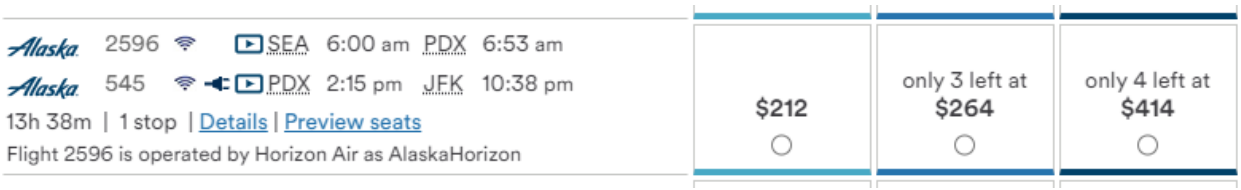
1. What is the conversion rate for an individual flight search result? For definition, an ‘individual flight search result’ is the following:

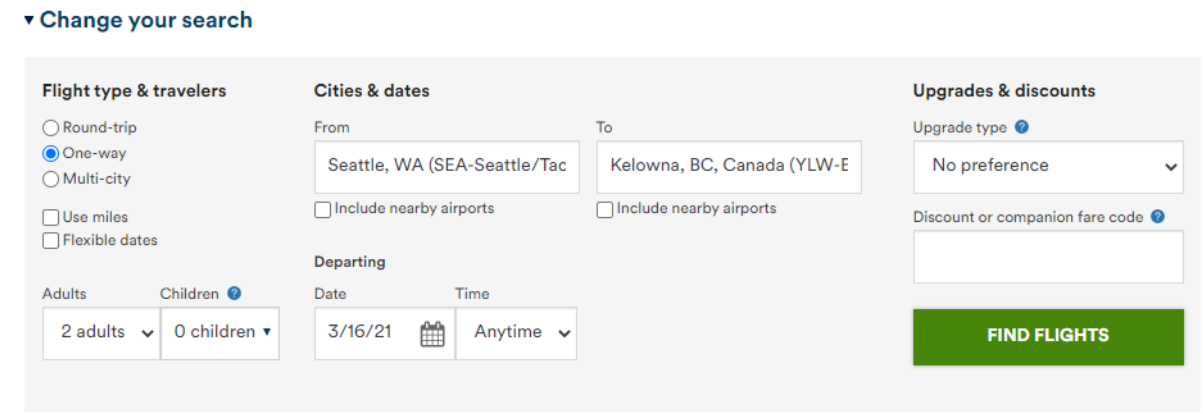


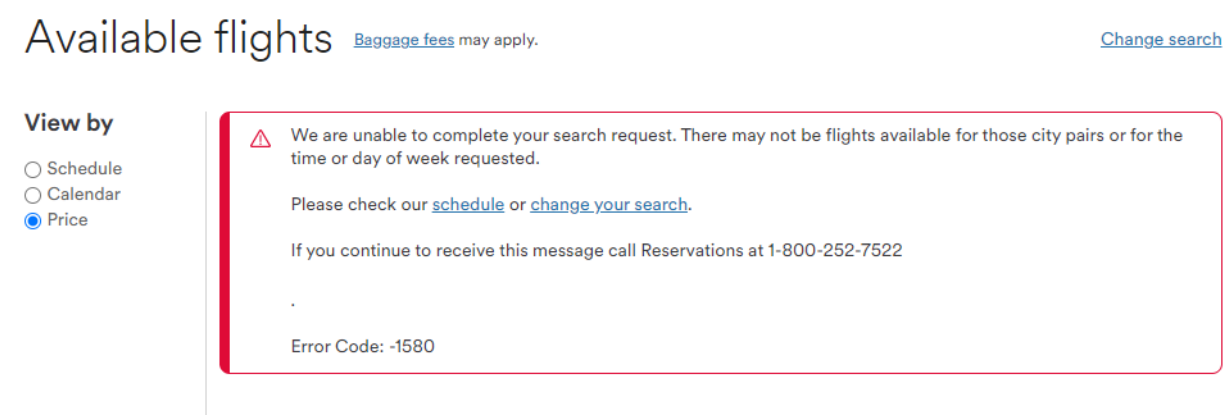
Answer: The conversion rate for an individual search result is based on the number of customers choosing the flight to book the ticket, more the people book the flight ticket, the rate rises as per the demand.

2. How does the cost in miles affect the guests’ willingness to purchase? For this question, assume that the conversion space is already tagged successfully, and this data is already accessible.

Answer: If a customer has miles, then the miles can be given the first choice to buy the tickets. Considering that the data is already accessible, we can check if the customer would prefer miles or dollars to buy the price.

3. How many times does a guest attempt to search for a destination that we do not serve for the given airport or date? This can be demoed through the following flight search:





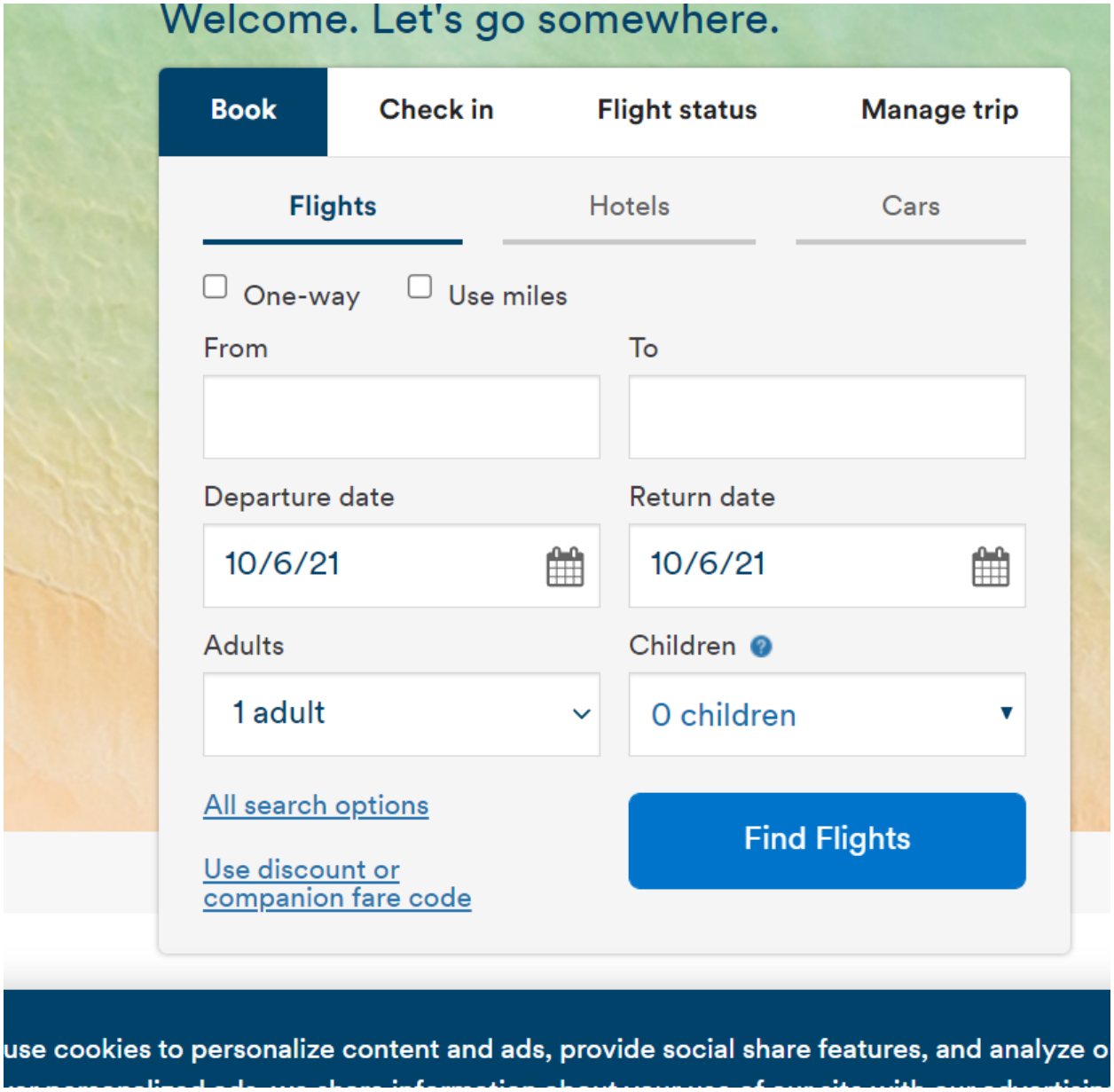
And provide a model for recommendation to guests on what itenary would be helpful for guests and will generate revenue.

Answer: The model can be designed in a way that we catch the search results as history implementing lazy search, if the destination that the customer is searching for is not provided, based on the destinations, a similar destination can be suggested to the customer, also keeping the price similar, so the customer is influenced to take up the ticket and revenue is generated.

Proposed Model

A model can be created based on the customer flight search and the options present in the beginning of the search results. We can start by adding the flexible dates option in the first page helping the customers to be able to look for results in the next few dates.

A customer's instinct is going to be checking for dates a day ahead or a day early, to see if they have a price difference to book the ticket at a different price.



Working with HTML we could customize the UI of the first page making it vibrant to attract a customer.

To get the analytics, we could base using the following tables:

Table A:

To City	From City	Dollars	Miles

Customer ID

Table B:

Customer ID	Date of Travel	Date of Return	

We could use the following tables to get the analytics.

By Joining the Customer ID from Table A with Dollars and Miles from Table B. We would be able to find particular customers spending in both dollars and miles and will be able to provide an upgrade or extra points, making the customer want to take more trips. Python can be used to create or write a code and can be automated to run every month with and can be compared to get the data for potential growth customers.

Here customer ID is the key variable.

To get a better idea on the overall dates of customers booking the flight tickets and the city which they are travelling to, to help us understand the way customers think.

We get this by joining the Customer ID, Date of Travel, Date of return from Table A and Customer ID, To City and From City.

We can create regression models based on the results, with the key variable being customer ID, to get the analytics and also improvements to generate the revenue.