

6.831 – HW2: Heuristic Evaluation

Evaluating: GroupOrder

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1 Good Points

1.1 The process of placing an order is very clear to the user

Heuristic Nielsen 10 (Aesthetic & Minimalist Design), Nielsen 3 (Help & Documentation)

Description The home-page is clearly laid out. The usage of **1. Order, 2. Delivered, 3. Eat** in bold serves well to inform the user of the process in which he or she is about to undertake. This is excellent use of value/contrast to highlight the important points of the sentence. The progress bar at the top also reinforces the process sequence. There is a generous use of whitespace to separate the different portions of the home-page clearly, and this is consistently well used in subsequent pages.

1.2 Buttons provide clear affordances whenever they are available to be clicked

Heuristic Nielsen 1 (Consistency & Standards), Nielsen 7 (Error Prevention), Nielsen 5 (Visibility of System Status)

Description The buttons have clear enabled and disabled states visually, and also appropriately allow or disallow mouse clicks to help prevent errors. The style of the buttons are consistently used throughout the application to maintain internal consistency.

1.3 The few colors used throughout the application are consistently used

Heuristic Nielsen 1 (Consistency & Standards), Nielsen 10 (Aesthetic & Minimalist Design)

Description The number of colors used in the application is kept to a minimum, with a consistently used palette throughout. The generous use of whitespace makes visibility of the various components clear, and overall, the application has a professional look and design.

1.4 User-entered information is maintained when going back and forth through the screens

Heuristic Nielsen 9 (Error Recovery)

Description It is comforting to know that navigation across screens maintains the state of information which was input by the user. This helps error recovery by returning the user back to the state he or she was in in the event of a mis-click of a button.

1.5 Validating the phone number entered by the user helps prevent errors

Heuristic Nielsen 7 (Error Prevention)

Description It is extremely important that users do not make a mistake when entering their contact number; and the system does well to prevent errors by validating that the phone numbers match valid ones in terms of their length. This helps to prevent typographical errors. The ‘Place Order’ button also is disabled to ensure that the user is not able to proceed with an incorrect phone number. This encourages the user to learn by doing, as by entering the number correctly, the warning message would be removed and the ‘Place Order’ button will be enabled.

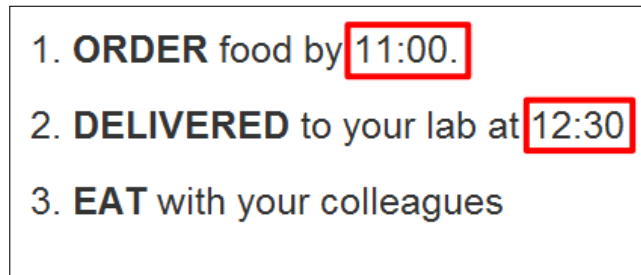
2 Usability Problems

2.1 Timings shown on homepage could use more precise terminology

Severity **Cosmetic**

Heuristic Nielsen 1 (Consistency & Standards)

Description Though it might make sense that the timings are 11:00 A.M. and 12:30 P.M., it doesn't explicitly state whether the timings that are listed actually reflect the respective times.

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1. **ORDER** food by 11:00.
2. **DELIVERED** to your lab at 12:30
3. **EAT** with your colleagues

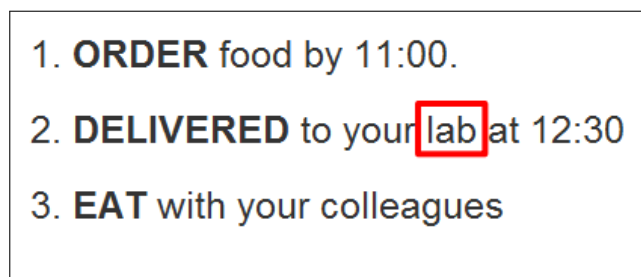
Recommendation Include A.M. and P.M. to the timings.

2.2 Usage of the term “lab” on the home page

Severity **Minor**

Heuristic Nielsen 2 (Match the Real World)

Description The use of the word “lab” has two meanings – the physical office space and the abstract group which you are a part of. For the former case, the user might interpret this as suggesting that the food can only be delivered to a particular lab's office location, and not somewhere else (perhaps you might be holding the meeting at a slightly different location). For the latter case, it might suggest that the user may not use this if it were a different group of friends who might be in the same location.

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1. **ORDER** food by 11:00.
2. **DELIVERED** to your lab at 12:30
3. **EAT** with your colleagues

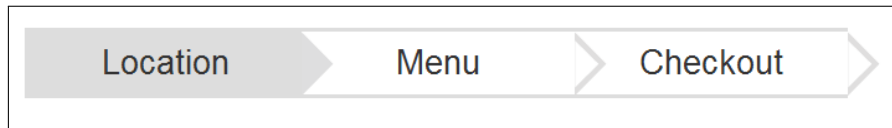
Recommendation Rather than using ‘DELIVERED to your lab’, perhaps use the phrase ‘DELIVERED to you...’ or ‘DELIVERED to your location...’.

2.3 Colors used for the completion bar have poor contrast

Severity **Minor**

Heuristic Nielsen 5 (Visibility of System Status)

Description The completion bar at the top fills up with a gray color as the user progresses through the pages. Gray is often used as a color to indicate incomplete, or unavailability (For example, the gray color is used to indicate that “Ramen House” is unavailable”).



Recommendation Use more contrasting colors to differentiate between an incompleting and completed portion of the navigation. Also, you could use visual variables such as checkmarks in the event you use a color such as green such that it is color-blind friendly. The figure below shows an example of what Amazon.com employs – uses gray to indicate un-fulfilled portions, uses orange to indicated completed sections and uses an icon to indicate where the user is currently at along the flow.



2.4 No navigation capabilities in the completion bar at the top of each page

Severity **Minor**

Heuristic Nielsen 4 (User Control & Freedom), Nielsen 6 (Flexibility & Efficiency)

Description The completion bar at the top does not seem to allow navigation back and forth, which might be expected as several sites with progress bars tend to allow you to do so. A concrete example is if a user is on the checkout page, and decides to change menus – he or she would have to back-track twice in order to reach the required page. Enabling navigation would be a good use of double duty for the progress bar: 1. Showing progress of the user. 2. Allowing user to navigate through the system.

Recommendation Allow the navigation to bring the user to whichever portion of the navigation he chooses. Also, it would be good to maintain the state of the user’s selection should he go back and return, i.e. When he or she is at Checkout, the user clicks on Location and then back to Checkout, it should remember the food choices made in the Menu.

2.5 Quantity displayed in the Checkout Page has low visibility

Severity **Minor**

Heuristic Nielsen 5 (Visibility of System Status)

Description Currently, the quantity of items ordered is shown using a number listed within brackets. The font, color and style used does not differ from those used for the corresponding item’s name. Because of the difference in length of the names, the quantity numbers are not aligned; and could be difficult for a user to scan through if the entire order list is long and has many different food names.

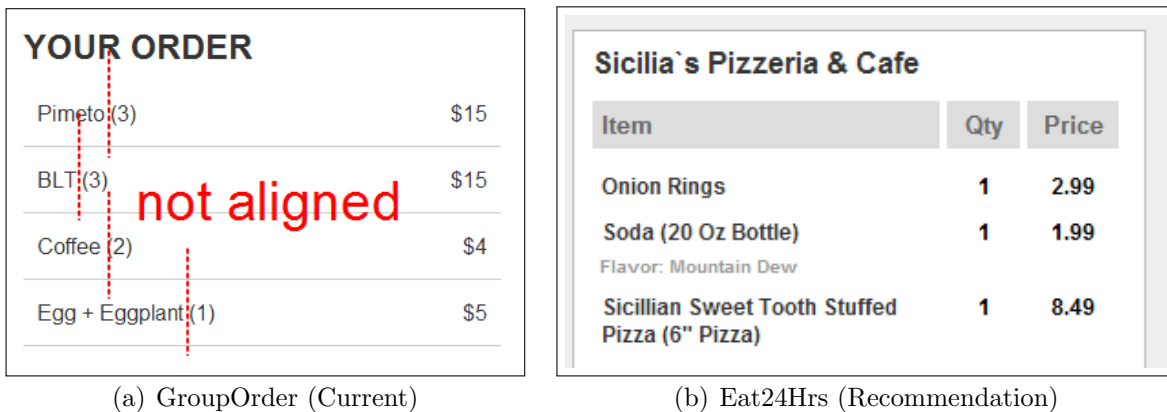


Figure 1: Showing how the quantity is made more visible by using columns

Recommendation Perhaps use separate columns: one for the item name, the other for the quantity and finally one for the sub-total. This will help unclutter the screen and allow the user to be able to have more visibility of the items and their quantities. Figure 1b shows an example of how Eat24Hrs.com employs this.

2.6 Usage of “Delivery Notification” in the Checkout Page”

Severity **Minor**

Heuristic Nielsen 1 (Consistency & Standards), Nielsen 3 (Help & Documentation)

Description It is unclear whether the notification would be a text message, a call or perhaps something else. Also, it doesn’t suggest that it might be a number that would be used to contact you in the event of problems with the order.

Recommendation Rephrasing the text to "We will use this number to contact you upon delivery, or in the event there are any problems with your order." might be a clearer indication of what the telephone number would be used for.

2.7 Requiring a "Mobile" number in the Checkout Page

Severity Major

Heuristic Nielsen 4 (User Control & Freedom), Nielsen 1 (Consistency & Standards),

Description This might end up restricting the user – perhaps he or she does not have access to a mobile phone and might want to specify a land-line number. Also, sometimes the term cell-phone might be more familiar as opposed to mobile. Also, the heading uses the term 'Mobile' but the instructions in red mention 'phone'.

Recommendation Do not restrict it to just mobile numbers, and perhaps prompt the user for a contact telephone number (usually this is understood to apply universally to both mobile numbers and landline numbers).

2.8 The term 'valid' number does not indicate what constitutes a valid number.

Severity Major

Heuristic Nielsen 2 (Match the Real World)

Description It is not entirely clear what constitutes a valid number. Does it need to be a mobile number? Landline number? Or does it have to be in the same area code as MIT?

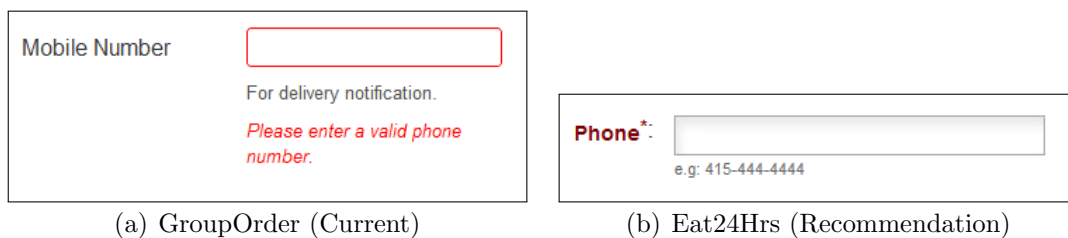


Figure 2: Showing how a user can learn what constitutes a valid phone number

Recommendation If it simply wants to ensure a certain format, it might be simpler to provide an example of a valid phone number. Figure 2b illustrates how Eat24Hrs.com employs such a technique by listing an example right below the textfield. This allows the user to learn by example.

2.9 Unit price of food items not visible in the Checkout Page

Severity **Major**

Heuristic Nielsen 8 (Recognition, not Recall)

Description In the checkout page, the price listed for each item ordered is the total across the quantities. If the user wishes to know the unit price of the item, he or she would be forced to perform calculations manually by taking the total price divided by the quantity. This becomes more difficult when prices are not whole, round numbers.

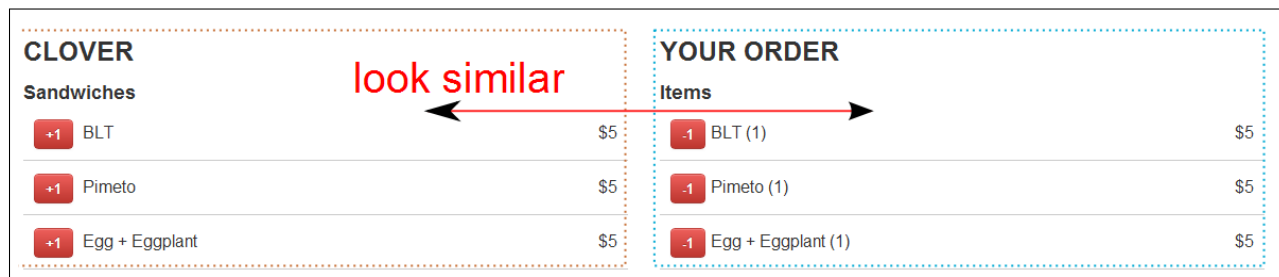
Recommendation Separate columns can be similar employed in this case to separate out the unit price and sum price.

2.10 The “Your Order” portion of the Menu Page looks similar to the menu’s list of food.

Severity **Major**

Heuristic Nielsen 5 (Visibility of System Status), Nielsen 9 (Aesthetics & Design)

Description The “Your Order” portion looks very similar to the food listing and lacks visual cues to indicate to differentiate it from the menu. When the order list is not empty, the page ends up looking like a two-column menu. The font size, style and color of “CLOVER” and “YOUR ORDER” are exactly the same, though they are semantically different headings.



Recommendation Use slightly different layout and colors to differentiate the order summary and item menu.

2.11 The listing of food items in the menu might become unwieldy for long lists

Severity **Major**

Heuristic Nielsen 5 (Visibility of System Status)

Description Currently, each item is placed in a category. If the number of items listed increases to dozens (which is likely), and the number of categories increases too; it might become inefficient to have to scroll through large lists. (For example, I just want a starter and a beverage – I will likely have to select something at the top, and then scroll all the way down to select the drink).

Recommendation Allowing the items within a particular heading to be collapsible will improve efficiency for the user to quickly reach the categories he is interested in. Also, it might be a good idea to enable the order summary to automatically track up and down the location of the page based on where the user is. Adding a toggle to disable that will help grant the user control over such a feature.

2.12 Incrementing/decrementing of an item in the “Your Order” portion is not centralized

Severity Major

Heuristic Nielsen 6 (Flexibility & Efficiency), Nielsen 9 (Error Recovery)

Description Currently adding an item can be only done on the left portion of the menu page, whilst decrementing is done on the right portion of the menu page (under “Your Order”). Thus, a user who wishes to make changes to his order by incrementing would have to first search through the menu list (on the left portion), and then use that the increment button there. This might be a problem if the list were to be longer. Another example would be if the user accidentally added too many items, and is somewhere lower down in the list – he or she would have to scroll back up and then scan through the “Your Order” pane to find the item to decrement. Fitt’s Law comes into play here becomes of the large distance between the small buttons.

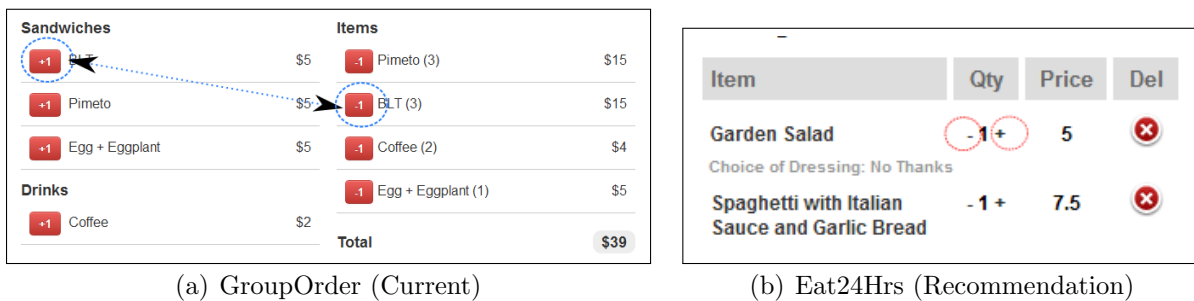


Figure 3: Separating (GroupOrder) versus Localizing (Eat24Hrs) the increment and decrement buttons

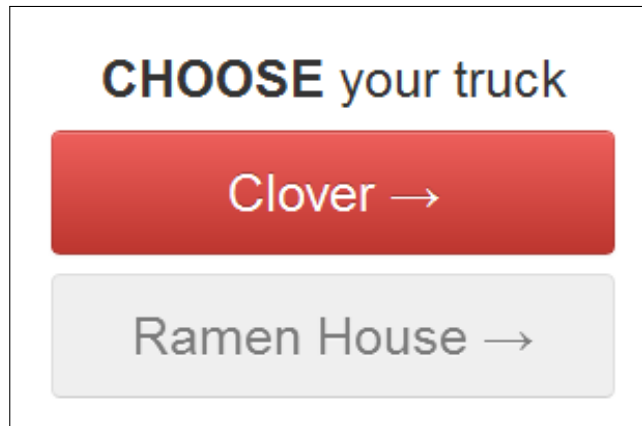
Recommendation Place both increment and decrement buttons in the order summary; the user will then be able to make modifications directly on the order without having to switch back and forth between the menu and the order summary, and also removes the need for the user to search for an item just to increment its quantity. This is shown in Figure 3b.

2.13 Lack of information as to the unavailability of “Ramen House”

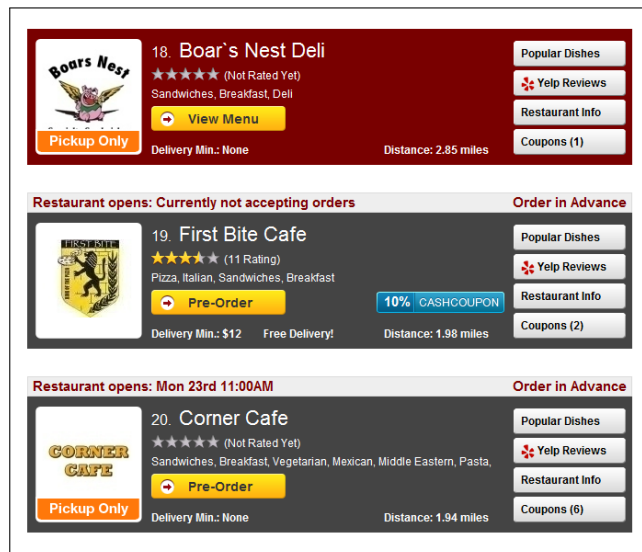
Severity **Major**

Heuristic Nielsen 5 (Visibility of System Status)

Description The option for “Ramen House” is grayed out, but there is no information to indicate as to why it isn’t selectable (Is it closed? Am I ordering too early?)



Recommendation Add additional information as to why the selections are unavailable. The example below illustrates a way to provide information to the user as to why options are not available.



2.14 Browser’s ‘Back’ button does not possess any functionality

Severity **Major**

Heuristic Nielsen 4 (User Control & Freedom)

Description The ability for the user to use the back button on his or her browser seems to have been overridden to make it not function. While the reason might be to force the user to use the provided navigation buttons instead, it feels unnatural being unable to go back and might surprise the user as to why the back button has lost functionality. This is especially noticeable if the user navigates from an unrelated page onto the home page – he or she is now unable to return back, and feels unnatural.

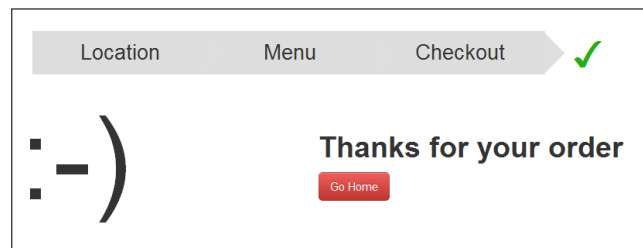
Recommendation Allow the user to make use of his or her browser’s back button if need be, and perform the required steps to ensure that it does not break the state or lose information. It should function just like, or at least similarly, to the behavior of pressing the provided buttons.

2.15 There is no feedback to indicate whether the order was successfully delivered

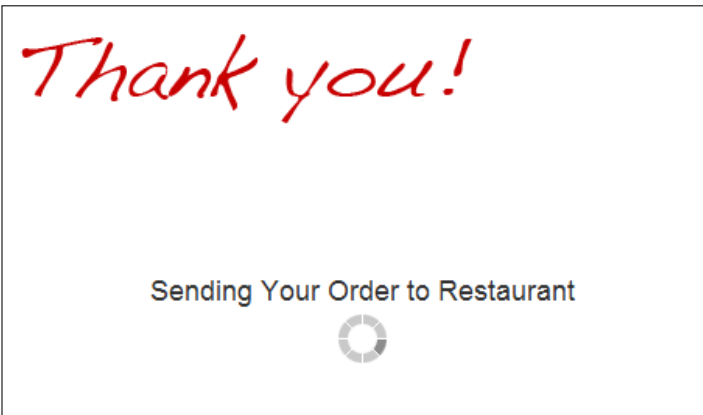
Severity **Catastrophic**

Heuristic Nielsen 5 (Visibility of System Status), Nielsen 9 (Error reporting, diagnosis & Recovery)

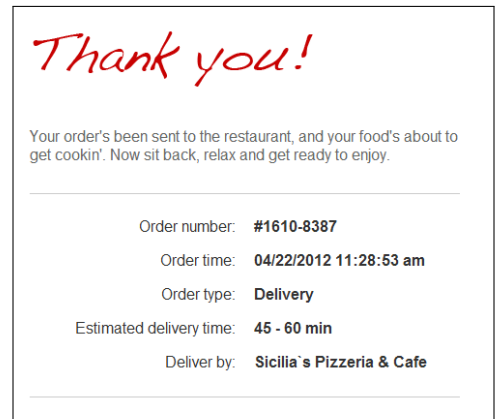
Description The resulting page upon placing the order does not have any indicator about whether the order had actually gone through. It merely thanks for the user for the order, without stating whether or when the order would be forwarded to the delivery destination.



Recommendation Provide some indication of whether the order has been processed and successfully sent. You can do this by first displaying a message that the order is being sent, and then changing it to a message where it explicitly says that the order has been successfully delivered. This is illustrated below.



(a) Processing order screen



(b) Confirmation Screen

Figure 4: Feedback showing the order being processed, followed by a confirmation in Eat24Hrs.com