

Badger Shop

Empathy-Driven Redesign Using Component Libraries

In this project, I will practice design thinking and visual design methods to improve upon Badger Shop. I will complete this project in three parts.

In the **first** part, I will practice using the "empathy" method (the think-aloud protocol) that we have discussed in the *Design Thinking* as a method that will give me the most bang for the buck in terms of understanding user needs, preferences, and behavior. Specifically, in the think-aloud, I will (1) identify users who represent my target group of users, (2) identify/develop tasks that represent the functioning of the target system, (3) observe users as they perform the tasks, and (4) analyze my data to develop design insight.

In the **second** part, I will practice the ideation and visual design principles I have learned in the *Visual Design* lecture to turn my design insight in the first part into a redesign of the Badger Shop website I have created, expressed in a layout sketch.

Finally, in the **third** part of the assignment, I will implement the design I created in the second part using the Bootstrap component library. This three-part assignment will take me through user research to ideation and from sketching to implementation of user-facing elements. Follow the instructions below to complete the assignment.

Part 1: Think-aloud

Step 1. Identify users. Who uses online shopping? Describe below the characteristics of this user group, identify one person (a roommate, a friend, or a family member) who might be willing to take part in my user research, and ask the person for their interest/availability.

The Wisconsin students or faculty who need commute work to the university and want to save time on purchasing daily supply after work to markets.

This e-commerce account webpage is to manage and facilitate customer's orders and allows users to monitor their orders and subscriptions. Users are able to pick up their deliveries at the closest Badger Shop near them. The online management system will show customer's order history and allow users to decide whether or not continuing their subscriptions.

Chen is a Wisconsin student who needs to attend on-campus classes and have no car to commute. He will take part in my user research.

Step 2. Develop tasks. Study the new Badger Shop application, to develop a set of tasks that users might perform with the system. Rank my list in terms of importance (simultaneously considering impact, frequency, prevalence) and identify the top three tasks. Describe each task in 1–2 sentences in a way that my users can understand.

Note: My tasks can focus on the general visual and click-through navigation of the site and interact with personal information in a very limited sense.

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- Navigation bar 1
 - Show a list of info that user can go through as soon as possible.

- It is the first object that user will see
 - Sometime, designer will decide to fix its position on the entire screen
- Manage continuing subscribing orders **2**
 - User manages their order history and subscription in tables
 - In the same row of a table, it needs a visual highlighted color when user hover on one item of the table
 - When managing subscription, user can cancel each row by clicking cancel button
- Print order receipts **3**
 - A visible download receipt button is helpful when user needs to print, so the button should be straightforward to identify
- Search Box
 - Whenever user is finding certain item, they go to Search Box in the navigation bar
- Authentication
 - Users will need to sign-in and sign-out to see their personal order and subscription

Step 3. Perform think-aloud. Hold a think-aloud session with my representative user (e.g., over Zoom using screen sharing) on **a real shopping website** (NOT the BadgerShop interface). First describe to my user how the think-aloud will work (refer to the reading and class notes), describe the tasks one at a time (answer any questions I might have), and ask them to perform each task while they say out loud what they are thinking.

Pro tip: If I see my user performing the task but not speaking, probe them by asking what they are thinking or reminding them that they should be describing.

As I observe my user performing the tasks, take notes (using the other sheet) of important actions, problems they encounter, confusions they might voice, and so on. For anything that stands out, after each task, ask my user why they did that or said that. My observations and notes will form my data. Include my data below.

Note: If my tasks involve entering or reviewing personal information, I can ask my user to stop screen sharing while they perform these actions in order to preserve their privacy.

We decided to hold a think-aloud session on [bestbuy.com](https://www.bestbuy.com).

I created a list of tasks and ask my representative user - Chen to perform on his own. I asked Chen to find the closest location of BestBuy and check the availability of PS4 in this BestBuy web. If PS4 in the store was out of stock, then find the nearest BestBuy store where PS4 is available.

Tasks I assigned –

- Find the closest BestBuy location near him
- Check for the availability of PS4
- Find the BestBuy store where PS4 is available near him to pickup
- Start to put this available PS4 into the Cart

First, he simply saw the button on the navigation bar, it just shows “West Madison” which was calculated based on the IP address of his laptop.

- In this task, BestBuy website did a great job of showing information of the closest BestBuy store near the user. It is intuitive because a user or a customer at the very beginning will think “is this shop far

from me or not, if it is far, I will pick a nearest location of store and buy my stuff.” And navigation bar is always the very first look after looking the logo of website-BestBuy icon. Therefore, every object on the navigation bar is important.

Secondly, Chen was asked to find available PS5 on BestBuy web. Chen thought he has to sign up for the website first, so he could start searching availability at first, but, it doesn't. He, like most of the users, type “PS4” on the search box on the navigation bar and hit Enter. After the result on the searching engine page, it was quickly shown right after the bottom of first searching item, with a text - “Sold Out” with bold, red color.

- The area of the search box on the navigation bar is about 30% size of the entire the blue navigation bar, and the contrast colors are the navigation bar's blue and the search box's white. Chen clicked the box without thinking before typing “PS4”.

Third, he typed and searched “ps4” in the search box, and it shows “We didn't find any products that matched your filters”. When Chen could not find PS4 on the location that provides PS4, he would then click the top left corner icon, went back to the main page, and clicked the search box again. This time he used left filter and applied the condition he wanted. He clicked “Store Pickup at” button and selected “All stores nearby” button. He could find some PS4 available, and the system shows “High Demand Product”. This time the system told Chen, in your location, PS4 cannot be picked up. However, BestBuy only shows “Pickup not available for this item” and “Shipping not available for this item”

- The user interface is confusing when Chen searched last time. The search potentially indicated BestBuy sells PS4 and in some where they do have one, but it only shows “Pickup not available for this item” and “Shipping not available for this item” which does not allow customer to decide to keep searching on this website. Besides, it just used high contrast button shows “Shop Open-Box” to hint customers to keep going.

Finally, Chen and I think that BestBuy have PS4, but the UI does not have a add to Cart button on the product.

- When we try to do another item, eg. AirPods. It does have a yellow and white background contrast button to add to cart. Therefore, it means, in some case, if BestBuy had products out of stock in certain location, it would direct user in “Shop Open-Box” button, and it caused wired user experience.

Step 4. Create insight. In my data (e.g., notes), highlight where I saw significant breakdowns in functioning, need for better functioning, or user preferences that would require an alternative design. Make a list of my findings as design recommendations.

At the first glance, the website shows the closest location of the BestBuy to the user based on his location. We could find that on the Navigation bar, a large button of near location was already shown; however, this information is only show the location, but it does not show the intended item's availability which user would like to buy. Customers can be confused that when s/he wants to buy a certain product and would be directed to a store may not have this certain item. This website did not consider the intuition of user who thinking about buying an item and be available to be shown on nav bar; in contrast, it only shows the nearest BestBuy store.

Some be answered in Step 3.

Part 2: Design

Step 1. Visual Design. Next, using knowledge of shopping operations from the think-aloud, I will redesign badger shop with the goal of improving its visual design. First, consider what elements I must place on the canvas. All elements should have a function. If the original design included elements with no function or use, I can exclude them in my redesign. Next, consider the design principles, and ask myself, “how can I direct user attention appropriately,” “do I need to create contrast between elements,” “how do I achieve unity,” and so on. I will need to go back and forth between the elements and principles. For example, I must determine what user attention should be directed to, such as a product photo, a button, or a paragraph of text, in order to place the focal point to it. Similarly, I should think about the composition of elements to create an appropriate level of balance on the page. My redesign should be in the form of a digitally- or hand-drawn wireframe with annotations that justify the use of the elements and principles.

Elements of Design

□ Space

- I decided to put white space in both edge sides of layout. I avoid squeezing in too many items, especially, this is an account managing page. Users want to focus on their orders, and it sometimes has some issues with refunding money. I stay the page clean and only leave necessary information in the middle part to avoid irritating users.

□ Line

- The search button notifies users to press, and when they hover on the button it will be highlighted to start searching.
- The Line separated the view of welcoming from “show now”, so user can be directed to this button besides from text above.
- In the Carousel I used lines to indicate different posts that has been shown.

□ Shape

- In my design, I use rectangles to express order and subscription information, bullet points in product orders. This shape can clearly give users the digital info, like product name and those numbers.

□ Size

- The size is set to be 2 major objects in a page. These objects are deliberately fit in center part of the page and can be seen with focus.

□ Pattern

- I made a combination in dark green and light green to show all similar symbols on top of the navigation bar. It is effective that users will pick each topic they intend to go and simply redirected by these differentiable buttons with same pattern.

□ Texture

- Dark green looks impactful, and light green looks bright. This combination is effective to be used on advertising and creating sales posters. As customers, they feel confident to read table data when the background color changed to light green. This texture can be attractive and captivating.

□ Value

- The top “show now” and “End Subscription” are important redirections to user clicking to be advertised and cancel subscriptions. The lightness was created in other than dark green and light green. It was use in red to capture user’s attention. “Subscribed” tab is designed in darker green to indicate current tab.

Principles of Design

❑ Focal point

- I put the “shop now” redirect button on the center top of the page, and this should be seen first, and the white spaces were designed in both outer sides, avoiding negatively attract users’ eyes. This is focal point; text was large and bold. It is impossible to skip this part.

❑ Contrast

- I choose to use white background, and it can always be effective when I utilize green colors to start my emphasis. When users want to cancel their subscriptions, they see the red and white contrast button at the right side of each subscription. When user hover each row of order data, light green highlight will be shown in each item of row.

❑ Balance

- Dark green and light green are felt solid but a combination of easily relaxing. It softens this high contrast of white background with dark green.
- The webpage is always symmetry, making it more formal to treat users’ data, orders, subscriptions, any thing relevant to user’s right.

❑ Movement

- The movement was designed in starting from more important information to less important information. I put the navigation bar, “shop now”, user’s order, subscriptions, advertisements, and following law information. Some less important but necessary laws will just be leave in the last bottom part.

❑ Rhythm

- The structure of entire page design is in a smooth rhythm, outputting information to user. I didn’t put extremely detail in each part of structure. Users would focus on their individual orders and sometimes slightly scan through some advertisement and website helps.

❑ Perspective

- I created a small carousel widget in a sense of informative horizon part at bottom of canvas. It is not an emphasis but shows limited information.

❑ Unity

- The canvas colors mainly consist of dark green, light green, and white. It is well built with symmetry and small widgets to assisting reading.

Step 2. Specify color and type choices. Finally, determine what color palette my redesign should follow. How many colors/shades will I use? Why will I use these colors? Keep design principles in mind when I am choosing colors. For example, using contrasting colors, I can create contrast and manage user attention. Additionally, determine what category of typeface and what font I will use, whether or not I will use multiple fonts on the page, and how I will parameterize each font. I may review the fonts in my computer's fonts folder (on Windows, go to "My Computer > Control Panel > Fonts" and select "View > Details;" on the Mac use the Font Book app) or the [Google Fonts collection](#) to give me ideas and get familiar with available typefaces.

Colors –

Color – RGB 38 62 57

Color – RGB 255 255 255

Color – RGB 118 208 110

I choose these white and green-based colors to be my theme color is because I was inspired by [Wisconsin Union's page](#). As a Badger Shop, I made an association that this shop may be supervised by Union. I decided to use this combination to create contrast. I use dark green to create navigation bar and the info board, and the lighter green to display text. This combination looks powerful and impactful. People can feel confident and more mature when staring at the text. Therefore, when customer is shopping, they can feel the honesty and credibility of this web.

Font –

I choose Helvetica Neue to become my font for the Badger Shop website. I was considering because this is a user account page, I should use a formal and common font to make the public feel comfortable. Helvetica is a most popular font using in modern literature or public markets. It also is used in most of the big companies, so I believe this font is good for reading product receipts and subscription managements.

Part 3: Implementation

(0.2 Points) **Step 1. Inspect component library elements.** In this step, I will inspect the [Bootstrap](#) component library to see how I can realize the layout, visual element, and color/type choices I have made in the previous part using the component library. I am not expected to change the library components to exactly match my design choices, but to identify which component elements might best meet my design goals. Below, copy the design and the choices I generated in Part 2 and annotate them to describe which components from the library I will use to accomplish my design goals.

Default colors –

In bootstrap library, it includes default 9 colors in default, Primary, Secondary, Success, Info, Warning, Danger, Light, Dark, White. However, I will overwrite some custom colors myself. For example, the dark green and light green for my customize theme.

Button –

The button component is a key that will redirect user into actions and to different pages. I decided to override its default border-radius to 0. The reason I made this decision is because I think a sharper angle in a button shapes a more solid expression to users. They feel confident when managing monetary orders.

Jumbotron –

In the upper part of the canvas, I will use Jumbotron to create a welcome view, which is a larger greeting post to the user. The layout background needs to be light green, and this makes a contrast with the canvas's white background.

I also use Jumbotron to manage canvas' footers. I intend to let every redirection or sub-tab page with the exact same header and footer to match the canvas' Rhythm.

NavBar –

In Bootstrap's default navigation bar, it can adjust the position of each object on it. I will use "navbar-expand-sm" wrapping up each item. For some of object, it is able to dropdown to show more redirect pages. Be specifically, when user has a smaller screen of device, there is a "navbar-collapse" function for organizing small dropdown.

Tables & Pagination –

Tables are main functions for fitting to the subject of managing orders and subscriptions. I want each row of the table be seen as precise as possible; therefore, I will utilize the "table-hover" components to make a color contrast to pinpoint row data to user. In addition, the highlighted color meets to the overall color – light green, which maintain the Balance of the canvas without showing abrupt Rhythm.

Cards –

Wrapping up tables, Cards provide small headers and footers to demonstrate text with contextual background color. I will make a container in the Cards components and wrap up tables and user data.

Carousel Slider –

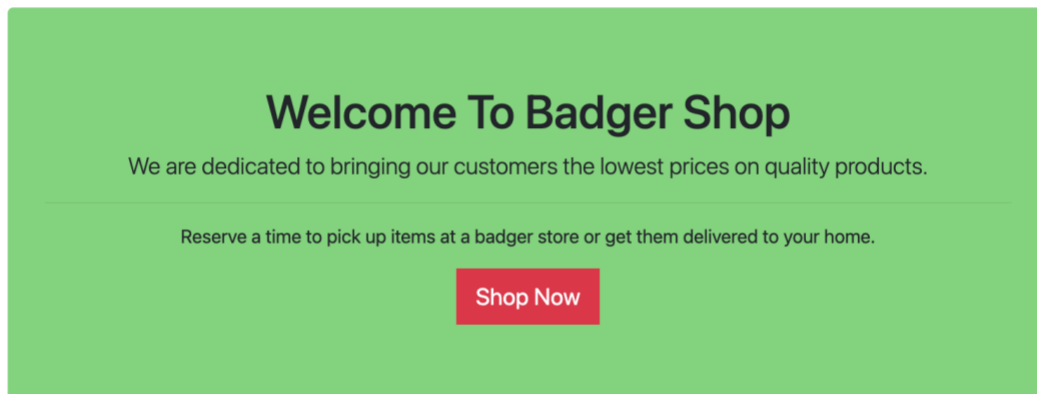
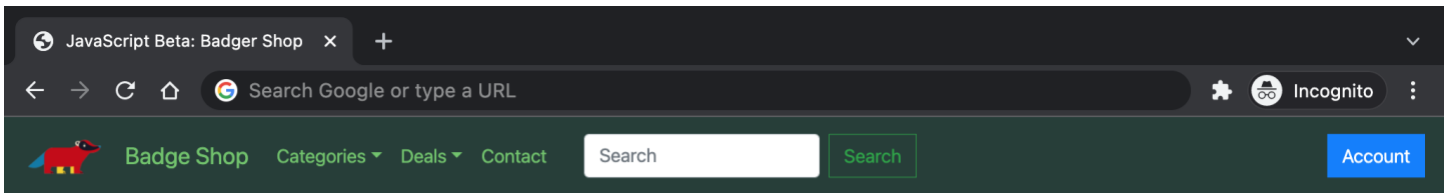
When I saw this component, I decided to make this to show the ads, help information. It is a JavaScript widget that able to rotate information in a frequency. Like most of the e-commerce shop, the canvas will need some advertisements to promote customers to purchase.

Modals –

I will use Modal component with login and logout. It jumps out the current page and darken the back canvas, letting user to focus on authentication system. In addition, when users intend to cancel their subscription Modal also can create a focal point and catch user to entering a confirmation page.

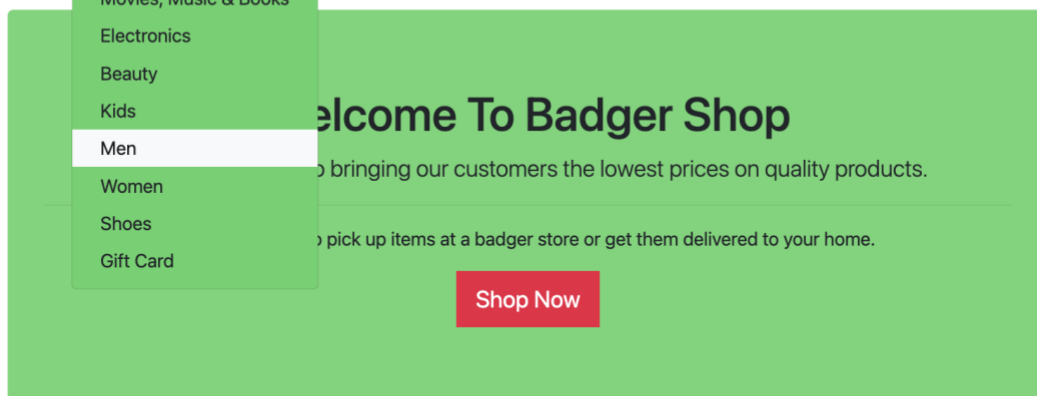
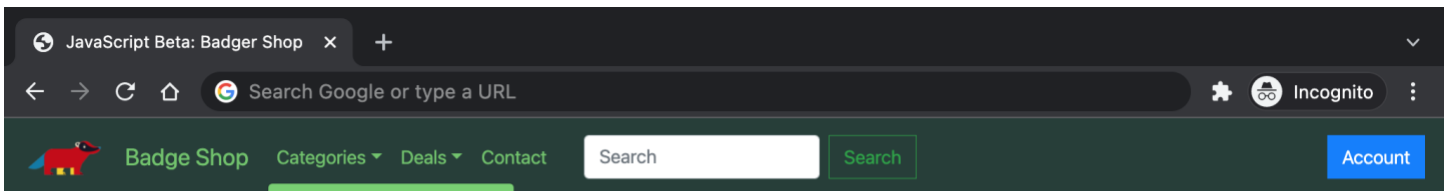
Step 2. Implement my redesign. The last step of this part will involve implementing the layout and components I had identified in the previous step. I will include Bootstrap in your project and use it to implement your design. I do not have to implement new *functionality*; focus on implementing my *design*.

My deliverable will be a completed version of this document, attached as a PDF, and the GitHub repository name and latest commit hash.



Your Orders and Subscriptions

Order #0616803
Order Placed: 2021-09-03T12:45:55.622Z



Your Orders and Subscriptions

Order #0616803
Order Placed: 2021-09-03T12:45:55.622Z

JavaScript Beta: Badger Shop

Search Google or type a URL

Incognito

Badge Shop

Categories

Deals

Account

Sign In

Your Account

Name: Badger

Email: badger@wisc.com

Phone Number: 555.555.1234

Subscribed to membership services: true

Subscribe/Unsubscribe

Logout

Close

We are dedicated

Reserve a time

quality products.

to your home.

Your Orders and Subscriptions

Order #0616803

Order Placed:

2021-09-03T12:45:55.622Z

JavaScript Beta: Badger Shop

Search Google or type a URL

Incognito

Your Orders and Subscriptions

Order #0616803

Order Placed:

2021-09-03T12:45:55.622Z

Total:

66.79

Brand	Product	Quantity	Price
Badger Foods	Frozen Margherita Pizza, 10oz	1	3.99
Badger Foods	Madras Curry Sauce, 12.5oz	6	3.69
Bucky's Deli	Meatball Banh Mi	1	6.50
New Bublr	Pomegranate Kombucha, 16fl oz	1	3.69
New Bublr	Spotted Cat Beer (6-pack)	2	12.99
Bucky's Deli	Fried Cheese Curds	1	4.49

JavaScript Beta: Badger Shop x +

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Order #9033042

Order Placed:
2021-09-16T06:48:57.633Z

Total:
211.29

Brand	Product	Quantity	Price
Boutique de Madison	High-Rise Skinny Jean (Vintage Blue)	1	50.00
Boutique de Madison	Lightweight French Terry Crew (Black)	1	38.99
Buckylemon	Performance Shorts	2	29.99
Bucky Outfitters	Stainless Keyring	1	9.49
StudyBucky	1-Subject Notebook (2-pack)	3	8.95
StudyBucky	Gel Pen (Medium Point, 6-pack)	2	12.99

Download Order History

JavaScript Beta: Badger Shop x +

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Manage Your Subscriptions

Subscribed Cancelled

Next Auto Payment:
2021-10-23

You are currently subscribed to 5 subscriptions.

Service	Description	Price	
Badger Tunes	Unlimited music streaming	5.99	End Subscription
Badger Flix	HD-quality video streaming	12.49	End Subscription
Badger Prime	Free same-day delivery of grocery items	9.99	End Subscription
Bucky's Cheese Club	Monthly delivered, curated cheeses from Wisconsin	30.00	End Subscription
Holy Cow	\$10 ice cream vouchers every week	7.99	End Subscription

JavaScript Beta: Badger Shop

Search Google or type a URL

Incognito

Manage Your Subscriptions

Subscribed Cancelled

Next Auto Payment:
2021-10-23

You are currently subscribed to 5 subscriptions.

Service	Description	Price
Badger Tunes	Unlimited music streaming	5.99
Badger Flix	HD-quality video streaming	12.49
Badger Prime	Free same-day delivery of grocery items	9.99
Bucky's Cheese Club	Monthly delivered, curated cheeses from Wisconsin	30.00
Holy Cow	\$10 ice cream vouchers every week	7.99

Cancel Subscription

Are you sure you want to **cancel** your subscription?

CANCEL

YES, CANCEL SUBSCRIPTION

End Subscription

End Subscription

End Subscription

End Subscription

End Subscription

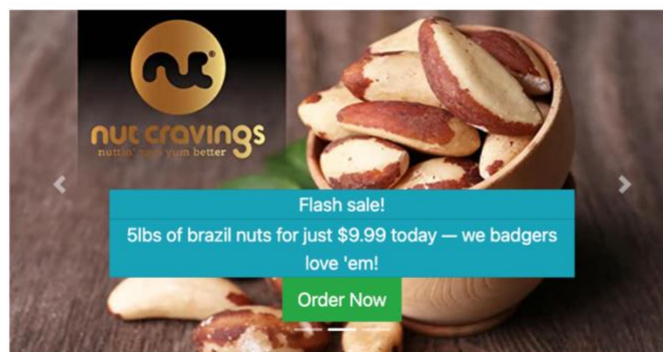
JavaScript Beta: Badger Shop

Search Google or type a URL

Incognito

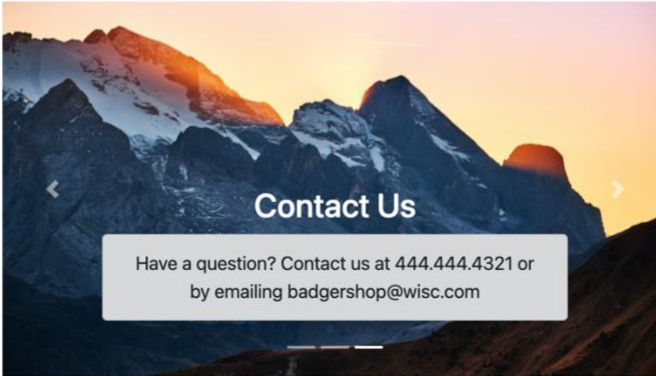
Your Family Plan Members

Subscribed Cancelled Member	
Name	Email
Goldy Golpher	goldy.gopher@example.com
Pioneer Pete	pioneer.pete@example.com
Add a Member	



Your Family Plan Members

<div>Subscribed Cancelled Member</div>	
Name	Email
Goldy Golpher	goldy.gopher@example.com
Pioneer Pete	pioneer.pete@example.com
Add a Member	



Your Family Plan Members

<div>Subscribed Cancelled Member</div>	
Name	Email
Goldy Golpher	goldy.gopher@example.com
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Add a Member	



