuitive interface for our product. Part of this is choosing a good color scheme that is not too dark to promote readability, which is something Delta did not do. Navigation should be clear with accompanying text for any buttons. We will need to consider what we want to do with the space below the search box if we want to leave it empty to be more minimal or include promoted or popular flights as each of the competitors do. Another feature to consider is a frequent flyer reward system that each of our competitors do. If we have an account system, this would be a good way to have returning users.

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## Appendices

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