

Food Reminder Usability Test Report

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Usability Test Plan:

Scope:

The usability test will cover restaurant searching and contacting, review creating, searching, editing and deleting features.

Purpose:

- Uncover potential usability issues that need to be fixed in future stages of the development
- Evaluate the learnability, performance, and error rate of Food Reminder
- Check if the users can create new reviews successfully
- Check if the users can search a restaurant or restaurants with specified restaurant name, cuisine, or last attended date successfully
- Check if the users can search an existing review or reviews with specified food name, restaurant name, rate, cuisine, price, and the date the review is created successfully.
- Check if the users can edit a review with specified values of food name, restaurant name, rate, cuisine and price successfully
- Check if the users can delete a review successfully.

Schedule / location:

The usability test will take place between November 16th and December 3rd. The usability test will be conducted on-line remotely.

Format:

It will be an asynchronous, unmoderated, and remote test while communication between the group members and participants will take place with the chat facilities of Microsoft Teams.

Participants:

Five **Ten** other students enrolled in Human Computer Interfaces Fall 2020 will be chosen as the participants of this usability test.

Equipment:

Participants can use any web browser they have to use the application. For participants who want to do the phone call test by laptop, "your phone" by Microsoft Inc should be downloaded and bluetooth linked to their phone. Participants need to record

their screen and provide a concurrent think-aloud as they perform tasks with either microphone, text (write in a text editor during screen recording, no need to send it to the group members with the video), or a mix of two methods.

Roles:

- The role of the group members will be to collect and analyze the completed pre-test and post-test surveys and take notes from the participants when they think aloud.
- The participants' role will be to carry out the instructions provided.

Sessions:

Usability test sessions will be conducted as follows:

1. Participants will fill out the pre-test survey.
2. Participants will record their screen while thinking aloud and perform the given task scenarios from the tasks and scenarios list (we are Group of two, Group **H** will be the question list for Hongzhao and Group **S** will be the question list for Shuo:
3. Participants will fill out the post-test survey.
4. Participants will send the video files to us (MS team or email).

The estimated time required for completing the test is about 15-25 minutes.

Tasks and Scenarios List (do in order):

- Create new review with specified attributes' values: **(H&S)**
 - Restaurant Name: "barBurrito"
 - Food Name: "Small Ground Beef Burrito"
 - Price: "\$6.50"
 - Cuisine: "Mexican"
 - Rate: Tastes Normal
 - Comment: "The beef was too salty."
 - Phone Number: 9053932222
 - Attach Image of The Food: choose an image originally in the "picture" folder attached in the application source folder or download an image into the "picture" folder and choose it.
- Create new review with specified attributes' values: **(H&S)**
 - Restaurant Name: "barBurrito"
 - Food Name: "Regular Mild Chicken Burrito"
 - Price: "\$10.50"
 - Cuisine: "Mexican"
 - Rate: ~~4 stars~~ **Tastes Good**
 - Comment: "The wrap is good or not totally depends on if the wrapper is good or not."
 - Attach Image of The Food: ~~See attached image in appendix~~ **choose an image originally in the "picture" folder attached in the application source folder or download an image into the "picture" folder and choose it.**
- Create new review with specified attributes' values: **(H&S)**
 - Restaurant Name: "Mister Gao"
 - Food Name: "Xinjiang Style Chicken"

- Price: "\$20"
- Cuisine: ~~"XinJiang Style Chicken"~~ **"Chinese"**
- Rate: ~~4 stars~~ **Tastes Good**
- Comment: "very delicious dish"
- **Phone Number: 9053932222**
- Attach Image of The Food: ~~See attached image in appendix~~ **choose an image originally in the "picture" folder attached in the application source folder or download an image into the "picture" folder and choose it.**
- Search for Restaurant in Search Restaurant Page:
 - Search for Restaurant by name, "barBurrito" **(S)**
 - Search for Restaurant by cuisine "Mexican" **(H)**
 - **Search for Restaurant by last attended date "11/16/2020" and "date of today"(S)**
 - **Search for Restaurant by maximum average price 22 CAD and 11 CAD (H)**
 - Sort Restaurant by rate **(H)**
 - **Reset the Search Restaurants page (H)**
 - ~~Click contact beside "barBurrito" and add: (S)~~
 - ~~Website:~~

https://www.ubereats.com/ca/hamilton/food-delivery/barburrito-1711-main-st-w/CQd1N7ZyQL297I4189JU3w?utm_source=google&utm_medium=organic&utm_campaign=place-action-link
 - ~~Phone:~~ **+1 9053932222**
- Contact Restaurant in Search Restaurant Page **(S)**:
 - ~~Click contact beside "barBurrito" and then select "Order by website", that should redirect to the uber eat page.~~
 - **Right Click "Jump to UberEats" button beside "barBurrito" to open the homepage of UberEats in a new tab**
 - (optional, Only when participants really want to order, and should have "your phone" open and bluetooth linked with their phone for laptop testers) ~~click contact by phone call~~ **click the button labelled with the phone number for "barBurrito" previously entered during creation to contact by phone call.**
- Filter Food Review in Browse Review Page:
 - Filter by name, "Mister Gao" **(H)**
 - Filter by cuisine "Mexican" **(S)**
 - Filter by rate 4 **(H)**
 - Filter by food price \$10~\$20 **(S)**
 - Filter by Food Name "Regular Mild Chicken Burrito" **(H)**
- Edit food review of "Regular Mild Chicken Burrito" created previously with new attributes' values: **(H)**
 - Food Name: "Small Ground Beef Burrito"
 - Price: "\$8.80"
- Delete food review in Browse Review Page:

- Delete a single review by clicking the red delete button on the left top of one review (S)
- ~~Delete reviews with Food Name “Regular Mild Chicken Burrito” by clicking the right top light red button **below** the navigation bar [this action come after filter by food name] (H)~~
- Delete reviews with Restaurant Name “barBurrito” by clicking the orange button **below** the navigation bar [this action come after filter by restaurant name] (H)
- Clear Review by clicking on the red “clear” button in the top right of the navigation bar (S)

Observations:

The group members will take notes about participants’ performance and experience of doing the tasks by watching the records of screen received from the participants.

Metrics:

All metrics listed below will be measured by taking notes during observation. Length of time will be measured with the stopwatch facility on smartphones. The number of wrong attempts will be kept track of on the taken note.

- The length of time (in seconds) the participants spent to find the correct buttons or input boxes for each task
- The length of time (in seconds) the participants spend to perform each task after the correct user actions are found
- The number of times a participant attempts wrong user actions

Instruments:

A pre-test and a post-test survey will be used. Surveys are attached in the appendix

Appendix

Link to Pre-test Survey: <https://forms.gle/RfMWju7tL66zoQePA>

Link to Post-test Survey: <https://forms.gle/vYbszHz9RdYUbSg87>

~~Link to image for creation of review to “Regular Mild Chicken Burrito”:~~

~~<https://drive.google.com/file/d/1M99Cg-bz1ebQzszXeb4USvppiFt1cfOH/view?usp=sharing>~~

~~Link to image for creation of review to “Xinjiang Style Chicken”:~~

~~<https://drive.google.com/file/d/1HCtB3RG1LUBmOjp-S3auNYjR31ISCA8O/view?usp=sharing>~~

Usability Test Result:

- **Note:**
 - For some undetermined reason, the group members have received 10 responses of pre-test and post-test survey while only 9 recordings of scenario completion were messaged from the participants.
- **Pre-test Survey Result:**
 - As a result of the first question in the pre-test survey, 8 out of the 10 people who did the survey answered that they eat in or order delivery from in-campus or near-campus restaurants 0 to 3 times per week, while the rest 2 people answered 4 to 6 times per week and 7 to 9 times per week respectively.
 - For the second question, 8 out of the 10 people answered that they usually order food online through online food ordering and delivery platforms while the other 2 people often take the dine-in approach or order on-site then taking the food out.
- **Post-test Survey Result:**
 - For the first question, 4 out of 10 people remained neutral in the statement that they would frequently use the product. 3 out of 10 people disagree with the statement while other 3 people agreed that they would use the product frequently (2 agree + 1 somewhat agree).
 - For the second question, 5 out of the 10 people disagreed with the statement that the application is unnecessarily complex (1 Somewhat Disagree and 4 Disagree) while the other 5 people who did the survey thought that the application is unnecessarily complex (3 Agree and 2 Somewhat Agree)
 - For the third question, 5 out of the 10 people thought that the application was easy to use (4 Somewhat Agree and 1 Agree). In the rest 5 people, 3 of them stood on neutral position while 2 of them disagreed with that the application was easy to use (1 Disagree and 1 Somewhat Disagree).
 - For the fourth question, 9 out of 10 people chose a page in the application as their favorite page (4 votes for Search Restaurant page, 3 votes for Browse Review page and 2 for Create/Edit Review Page) while 1 person stated there is no page special to him/her.
 - For the last question:
 - 5 out of 10 responses said some features in the browser review page and search restaurant page are confusing. (one

for “typing ‘confirm’ to clear all reviews’, another one had problems with restaurant name, two was confused about the combination of radio buttons and inputs’ and one reported a bug in searching by date function.

- 3 out of the 10 participants had some problems with the Create Review page. The first issue that is reported from the participants was that the input field for restaurants’ telephone numbers was unnecessary. The second issue was that for every time the users enter the page, the application automatically scrolls to the bottom of the page. The last issue was that the user would have felt better if he could select a restaurant instead of entering the whole restaurant’s name by himself.
- One tester said that it is not easy to understand the functions in different pages and another said the temporary data on the application was too easy to be reset by some accidental actions.

- **Scenario Completion Recordings:**

- **General response:**

- Most people were shown to be confused about the combination of radio buttons and input boxes in the browser review page. When they were searching for other attributes, some of them forgot to check the radio button beside the input box and ignored the search attribute hint at the right bottom of the screen.

- **Recordings from Shuo Zhang’s Participants:**

- Two participants who did the test in the first week of December found that when they were searching the restaurants by the last attended date with “date of today” entered, the expected restaurants were not shown in the summarizing table.
 - Two participants accidentally ignored some part in the instruction and directly clicked the website button in the search restaurant page instead of right click to open in the new tab. So the temporary data store in the front-end lost and they had to re-create in the create review pages.
 - Other parts of the scenarios are completed successfully.

- **Recordings from Hongzhao Tan’s Participants:**

- One participant found that when he was searching the restaurants by average price and typing in the input box, if the “Enter” key on the keyboard was pressed, the web page would be refreshed and the application would be restarted.
 - In one of the participants’ recordings, the participant was doing the test with the browser’s page taking half of the whole screen, and

the layout of the webpage was shown to be different from what it would be normally (i.e. When the window was taking the whole screen or more than only half of the screen for some extent).

- Other parts of the scenarios are completed successfully.

Result Analysis:

• Findings Summary Table:

Issue Type	Issues	Page	Recommendations	Ease of Fixing	Issue level
Search Result Not As Expected	<p>When a review is written or a restaurant is lastly attended between the 1st to 9th of a month, it cannot be found through search by date(last attended date) method.</p> <p>It was because the input box always returns the string of the date with 2 digits(i.e. "01" to "09" for the first to the ninth) while the getDate() function would only return one digit (i.e. "1" to "9" for the first to the ninth) which causes mismatch of string.</p>	Search Restaurant Page and Browse Review Page	Give an if condition to the getDate() method to add a "0" in front of any single digit Date in order to match the value obtained by calendar input.	Easy	High
Webpage Layout	When the user was letting the browser's window taking half of the screen, the layout of the webpage would not be styled the same as what it would be if the window was taking the whole screen	All pages	Add extra layout style in css using @media screen and (max-width: XXX) ...	Medium	Low
Unexpected Behavior	Even though there was no code in the script that was specifying what the application would do when "Enter" is pressed, pressing the "Enter" key when inputting the average price of the restaurant would unexpectedly refresh the webpage.	Search Restaurant Page	Specify in the script that either nothing would be done or the application would search out the restaurants that have average price lower than user's input when the "Enter" key is pressed.	Easy	Medium

Loss data after navigating to other websites	When the user left clicks the "jump to UberEats" button beside a search result, the browser will navigate to UberEat website (not in a new tab) and the review data created will be lost.	Search Restaurant Page	Implement the backend site to manipulate the review data Or change to windows.open() method to open UberEat in new tab	Hard-for backend implement Easy-for change to new tab	Medium
Search by wrong attribute	Wrong result will be shown if the user forgets to select the radio button beside the input box chosen to be the filtering attribute.	Browser Review Page	Instead of using a radio button to select the attribute, add a global variable and an onclick event to every input box that changes the value of the global variable when clicking on it. And the "Go" button will use if condition to match the filtering attribute with the global variable. Color of the selecting attribute should be different from others to indicate to the user that it is the chosen attribute.	Medium	Medium

From the results of usability test, the members of development group have learned that:

- The application was generally performing well and as expected when it is running under an expected environment (e.g. full screen) and the users inputs are regular. However, it performed poorly when the environment and/or the users' actions were irregular.
- Even though it has been mentioned in the design document that the application will run under full screen, when stylizing the webpage, the members should take more possibilities of the sizes of the window into consideration.
- When implementing and testing the application, the group members should consider more possibilities about what the application would do when different types of users' inputs (especially the actions that are not specified in the script and the irregular actions) are entered
- Users usually will ignore some changes in the bottom corner of the page (e.g. text about searching attributes at right bottom corner), but they can easily catch changes in styling (e.g. a red delete button pop up, changing color when hovering mouse on the button). So it is better to use the styling change to provide hints instead of text. If text is needed, it should be in large size and in a conspicuous place.

- User do not like unnecessary operations, (testers do not like the combination of radio button and input boxes and they usually forget to check the radio options) so it is better to minimize steps for a certain operation (e.g. when inputting a attribute, user want the system to be aware that the editing one is the chosen attribute instead of needing to check some buttons to confirm the selection).
There is a tester

Recommendations:

1. The development team should give an if condition to the getDate() method to add a "0" in front of any single digit Date or Month so that the string that represents the date when the review was created or the restaurant was last attended would match the string returned from the date input box.
2. The development team should add extra layout style in css using "@media screen and (max-width: <some value>)" so that the displayed content that overflows out of the size of the window would be hidden but not causing the layout to be rearranged abnormally.
3. The development team should specify in the script that when the "Enter" key is pressed, either nothing would be done or the application would search out the restaurants that have average prices lower than user's input so that the webpage would not be refreshed and not frustrate users.
4. The development team should add windows.open() method in the script that specifies application's action when "Jump To Ubereats" button is clicked to open UberEats' homepage in a new tab so that the users would not need to manually open UberEats in a new tab by right clicking the button which saves
5. The development team should change the radio option to an onclick event to every input box which will change the color of the input box and change the value of a global variable when clicking on it. And the "Go" button will be used if condition using the filtering attribute that matches the global variable value. By doing this, the user will not need to additionally select the filtering attribute and the different color of input boxes can work more effectively on indicating the chosen attribute to the user.