

DELIVEREATS Project Evaluation

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I. INTRODUCTION

The purpose of this project DeliverEats is to provide the users price comparisons between delivery apps such as Postmates, UberEats, DoorDash, etc. to ensure that they receive the best service and price when they are ordering from DeliverEats. The convenience from having many restaurants in this single food delivery app allows users to save time and money all in one application. Users should consider this project important because there are an increased amount of users ordering their meals using delivery apps for their own convenience. Therefore, DeliverEats will serve as a purpose to implement features that make the ordering process simpler, usable, and useful to ensure accessibility when navigating through this app. Enabling the live price comparisons between delivery apps integrated into this single app is beneficial for the users to order their meals and make the decision with which delivery service may save them time and money by a few clicks. It is easier than ever to know who offers the better deals or can ensure quick delivery times with this app. Furthermore, implementing important features such as searchbars, maps, settings, shopping carts, restaurants, and linked delivery apps will allow users to have a positive experience interacting in this app. If DeliverEats delivers functionality that is both usable and useful to its users, then we may ascertain that the application will be highly favored by research participants.

II. PRODUCT DESCRIPTION

DeliveryEats is an application where users can order from restaurants and choose from a list of delivery services that may be more convenient with price and delivery times for users. When first opening this application, the user is asked to create

an account or sign in, if the user had already created an account previously. The user is asked to also create a strong password, requiring to enter at least 8 characters in length and 1 capital letter for added security. The user may then use that password to log in to their account with a username or email address.

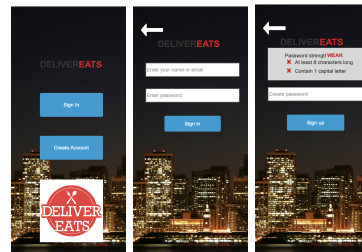


Figure 1 - Account Creating

The user's information is saved in the "Account Information" section of the setting tab inside the application. As well, the user can see their past order history when inside the settings tab. The user is able to access the Account Information and Order History in the settings menu button that is located on the top left most corner of the application at all times throughout the ordering process. Also the user can log out from their account with the "Logout" button located in the settings menu.

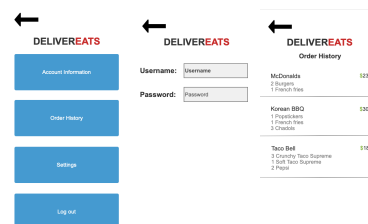


Figure 2 - Menu Information

As soon as the user creates an account, the user may choose a restaurant based on three categories

consisting of recommendations based on search, nearby restaurants and good deals. Each category provides a list of restaurants where the user can choose the restaurant that he or she wants. However, the section with the nearest restaurants also provides a map where the user can find restaurants based on their current location. The user can get access to the map by clicking on the “Nearby Restaurants” section or on the image of the map in the top right of the page. In addition, the user can choose a restaurant by using a search bar that is provided on each page.

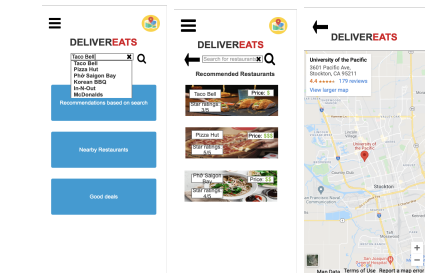


Figure 3 - Choosing a restaurant

Each restaurant has a menu that is based on the restaurant’s cuisine. The user can choose from their restaurant’s menu options which include food, drinks, appetizers, and other food items. Then items of the chosen food are added into the “Shopping Cart”. The user can get access to the “Shopping Cart” by clicking on the image of the cart on the top right corner of the page or by confirming the order. If the user is not satisfied with the order, the user can delete the order by clicking on the “Delete All” button located underneath their items.

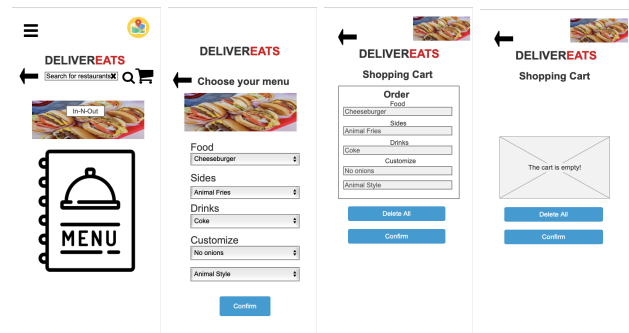


Figure 4 - Make an order

The last step is choosing a preferable delivery application. As the user confirms the order, the user is able to see a map and three delivery options. The information about the delivery expenses and estimated time delivery is provided on this page.

The user can click on the image of one of the delivery applications in order to move to the application’s website. However, if the user can not find a preferable delivery application, the user can choose the “App not found?” button that is located at the bottom of the page. This button leads to the list of delivery applications where the user can choose between many delivery options and have them downloaded, based on the user’s preferences.

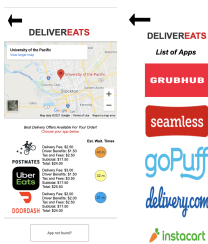


Figure 5 - Delivery Applications

The user always can go back to the previous page by clicking on the “Back” button on the top left corner. In the settings, DeliveryEats provides a “Help” page where the user can get familiar with the application. Also, the settings have information such as the list previously mentioned, in order to download the necessary apps to complete their ordering process. In the “Downloading Apps”, the user has access to AppStore and Google Play. In the “Delivery Apps”, the user can see a list of these delivery applications.

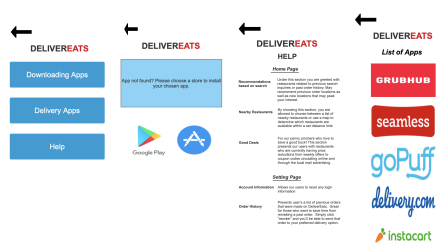


Figure 6 - Settings Information

III. EVALUATION

The purpose of our evaluation is to determine the usability of the DELIVEREATS application. Specifically, this research is to determine the usability of the design and layout by answering these questions:

- 1. Can subjects create an account?
- 2. Can subjects look at different restaurant menus?

3. Can subjects complete their orders by choosing their preferred delivery app?

By answering these questions, we are able to gauge the features implemented to see if they are usable.

A. Procedure

In order to answer our research questions, we had users follow a procedure that required them to interact with a high-fidelity prototype, which has access to only three different features being account creation, chosen restaurant menus, and order completion. The procedure is as follows:

1. Provide user with information on the usability testing overview, then ask for consent to proceed.
2. Once consent is given, the user is asked to follow a series of steps:
 - a. Open the application on their web-browser, using the project link provided by an examiner.
 - b. Create an account by clicking on the Sign Up button on the front page.
 - c. Log out, and sign back in by clicking on the sign in button on the front page.
 - d. Find a restaurant and place an order in their menu.
 - i. Scroll through the different options in the menu and select different items.
 - e. Complete the order by navigating to the cart and hitting confirm.
 - f. Choose a delivery service option based on time/cost/distance.

3. Complete a user usability survey after completion of these steps.

The number of subjects who participated in this survey was 6. One subject was absent on the day of the experiment.

B. Data Collection

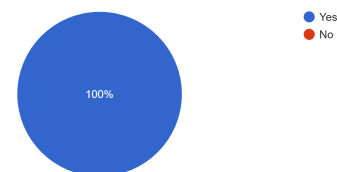
Data collection for DeliverEats was conducted through in-class evaluations with fellow student volunteers. The evaluations were based on user usability surveys which included both qualitative and quantitative questions. Based on the functions/features that were tested by the volunteers, we were

able to record their responses to how the users' experienced these features. The data collected included a mix of short responses, multiple choice questions, and implemented the use of the likert scale to measure user opinions quantitatively. The main functions of DeliverEats that were tested upon were account creation, and through natural exploration of DeliverEats, users were able to search through different restaurant's menus and last, the user's were observed to confirm they were able to reach the check out page with the option to choose between delivery apps. During the data collecting process, we considered our dependent variable to be the survey response scores, meaning a higher percentage, the more likely the user understood how to use a function. The independent variable in our tests were the users themselves, as we guided them through the process, we manipulated the speed at which they understood functions. The intervening variables in this case were the user's thoughts while learning the functions of DeliverEats.

C. Analysis

The data collected through the user usability survey was analyzed through charts and graphs created after all the results came in. These charts and graphs helped us determine whether our research questions were answered through this experiment.

Can the user create an account?
6 responses



How easy was it to create an account?
6 responses

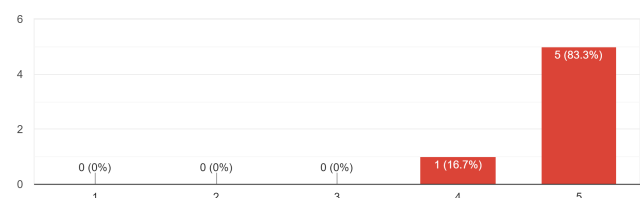


Figure 7a and 7b - User Account Creation Survey

Six subjects were tested on their ability to complete the user account creation process. Based on Figures 7a and 7b, we were able to ascertain that all of them were able to accomplish this task relatively easily. Six subjects answered a question regarding the ease of use of the application to complete the task on a Likert scale 1 (hard) to 5 (easy). 5 subjects answered 5 to the question, and 1 subject answered 4. If the answers would have been more spread out, the data would represent that some subjects had difficulty completing the task, which would tell us that some users cannot create accounts.

Can the user find recommendations based on their search?
6 responses

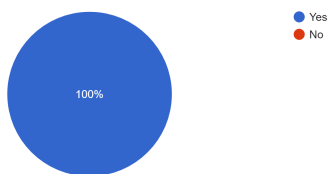


Figure 8a -

All six subjects were tested in their ability to navigate through the home screen to find “Recommendations” based on their search. As seen in Figure 8a, all the subjects, all of them were able to complete the task.

Can you add items to your cart?
6 responses

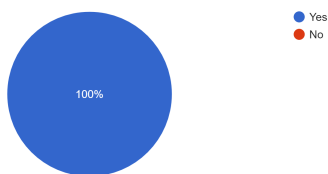


Figure 8b -

After navigating to recommended restaurants, the subjects were then asked to add items from a restaurant from the menu to their cart. As depicted by Figure 8b, all of the subjects were able to complete the task.

How easy was it to add items to your cart
6 responses

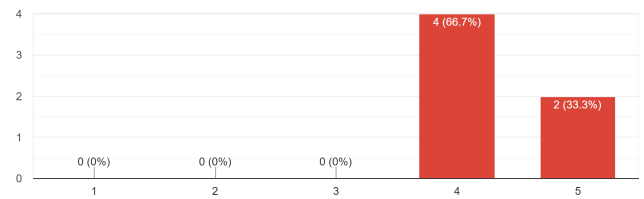


Figure 8c -

Figure 8c is a Likert scale that shows that the process to add items to the cart was “relatively” easy to complete. Four out of six subjects responded to the ease of use survey with a “4” on the scale, and two subjects responded with a “5” on the scale. This data can be interpreted as the process that we had created to add items to the cart in the application was easy for few, and somewhat easy for others. “Somewhat” easy can be described as the user having some difficulty understanding the process or having some trouble completing the task without help.

How easy was it to complete an order?
6 responses

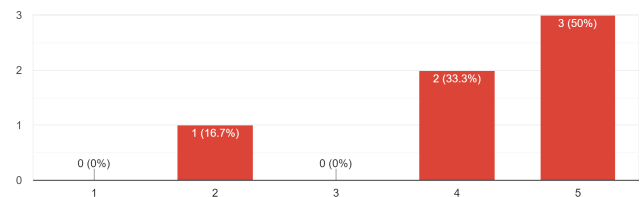


Figure 8d -

After adding items to their cart, subjects were asked to complete their order by hitting the confirm button and seeing if they are being redirected to the food delivery application of their choice. Subject responses were more spread out on this survey as three subjects responded with “5”, two subjects responded with “4”, and one subject responded with “2” on the Likert scale seen in Figure 8d. This data demonstrates that the ability to complete an order was relatively easy for the majority, while it was hard for the minority.

Can the user see the list of settings?
6 responses

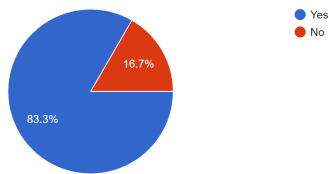


Figure 8e -

After completing the order, users were asked to navigate and find the settings tab in the application, which was found by clicking the ladder-like lines in the top left corner. Figure 8e shows that out of six subjects, 5 were able to complete the task, whereas one was unable to do so. This data represents that the task may have been difficult to complete.

Was it easy to navigate to the settings tab in the menu?
6 responses

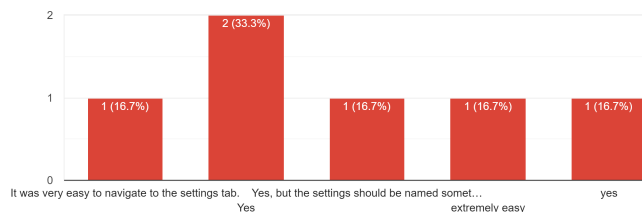


Figure 8f -

As seen through the mixed responses in Figure 8f, the majority of the responses came through the 1-3 range of the Likert Scale. This can be interpreted as the subjects having a difficult time understanding what to do in order to accomplish the task.

IV. RESULTS

Based on the results from our Analysis, we asked our research volunteers to complete the questionnaire that determines their satisfaction for interacting with this app. The results are shown from the questionnaire and charts above based on the research questions provided. Creating a user account, 6 subjects indicated that they are able to create a user account at the start of this application by entering the username and password. Navigating for different restaurants, 6 subjects indicated that they are able to look at different restaurant menus through the search bar and navigation of the homepage. For completion of the order, 6 subjects

indicated that they successfully completed their order by choosing their preferred delivery app. Therefore, most of the test subjects are able to complete the tasks based on the research questions given.

The charts that's scaled 1 to 5, show the ability of the subjects completing the tasks. Some subjects have slight difficulties completing tasks such as completing an order and navigating through the settings. Some subjects are able to complete most of the tasks satisfied. These results are largely dependent on the subjects' preferences that can potentially affect the application DeliverEats.

V. Conclusion

Thorough investigations into the usability and usefulness of DeliverEats, user satisfaction questionnaires determined a favorability to the application thus affirming to our hypothesis. In this paper, the functions we deemed as necessary were tested and implemented into DeliverEats. Based on the questionnaire responses, they suggest that users find creating accounts within the application, as a quick and simple procedure during the testing phase of the research. On searching for restaurants, the participants had little to no issues while adding items to their cart. Users generally had some difficulties with navigating through the settings and completing an order once they had added items to the cart. Lessons learned from this study is that users enjoyed interacting with the features implemented in the app, DeliverEats, through the process of completing an order. Although difficulties arose for one of six, we can concur that the general consensus was a strong likability to the number of features as well as concept for a product not in the market currently. These evaluations are providing guidelines that suggest further improvements are considered to improve user experience in this application.

Future plans are to consider implementing features that are simpler for users to navigate through the settings and completing orders. Further methods such as adding widgets, slides/pages, and a pop-up widget will improve the usability of completing an order. The procedures needed to prepare for a simple and understandable data collecting process are what allow us to consider

how to improve user navigations and preferences. Continuously learning and improving the functionality of DeliverEats will make an impact on

the users of the application as we strive to provide them with money and time-saving options.