

# Kayak.com User Research

## Usability Report



**Kayak.com is an internet based travel search engine that allows users to search for flights, hotels and rental cars, in addition to displaying important travel information to the user.**

### **P4 Completed By**

**Olumuyiwa Adenaike | Tim Lattimer | David Vernier | DeAnna Doersch**

### **Date**

**03/15/2016**

### **Objective**

**The goal of this report was to display our results from our usability tests for Kayak.com. The usability tests helped us find usability problems and determine the amount of user satisfaction and interest with the website. Based on our findings, we provided recommendations on how to improve the website's interface.**

# Table of Contents

Executive Summary.....2

Procedure.....2

Testing Environment and Recruiting Criteria .....3

Observations and Recommendations.....3-8

Appendices.....9-15

## Executive Summary

Kayak is a travel website that allows users to search, book, and plan their travels, either through finding affordable flights, or booking hotels and vacation packages. Kayak is a major player in the travel business, as it aggregates travel information from several airlines and providers, and displays the best results to the user. As a result, Kayak is used by a diverse group of people, with the common goal of easing their travel experience. Our goal as a team involved evaluating the usability of the most used aspect of Kayak's website, the flights section. To achieve this, we initially performed a heuristic evaluation and a cognitive walkthrough of the interface in order to get a first-hand experience with the site. After completing those studies, we interviewed a common demographic in Kayak's user base, college students, in order to generate personas, which we believe adequately represented majority of Kayak's users. Using these personas and findings, we were able to create a fleshed out plan to perform usability tests on Kayak's website. The sections below entail a detailed description of our study's process, findings, and recommendations.

## Procedure

Our usability tests began with the moderator introducing the purpose of the study to the participant, which was to understand the positive and negative aspects of Kayak's website and determine the average level of user satisfaction with the website. Afterwards, the purpose of the study was made clear to the participant, and the moderator asked them to sign a consent form before participating (shown in Appendix B). Next, the moderator introduced four different tasks for the participant to complete, each task meant to test four different aspects of the website. The testing protocol can be found in Appendix B. After the moderator took the participant through the four tasks, they asked a few wrap up questions to finish up the study.

We encountered a few problems when going through the procedure, as we had no previous experience with Morae, hence, it took a while to learn all of the software's functions. Also, a few times while attempting to begin the recordings, Morae would not connect to the other computer in the room. We tried our best to reduce the number of interruptions, by having the same observers control each station so they became more familiar with the software as time wore on. As a group, we also decided to moderate each other's participants because we felt that it eliminated any possible bias we might have had, ensuring objectivity at all times.

## Testing Environment and Recruiting Criteria

Eight participants took part in our usability testing on Saturday, February 27 in DePaul's CDM building, testing room 805. This room was split into two sections, divided by a portable wall. The moderator and participant sat on one side, and the other three group members observed and took notes on the other side. We used Morae software to capture the results during these usability tests. Using this software, our group was able to view the participant's screen from the computer on the opposite end of the room. We attempted to complete the testing in one afternoon, and since each of the participants arrived on time, we were able to do so. The usability testing took about 4 hours, about a half hour per participant.

Participants were chosen based off our screener, which can be found in Appendix B. We found college students who traveled at least once per year and used the internet to help them with their traveling plans. Although some of our participants traveled more often than others, everyone who participated in the study traveled at least once in the past year.

## Observations and Recommendations

All observations and recommendations are presented below on a task by task basis. The observations were analyzed based on the following metrics

- Positives: Findings that support or affirm the usability of a feature.
- Minor: Small issues that do not require immediate attention.
- Severe: Issues that are directly affecting usability and should be attended to
- Very Severe: Big issues that should be prioritized and fixed immediately

**Task 1: You decided to go on vacation and visit your best friend in LA. You want to find a flight from Chicago to Los Angeles leaving tomorrow night (after 6pm) and returning next Saturday night (after 6pm). How would you do this?**

*Objective: Find flights (Can people use it to find what they need?)*

Minor

- One participant didn't notice they were not on the flights page, but rather on the hotels page.
- Participant 7 could not complete the task as there was a technical issue with the calendar picker not starting on the current month, this apparently confused the participant, and hence they were not able to complete the task.

### Positive

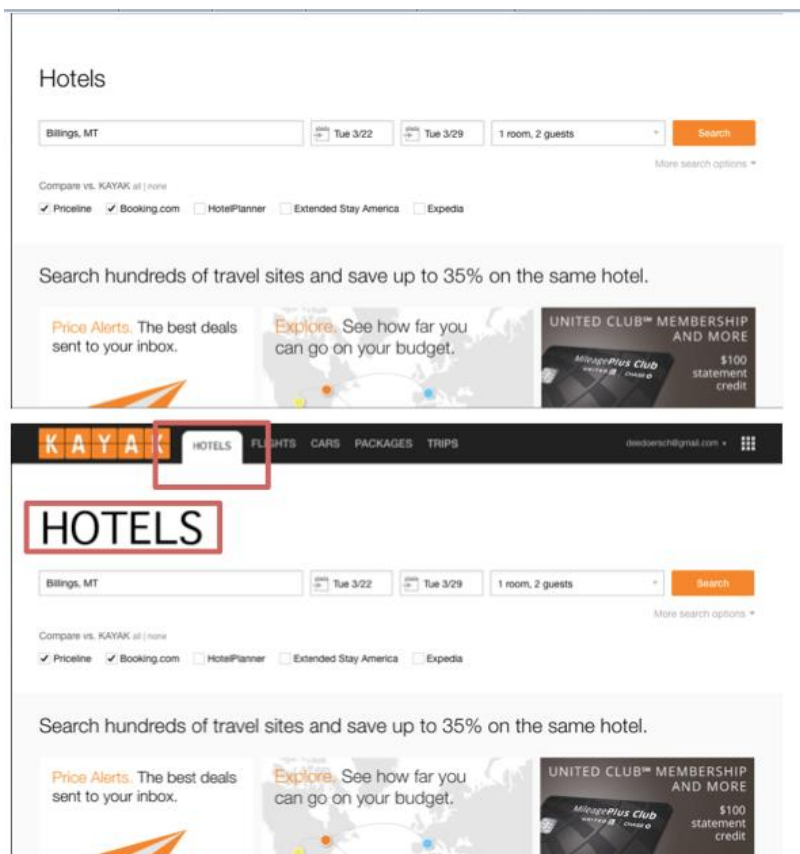
- All participants except for one completed the task in a reasonable time.

### Quotes

- “I don’t really know what the purpose of this site is...”
- “Seems a little laggy”
- “Oh I can’t pick the flight time on this page?”

### Recommendations

- Make a distinction between the flights, hotels, packages pages. This allows users to know exactly where they are (shown to the right).



## **Task 2: You just found out you need to limit your budget to \$500. Also, you would like a nonstop flight, using only United Airlines. List all of the flights that fit within your criteria.**

*Objective: Filter flights (Can people filter their search options that fit within their criteria?)*

### Minor

- The filters to the left were a little convoluted and hard to use
- When selecting an airline, a Participant 8 chose to uncheck all of the airlines, instead of hovering over it and selecting the “only” button

### Positive

- The participants were still able to use the filters

### Quotes

- “That’s a bit confusing, I feel like the filters should be more prominent, plus the sliders are not really effective”

## Recommendations

- When you click the option to compare websites, the comparisons actually open up in separate new windows behind your web browser. The website does not notify you of these new web browsers.
- The time slider is hard to use, having the ability to input a specific time would have been for helpful
- The ability to check only one airline makes sense once you hover over it, but if a mistake is made you are not able to re-check all of them with a single button. You have to check all of the airlines you want to compare separately. The recommendation would be to have a “Select All” button (shown to the right).

The image displays two screenshots of a flight search results page. The top screenshot shows a list of flight options with a 'View Deal' button highlighted. The bottom screenshot shows the same list with an 'Uncheck all' button highlighted in a red box.

**Flight Search Results (Top Screenshot):**

Price	Airline	Origin	Destination	Time	Duration	Stops	Class
\$126	Delta	MDW	MIA	1:50p → 7:27p	4h 37m	1 stop (ATL)	Economy
\$126	Delta	MDW	MIA	12:00p → 6:10p	5h 10m	1 stop (ATL)	Economy
\$126	Delta	MDW	MIA	12:00p → 7:27p	6h 27m	1 stop (ATL)	Economy
\$132	Delta	MDW	MIA	1:50p → 11:56p	9h 06m	1 stop (ATL)	Economy

**Flight Search Results (Bottom Screenshot):**

Price	Airline	Origin	Destination	Time	Duration	Stops	Class
\$126	Delta	MDW	MIA	1:50p → 7:27p	4h 37m	1 stop (ATL)	Economy
\$126	Delta	MDW	MIA	12:00p → 6:10p	5h 10m	1 stop (ATL)	Economy
\$126	Delta	MDW	MIA	12:00p → 7:27p	6h 27m	1 stop (ATL)	Economy
\$132	Delta	MDW	MIA	1:50p → 11:56p	9h 06m	1 stop (ATL)	Economy

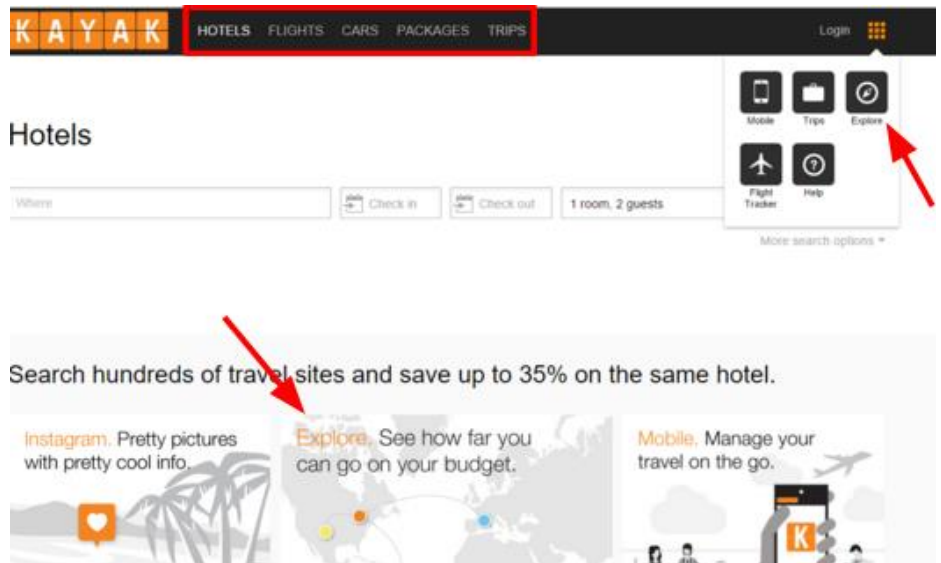
The bottom screenshot also features a red box around the 'Uncheck all' button in the 'Airlines' section.

**Task 3: You want to take a week off work in March of this year. You have only \$250 to spend on a round-trip flight leaving from O’Hare. Given this budget, you want to explore your options within your price range. Find 3 places you could visit.**

*Objective: Explore page (Can people explore flight destinations that fit their budget?)*

#### Severe

- The “Explore” tool was not found by any of our participants except for one.
- Participants got frustrated with the task.
- The “Explore” tool was hidden in top right corner of page instead of on header (shown to the right).
- Participants don’t look/scroll down on the website at all (shown to the right).



#### Minor

- One user knew what tool they needed, but couldn't find it.

#### Positive

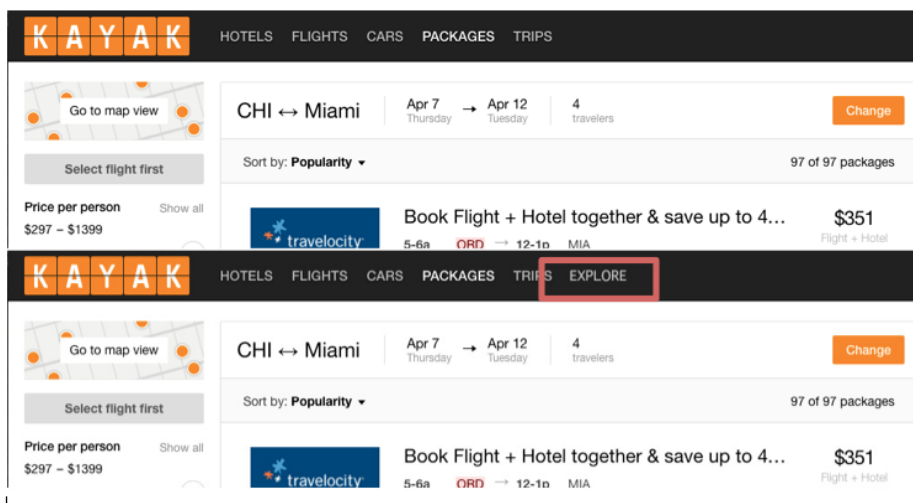
- Participant 8 clicked the explore button on the flights page without navigating to the icon at the top.

#### Quotes

- “I am trying to think if there is a way to put in a price range and then it will give you a list, but you can’t do that.”
- “I didn’t know that feature existed.”
- “This task is more time consuming.”
- “I will definitely use this feature now that I know about it.”

## Recommendations

- The explore feature is a very powerful and useful tool. If the feature was more prominent on the website, it would be a cool selling point for the website.
- Add the link to the explore page in the header of the website next to the links of the other tools (shown to the right).



**Task 4: Spring break is coming up and you and your 3 friends want to visit Miami. You are in charge of finding hotels and flights for the group. You can only spend up to \$2500 on the entire package. You plan to leave on March 7 and return on March 12. Show me how you would do this.**

*Objective: Packages (Can people easily search for flights and hotels that fit their criteria?)*

### Minor

- Participant had to do mental math to calculate the price of the ticket and hotel.

### Positive

- All participants completed the task.

### Quotes

- “This kind of reminds me of the AT&T cell phone plans and cell phone options, and the way the filters are very extensive on the left side, and the options are listed in a column.”

Best Western Plus Kendall Hotel & ... ★★★★ Excellent (8.9, 50 reviews) BUSINESS SAVER \$413 orbitz.com \$413 cheaptickets... \$439 Hotwire.com	\$413 Flight+Hotel
Hyatt Regency Miami ★★★★ Good (7.9, 3749 reviews) VERY POPULAR 4 STAR BARGAIN \$558 orbitz.com \$558 cheaptickets... \$584 Hotwire.com	\$558 Flight+Hotel
\$2230 total for 4 travelers	
Best Western Plus Kendall Hotel & ... ★★★★ Excellent (8.9, 50 reviews) BUSINESS SAVER \$413 orbitz.com \$413 cheaptickets... \$439 Hotwire.com	<b>\$413</b> Flight+Hotel Per Person \$1652 In All
Hyatt Regency Miami ★★★★ Good (7.9, 3749 reviews) VERY POPULAR 4 STAR BARGAIN \$558 orbitz.com \$558 cheaptickets... \$584 Hotwire.com	<b>\$558</b> Flight+Hotel Per Person \$2232 In All

## Recommendations

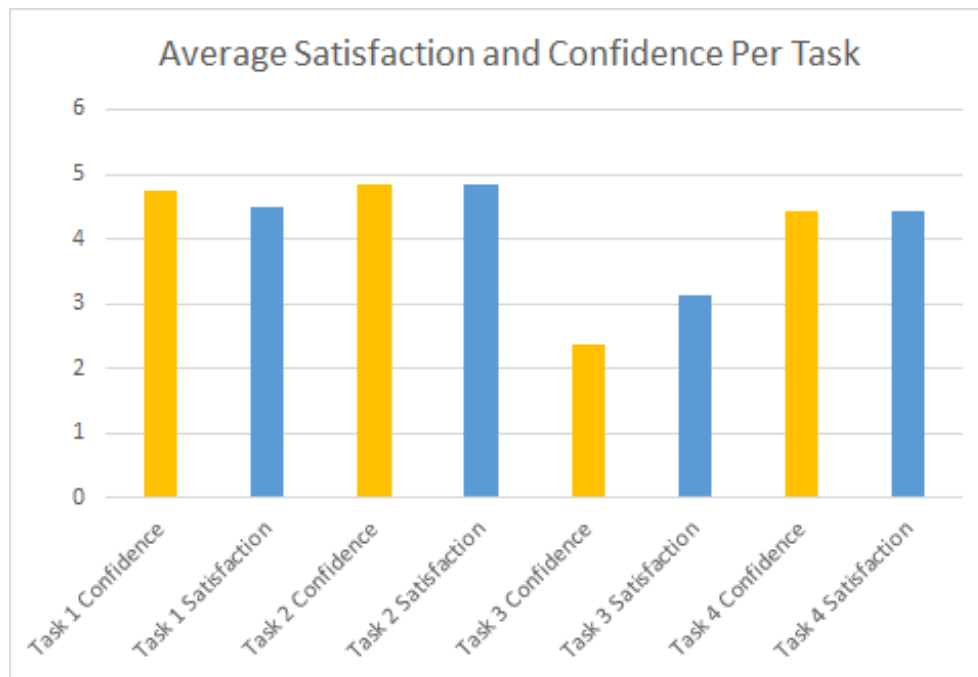
- Having the final price as bold as the per person price (shown above).



## Survey Results

Scale: 1 (low) to 5 (high)

1. How confident are you that you successfully completed the task? (Yellow)
2. How satisfied are you with your experience with the website while completing the task? (Blue)



## Task Comparison

Task	Confidence (Average)	Satisfaction (Average)	Time to complete (Average)	# who completed task	# who did not complete task
1. Find Flights	4.75	4.5	2:18	8	0
2. Filter Flights	4.85	4.85	1:07	7	1
3. Explore Page	2.35	3.12	1:16*	1	7
4. Packages	4.42	4.43	1:40	7	0

# Appendices

## Appendix A. Participant Grid:

ID	Name	Gender	Major	Kayak user?	Travel frequency?
1	Andrew	M	ISM	No	1-2 times a year
2	Breanna	F	Information Assurance and Security Engineering	No	1-2 times a year
3	Christopher	M	Urban Planning	No	Not very often, once a year
4	Derek	M	Psychology	No	Not very often, once a year
5	Elizabeth	F	Health Science	No	Not very often, once a year
6	Fred	M	Psychology	No	1-2 times a year
7	Greg	M	Information Technology	No	Not very often, once a year
8	Hannah	F	Graphic Design	No	About twice a year

## Appendix B. Supplemental Materials:

### Consent Form

#### ISM 360 USER-CENTERED EVALUATION (MOOSE CHAMPIONS GROUP)

Investigator (*circle one*): Olumuyiwa Deanna Timothy David

#### OVERVIEW AND PURPOSE

This usability test will provide us information about how users interact with Kayak's website. The goal of this study is to gather information about how effective Kayak.com is and how people use it to compare and search for hotel, flight, rental cars, and package options.

#### RISK, STRESS, OR DISCOMFORT

This study will not expose you to risk, stress, or discomfort beyond that normally encountered while conducting the interview.

#### OTHER INFORMATION

The results of this test will be shared with our ISM 360 class. Once the result of this usability test has been tabulated and reported, your name, as the participant, will be destroyed in order to ensure confidentiality. I, principal investigator, will retain data for no more than one year following the date on which the study is administered.

#### OPTION TO REFUSE PARTICIPATION

You are free to refuse to participate in the study and may withdraw at any time without penalty.

The study described above has been explained to me, and I voluntarily consent to participate in it. I have had the opportunity to ask questions and understand that the investigator named above will answer future questions I may have about the research or about my rights.

\_\_\_\_\_

Printed Name of Participant

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

\_\_\_\_\_

Printed Name of Investigator

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

## Screener

Questions	Answers	Instructions
How often do you go out of town?	Never	Terminate Survey
Do you use the internet to plan your travels?	No	Terminate Survey
Are you a college student?	No	Terminate Survey

## Protocol

### **Introduction:**

“Good afternoon, how are you? We would to thank you again for agreeing to this. How was your ride over?

My name is \_\_\_\_\_ and I’m going to be walking through the session with you.

We’re working on the Kayak website, and the purpose of this test is to figure out how understandable and user friendly that the site is. We are focusing on the site interface and how we can improve it.

A few people will be observing from the station. They will also be recording the test and their findings. Please don’t be alarmed by them. We are testing the system, not you. You won’t hurt our feelings if you get critical of our site. This session is strictly for internal design purposes, so no one other than the design time will be using the data acquired.

This session should take about 15 minutes.

(provide consent form)

Before we start, I’m going to have to ask you to sign this consent form. It simply states that we have permission to record you, but it will only be seen by people working on the project. It also states that as a participant in our research:

- you stop at any time
- you may ask questions at any time
- you may leave at any time
- there is no deception involved
- your answers will be kept confidential

### **Preliminary Interview:**

Before we take a look at the site I will like to ask you a few quick questions

- What is your major?
- How often do you travel?
- How much do you spend on flights and packages on average?
- How do you usually search and book your flights?

### **Evaluation Instructions:**

We will take a second to let you explore Kayak's user interface. In a few minutes, we will ask you to navigate through some of Kayak's main user features. While you perform the tasks, it would be most helpful for me if you think aloud when navigating the website. If you come across something that is ambiguous or confusing, please let me know. If you find yourself backtracking, please let me know the reasoning as to why you went through the steps

you did. All of your opinions and thoughts will help us tremendously with this project. If you are unable to complete a task, let me know and we will continue to the next task. Let me know when you believe a task is complete.

### First Impressions:

- Can you tell me what this site is about?
- Can you name 3 adjectives that describe this site?
- Do you think it is easy to navigate through this site?

### Tasks:

Feature	Tasks/Questions	Notes
First Impressions	What is the first thing your eyes are drawn to on this page? Can you tell what this site is for?	
<u>Find flights:</u> <i>Can people use it to find what they need?</i>	<p><b>You decided to go on vacation and visit your best friend in LA. You want to find a flight from Chicago to Los Angeles leaving tomorrow night (after 6pm) and returning next Saturday night (after 6pm). How would you do this?</b></p> <ol style="list-style-type: none"> <li>1. <u>Ask Participant</u> On a scale of 1 to 5, how confident are you that you successfully completed the task? 1 2 3 4 5</li> <li>2. <u>Ask Participant</u> On a scale of 1 to 5, how satisfied are you with your experience using this website to complete the tasks? 1 2 3 4 5</li> <li>3. <u>Moderator/Observers</u> How much time did it take to complete the task? <ol style="list-style-type: none"> <li>a. Fail</li> <li>b. Succeed but very slowly in a roundabout way</li> <li>c. Succeed a little slowly</li> <li>d. Succeed quickly</li> </ol> </li> <li>4. <u>Moderator/Observers</u> How much time did it take to complete the task? <ol style="list-style-type: none"> <li>a. Fail because of errors</li> <li>b. Many errors</li> <li>c. Some errors</li> <li>d. Few or no errors</li> </ol> </li> </ol>	
<u>Filter Flights:</u> <i>Can people filter their search options that fit within their criteria?</i>	<p><b>You just found out you need to limit your budget to \$500. Also, you would like a nonstop flight, using only United Airlines. List all of the flights that fit within your criteria.</b></p> <ol style="list-style-type: none"> <li>1. <u>Ask Participant</u> On a scale of 1 to 5, how confident are you that you successfully completed the task? 1 2 3 4 5</li> <li>2. <u>Ask Participant</u> On a scale of 1 to 5, how satisfied are you with your experience using this website to complete the tasks? 1 2 3 4 5</li> <li>3. <u>Moderator/Observers</u> How much time did it take to complete the task? <ol style="list-style-type: none"> <li>a. Fail</li> <li>b. Succeed but very slowly in a roundabout way</li> </ol> </li> </ol>	

	<ul style="list-style-type: none"> <li>c. Succeed a little slowly</li> <li>d. Succeed quickly</li> </ul> <p>4. <u>Moderator/Observers</u> How much time did it take to complete the task?</p> <ul style="list-style-type: none"> <li>a. Fail because of errors</li> <li>b. Many errors</li> <li>c. Some errors</li> <li>d. Few or no errors</li> </ul>	
<p><u>Explore page</u> <i>Can people explore flight destinations that fit their budget?</i></p>	<p><b>You want to take a week off work in March of this year. You have only \$250 to spend on a round-trip flight leaving from O'hare. Given this budget, you want to explore your options within your price range. Find 3 places you could visit.</b></p> <p>1. <u>Ask Participant</u> On a scale of 1 to 5, how confident are you that you successfully completed the task? 1 2 3 4 5</p> <p>2. <u>Ask Participant</u> On a scale of 1 to 5, how satisfied are you with your experience using this website to complete the tasks? 1 2 3 4 5</p> <p>3. <u>Moderator/Observers</u> How much time did it take to complete the task?</p> <ul style="list-style-type: none"> <li>a. Fail</li> <li>b. Succeed but very slowly in a roundabout way</li> <li>c. Succeed a little slowly</li> <li>d. Succeed quickly</li> </ul> <p>4. <u>Moderator/Observers</u> How much time did it take to complete the task?</p> <ul style="list-style-type: none"> <li>a. Fail because of errors</li> <li>b. Many errors</li> <li>c. Some errors</li> <li>d. Few or no errors</li> </ul>	<p><i>*If 2-3 minutes go by without finding explore page, take participant to it. Allow them to complete the task from here.*</i></p>
<p><u>Packages</u> <i>Can people easily search for flights and hotels that fit their criteria?</i></p>	<p><b>Spring break is coming up and you and your 3 friends want to visit Miami. You are in charge of finding hotels and flights for the group. You can only spend up to \$2500 on the entire package. You plan to leave on March 7 and return on March 12. Show me how you would do this.</b></p> <p>1. <u>Ask Participant</u> On a scale of 1 to 5, how confident are you that you successfully completed the task? 1 2 3 4 5</p> <p>2. <u>Ask Participant</u> On a scale of 1 to 5, how satisfied are you with your experience using this website to complete the tasks? 1 2 3 4 5</p> <p>3. <u>Moderator/Observers</u> How much time did it take to complete the task?</p> <ul style="list-style-type: none"> <li>a. Fail</li> <li>b. Succeed but very slowly in a roundabout way</li> <li>c. Succeed a little slowly</li> <li>d. Succeed quickly</li> </ul>	

	<p>4. <u>Moderator/Observers</u> How much time did it take to complete the task?</p> <ul style="list-style-type: none"><li>a. Fail because of errors</li><li>b. Many errors</li><li>c. Some errors</li><li>d. Few or no errors</li></ul>	
--	--	--

**Probe Questions:**

What are you thinking?

Why did you pause? Is this step confusing? What makes it confusing?

What are you seeing here?

Did you notice...?

Does [this interface] make sense?

**Wrap-up:**

These are all the tasks we have for you today, but we just have a few wrap up questions to ask you before you leave.

1. How would you describe your experience using this interface?
2. How did this interface compare to other travel sites you have used?
3. Would you use this website in the future?

Do you have any other questions or thoughts before you leave?

Thank you for your time!

### **Appendix C. Pilot Test Results:**

After running the pilot test we noticed that some of our task prompts were not descriptive enough, and as a result left a bit of confusion on the participant's side. To address this issue we added more details to each task, details like; the times of arrival and departure in task one, to the total funds the participant can spend in task 1, 3, and 4. We also made task one more of an introductory task, to warm the user up to the application and make them confident in their participation. Previously, that question had been more complex. These changes reflected the evolution of our groups understanding of our users.

### **Appendix D. Team Contributions:**

Our group evenly distributed the work and every member did their assigned job. For the usability test, each group member brought in 2 participants. Afterward, we worked on the PowerPoint presentation as a group and each member was assigned specific findings to present. For the paper, each member worked on different sections before we revised it as a group. Our group met using Google Hangouts to discuss and complete our work.