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Mint.com Usability Study Report

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Summary

Purpose. The purpose of this study was to evaluate the usability of Mint.com's budgeting feature, uncover potential design concerns and identify areas of improvement for key tasks involved in creating and tracking a budget. The study focused on the desktop version of the application. Main research questions the study was designed to address are:

- What motivates users to set and use budgets? And, specifically, as it relates to using Mint.com?
- How easily and successfully can participants create and track their budget using Mint.com?
- What improvements can be made to make it easier for users to complete their tasks?

Participants. The study included 6 participants that have an online banking account and have not used Mint.com in the past year. Participants included a mix of ages and various levels of self-reported budgeting experience.

Positive Findings. A majority of participants, 5 out of 6, were able to create budgets quickly and easily. On average, participants rated this scenario as somewhat easy (2) on a 5-point Likert scale. Participants also found the notification feature to be useful. 5 out of 6 participants appreciated having the ability to receive alerts when there are unusual transactions, their balance is low, and their spending exceeds the budget.

Opportunities for Improvement & Recommendations. Our study uncovered three primary usability issues. Below is a summary of those issues and our recommendations.

- **Budgets & Goals:** 5 out of 6 participants had difficulty finding where to create a goal. 3 participants have created or attempted to create a new budget category for the retirement goal. Our recommendation is to combine goals and budgets on one page and feature goals more prominently on the budget page.
- Subcategories: Finding subcategories can be difficult. 4 participants did not notice and
 use the search functionality resulting in them having to scroll through all categories and
 subcategories several times. Our recommendation is to make search functionality of the
 category field more obvious. We also recommend further research to determine optimal
 information architecture of categories.
- Show Calculations. Calculations of suggested amounts and a monthly breakdown for budgets spanning several months were confusing. 3 participants weren't sure how amounts were calculated or what assumptions were used. We recommend spelling out how calculations are made and any assumptions used.

Study Scope and Objectives

Mint.com is a free, web-based personal financial management application. Its primary functionality includes tracking multiple bank, credit card, investment and loan balances and transactions through a single user interface, as well as creating budgets and setting financial goals.

The purpose of this study is to assess the usability of the budgeting feature, uncover potential design concerns and identify areas of improvement for key tasks involved in creating and tracking a budget.

A heuristic evaluation was used to review Mint.com's budgeting feature using 10 Usability Heuristics by Jakob Nielsen. Based on the results of the heuristic evaluation, the objectives of this usability study were determined as follows:

- To assess the ease and effectiveness of creating a budget and whether the process matches participants' mental model of budgeting
- To determine obstacles to key activities:
 - Create budget
 - Adjust budget
 - Compare spending against budget
- To measure a level of satisfaction with the overall budgeting experience on Mint.com and determine areas of improvement

Research Questions

The following research questions have been identified for this usability test:

- What motivates users to set and use budgets?
 - And, specifically, as it relates to using Mint.com?
- How easily and successfully can participants create a budget using Mint.com?
- How easily and successfully can users track their budget on Mint.com?
- Do users need more guidance from the application in creating a budget?
- What factors prevent the users from using Mint.com's budget tool to complete key activities?
 - Are users able to find workarounds when they encounter obstacles?
- What improvements can be made to make it easier for users to complete their tasks?

Participant Profiles

Participants were recruited based on the following criteria:

- Have not used Mint.com in the past year
- Have an online banking account
- Do not work at a company that makes budgeting software
- A mix of ages (between 18 to 65)
- A mix of budgeting experience (self-reported)

Participant	Age Group	Frequency of Mint.com usage	Has budgeting skills (self-reported)
P1	56-65	Never	Yes
P2	18-25	Never	Yes
P3	26-35	Never	Yes
P4	18-25	Never	No
P5	36-45	0 - 6 month ago	Yes
P6	46-55	Never	No

Methodology

Study sessions spanned three days with 2-3 one-hour long sessions per day (see Appendix B for full testing schedule). Sessions were conducted on the University of Washington campus and one session took place at the home of one of the team members. Participants were given 5 scenarios to complete on Mint.com site using a laptop.

Participants

A total of 6 participants were recruited leveraging personal social networks and screened using an online questionnaire (see Appendix A). Compensation for participants' time was offered in the form of baked goods. One pilot participant who satisfied screening criteria was recruited from friends. We felt that the results were compelling enough to also include in the findings.

Procedure and Logistics

Testing equipment included a laptop with Internet access and Morae software to record the screen, participant's facial expressions, and audio. A test Mint.com account was created for this study and populated with fabricated financial transactions. During each session, one moderator was present to explain the scenario to the participant. One dedicated notetaker took notes, and two additional notetakers/observers were present to observe and collect data. The account and transactions were reset after each session.

Data Collected

The following instruments were used to collect data:

- Screening Questionnaire covering demographic info to qualify participants (Appendix A)
- Pre-Study Questionnaire to determine the budgeting approach and motivations (Appendix F)
- **Five Scenarios** using Thinking Aloud Protocol and post-scenario ratings (Appendix E)
- Post-Study Questionnaire covering overall satisfaction and any issues encountered (Appendix H)

The order of one of the scenarios was determined based on the answers to the pre-study questionnaire.

- Path A a default order of questions.
- Path B for participants who indicated that having a savings goal such as saving for a vacation, retirement, etc., as their main motivation for budgeting, we started with the savings scenario.

Path	Data	Туре	How To Collect	
All	Screening Questionnaire			
	Screening criteria	Quant; Objective and Subjective	Online Survey	
All	Pre-Study Questionnaire			
	Motivations for budgeting	Qual; Subjective	Questions	
В	Scenario 11: Set aside \$200 every month to save for retirement.			
	Task completion	Quant, Objective	Observation	
	Pages explored	Quant, Objective	Observation	

¹ For participants who indicated that their motivation for budgeting is savings oriented, such as saving for a vacation, retirement, etc., we started with the savings scenario to match their mental model. For others, the savings scenario was incorporated as scenario 5.

	Think aloud (confusion, problems experienced)	Qual, Subjective	Think Aloud
	Other problems experienced	Qual, Objective	Observation
	Ease/difficulty rating and why	Quant and Qual, Subjective	Likert scale
All	Scenario 2: Create a monthly budget for groceries and a quarterly budget for clothing expens		
	Task completion	Quant, Objective	Observation
	# of clicks to Create Budget pop-up	Quant, Objective	Observation
	Searched for needed category	Quant, Objective	Observation
	Created a subcategory	Quant, Objective	Observation
	Checked the roll-over checkbox	Quant, Objective	Observation
	Clicked on the hint button	Quant, Objective	Observation
	Think aloud (confusion, problems experienced)	Qual, Subjective	Think Aloud
	Other problems experienced	Qual, Objective	Observation
	Ease/difficulty rating and why	Quant and Qual, Subjective	Likert scale
All	Scenario 3: Review your budget and adjust your amount to be more in line with your spending		
	Adjusted amount using the shortcut	Quant, Objective	Observation
	Used "Everything Else" link to see suggested budget categories	Quant, Objective	Observation
	Deleted a budget category	Quant, Objective	Observation
	Think aloud (confusion, problems experienced)	Qual, Subjective	Think Aloud
	Other problems experienced	Qual, Objective	Observation
	Ease/difficulty rating and why	Quant and Qual, Subjective	Likert scale
	"Did you have enough information to make the decision?"	Quant, Subjective	Questions
All	Scenario 4: Set up communications to stay infor	med about your budget.	
	Reached "Set Spending Alerts"	Quant, Objective	Observation
	# of clicks to get to the "Notifications" screen	Quant, Objective	Observation
	Think aloud (confusion, problems experienced)	Qual, Subjective	Think Aloud
	Other problems experienced	Qual, Objective	Observation
	"What notifications were helpful and why? Any additional notifications you would add? Why?"	Qual, Subjective	Questions
	Ease/difficulty rating and why	Quant and Qual, Subjective	Likert scale

A	Scenario 5: Set aside \$200 every month to save for retirement.				
	Task completion	Quant, Objective	Observation		
	Pages explored	Quant, Objective	Observation		
	Think aloud (confusion, problems experienced)	Qual, Subjective	Think Aloud		
	Other problems experienced	Qual, Objective	Observation		
	Ease/difficulty rating and why	Quant and Qual, Subjective	Likert scale		
All	Scenario 6: You want to see if you have any disposable income left if you stick to your budget				
	Pages explored	Quant, Objective	Observation		
	Found left-over amount	Quant, Objective	Observation		
	Think aloud (confusion, problems experienced)	Qual, Subjective	Think Aloud		
	Other problems experienced	Qual, Objective	Observation		
	Ease/difficulty rating and why	Quant and Qual, Subjective	Likert scale		
All	Post-Study Questionnaire				
	Overall impressions and any issues encountered	Qual, Subjective	Questions		

Findings & Recommendations

Positive Findings

Our usability study revealed several positive findings:

- **Budgets are easy to create.** 5 out of 6 participants were able to create their budget quickly and easily. On average, participants rated the scenario related to creating the budget as Somewhat Easy (2) on a 5-point Likert scale.
- **Notifications feature is useful.** 5 out of 6 participants appreciated having the ability to receive alerts of any unusual transactions, when their balance is low, and when their spending exceeds the budget.

Summary of Usability Issues

The table below summarizes all usability findings, severity ratings, and recommendations. We used a three-level rating to rank the severity of the issues:

- **High** Leads to task failure or significant delay in completion. Causes extreme irritation.
- **Medium** Causes occasional task failure in some users. Causes medium annoyance.
- Low Results in some hesitation during task completion. Causes minor irritation.

Severity	Frequency	Issue	Detail	Recommendation	
High	5/6	Budget & Goals	Having goals on a separate page from the budget is confusing.	Combine goals and budget pages. Feature goals more prominently on the budget page.	
High	5/6	Subcategories	Finding subcategories can be difficult resulting in the creation of custom subcategories. Make search functional category field more obv. Make it clear when a new subcategory is added. Recommend further resulting of categories.		
High	3/6	Show Calculations	Calculations of suggested amounts and monthly breakdown for budgets spanning several months were confusing.	own for and any assumptions used.	
Medium	3/6	Overwhelming Interface	"Overwhelming" (P3, P4), and "clunky" (P1) interface.	Streamline interface by reducing the amount of information on a page. Provide a roadmap of the entire process.	
Medium	5/5	Navigation Menu	Menu terminology was confusing.	Rename nav menu. Group 16 top-level tabs.	
Medium	3/6	Legibility	Light blue color difficult to read, font size too small.	More contrast, larger font.	
Low	3/6	Emotional Design ²	Application "felt like a chore" (P1) and was "no fun" (P6). Consider making to design more enga		
Low	1/6	Budget Bars Hierarchy	The layout of budget subcategories on the budget page was confusing. Update layout to better relationship between can and subcategories		

² While not a usability issue, we have heard this from 3 participants and decided it was worth including.

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Primary Usability issues

Budget & Goals (High)

A majority of participants, 5 out of 6, had difficulty finding where to create a goal. For participants that have identified having a savings goal as their motivation to create and follow a budget, setting up a goal on a separate tab wasn't intuitive.

- 5 out of 6³ participants had difficulty finding where to create a goal.
- 3 out of 6 participants have identified that their motivation to creating and setting a
 budget is having a goal such as saving for the next vacation or being able to save for
 retirement. For those participants, creating a goal on a separate tab wasn't intuitive.
- 3 out of 6 participants have created or attempted to create a new budget category for the retirement goal.
- 2 out of 6 participants have mentioned that they are "not sure how to do that" (P1), "not sure if they are in the right place" and that they "are stuck" (P6). After not being able to create a goal 1 participant expressed extreme frustration "I am almost pissed" (P3).

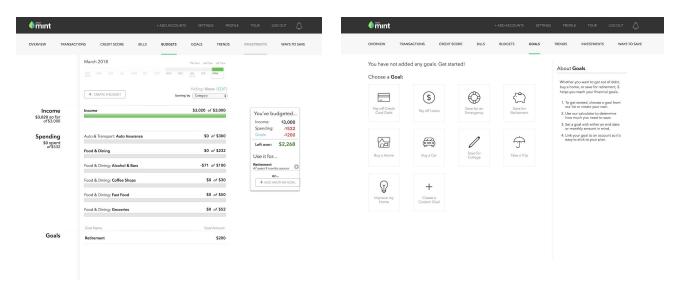
Recommendation: Combine "Create Goals" and "Budget" on one page and feature goals on the budget page more prominently. Provide more guidance upfront as to what to expect when setting up a goal.

Video Highlights

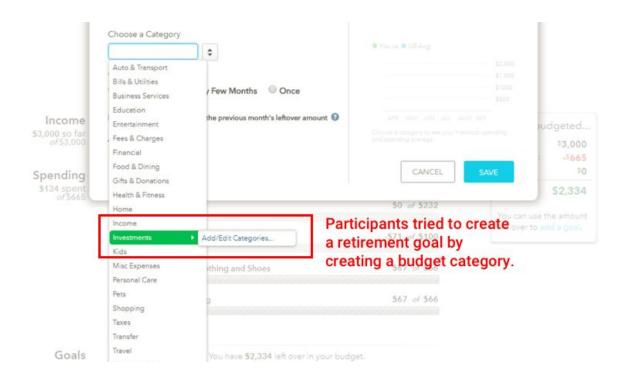
- P1 Goals & Budgets https://drive.google.com/open?id=1BmZX6tflpHdP7UZUTcxpDXFE2YnJ6Yht
- P2 Investment vs Goals
 https://drive.google.com/open?id=1BKgAguKNZygw00ULkQUkv6gPExdFIR_7
- P3 Frustration
 https://drive.google.com/open?id=1C9eSDlWeelfpB3JtgjHbeoBl1k9TjgCa
- P5 Goals & Budget <u>https://drive.google.com/open?id=1Cy54E02i36B5TGDs48ZSo0ZbZ6Zj5AIT</u>
- P6 Confusion <u>https://drive.google.com/open?id=1Ca7eWSovlUq1EcUoiPcZvkvZ8fm0wEJe</u>

³ For one participant the goal was not reset, however they were still confused and initially created a budget category instead of a goal.

To illustrate this, here you can see the Budgets page on the left and the Goals page on the right. From the Goals page, you can create a goal, but you have to go the Budgets page to view and track the goals.



On the screenshot below you can see a category 'Investments' where participants tried to create a retirement goal.



Finding Subcategories (High)

The information architecture of subcategories didn't always align with participants' expectations.

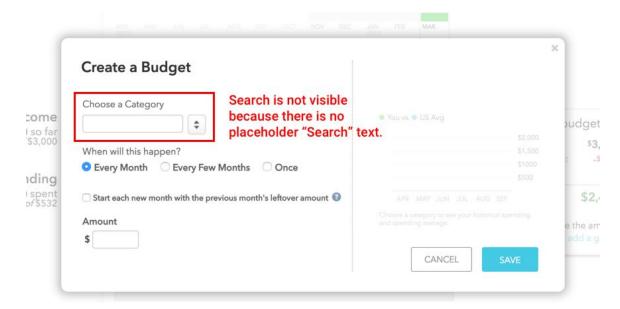
- 4 out of 6 participants were confused about IA of categories and felt list was too long.
- 4 out of 6 participants only used the scroll controls and didn't use search functionality when they couldn't find a needed subcategory.
- 2 out of 6 participants expected to see 'Clothing' under 'Personal Care,' rather than under 'Shopping' as it is currently. They didn't notice it under 'Shopping' category and created or attempted to create a new subcategory for 'Clothing.'
- When creating sub-categories it is not obvious if a subcategory has been added or not, resulting in 2 out of 3 participants having to re-do this step again.

Recommendation: To solve immediate issue of reducing the need to scroll through all categories, make search functionality of the categories field more apparent. We also suggest further research to uncover more optimal organization of the categories and subcategories.

Video Highlights

- P1 Subcategories
 https://drive.google.com/open?id=1BzHwhi4kQN0B4HKhDJ_zCAwMBXvA5S1j
- P2 Subcategories
 https://drive.google.com/open?id=1BMp8P_HqtbqHDCYUn7DScOv6bujgZ02g
- P3 Creating Subcategory <u>https://drive.google.com/open?id=1C82OGqt5a0i_kq6lsg6MYnSjxZH7xOB2</u>
- P6 Subcategories https://drive.google.com/open?id=1CeQ9LJvnX6640ZyQVUD1s1kc7m52UblY

The screenshot below illustrates that search functionality is not apparent to users.



On the screenshot below you can see that it is not obvious when a new subcategory has been saved leading users to re-do it twice.

Manage Your Cat	tegories
Auto & Transport	
Bills & Utilities	Categories
Business Services	Furnishings
Education	Home Improvement
Entertainment	Home Insurance
Fees & Charges	Home Services
Financial	Home Supplies
Food & Dining	Lawn & Garden
Gifts & Donations	Mortgage & Rent
Health & Fitness	
Home	
Income	Your Categories
Kids	test
Loans	
Misc Expenses	ADD A CATEGORY
Personal Care	
Pets	
Shopping	It is not obvious that the
Taxes	Te to thot obtitodo that the
Transfer	"test" sub-category has
Travel	already been saved.
Uncategorized	

Show Calculations (High)

Participants weren't clear on how some amounts were calculated or what assumptions were used, which resulted in diminished trust in the application especially in cases when their math didn't align them the amounts suggested.

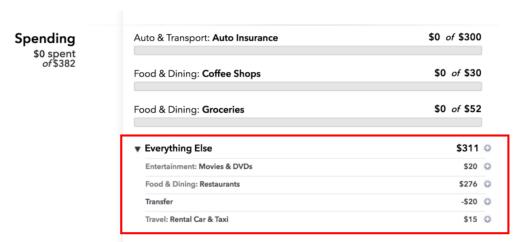
- 3 out of 6 participants weren't clear on how the amounts for suggested budgets were calculated, especially when they are different from the amounts listed in the 'Everything Else' list of suggested budget categories.
- 2 out of 6 participants were confused by the calculation when setting budgets that span several months.
- 1 out 6 participants felt that the retirement goal calculations had too many assumptions that they didn't agree with.

Recommendation: Clarify how calculations are made and spell-out any assumptions that go into computing amounts.

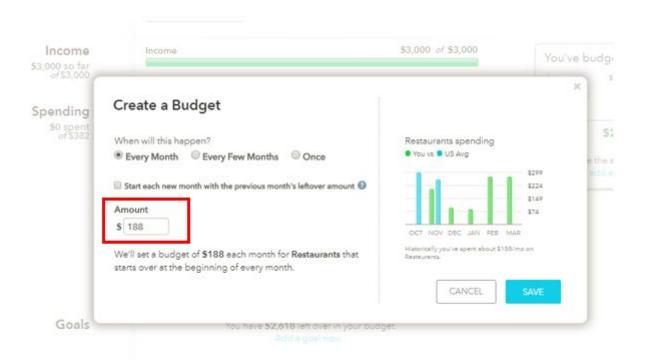
Video Highlights

- P4 Calculation <u>https://drive.google.com/open?id=1CMONSLRRGCMUef-QNX0cNd-nELr1lpMO</u>
- P4 Expect Month to Autopopulate <u>https://drive.google.com/open?id=1CUUdeKlyvc3RbMVxprqlCZHBAYxjYsxs</u>
- P1 Retirement Wizard Assumptions
 https://drive.google.com/open?id=1BsFliLroWk2kFVfyncs7CrsMCKBSqzWG

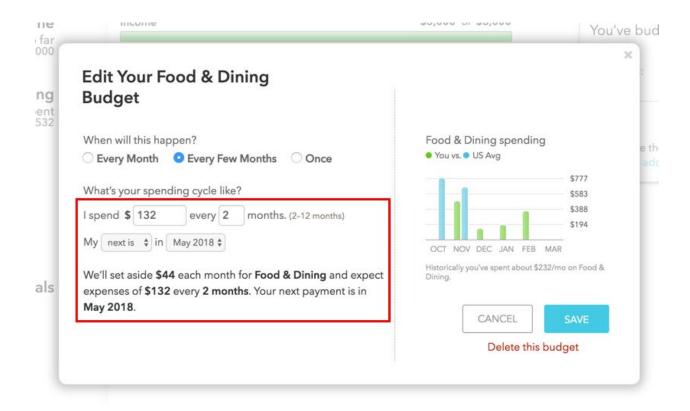
The two screenshots below illustrate inconsistency between actual amounts and the suggested monthly budget amount. E.g. the 'Restaurants' category in the list of suggested budgets under "Everything Else" had transactions in the amount of \$276 last month, yet when the participant clicked on the "+" button to create this as a budget, the suggested amount changes to \$132 (See screenshot below).



Amounts in "Everything Else" don't match the prepopulated amount when you create a budget by clicking on the "+" button on the right.



The screenshot below illustrates lack of clarity in how budget expenses that happen every several months are calculated.



Overwhelming Interface (Medium)

During post-study interview, participants were asked to describe their experience using three words. Their descriptions can be summed up as a well-designed app that provides too much information that can be overwhelming.

- 3 out of 6 participants have mentioned that the interface was "overwhelming", "clunky", and "had too much text".
- 1 participant expressed that they had to jump between tabs a lot when adjusting a budget

Recommendation: Streamline interface by reducing the amount of information users see at once. Consider providing an overview of the entire process by giving users a roadmap.

Participants were asked to describe their experience on Mint.com in three words and the table below lists their descriptions.

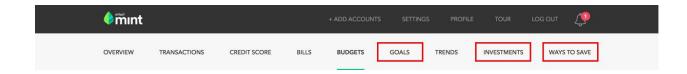
P1	Adequate	Clunky	Tedious
P2	Intuitive	Well-designed	Well-guided
Р3	Visual	Overwhelming	Preset
P4	Detailed	Overwhelming	Too much text
P5	Easy	Fast	Overly-simplistic
P6	Unremarkable	Really flat	Utilitarian

Nav Menu is Confusing (Medium)

Participants were confused by navigation menu terminology. They were not always sure what the difference is between 'Investments' vs. 'Goals' vs. 'Ways to Save' and would have to explore each page to learn more.

- 5 out of 6 participants were confused about navigation terminology and would have to explore each page to learn more.
- 1 participant expressed that a tooltip description of each nav menu option would have been helpful to them.

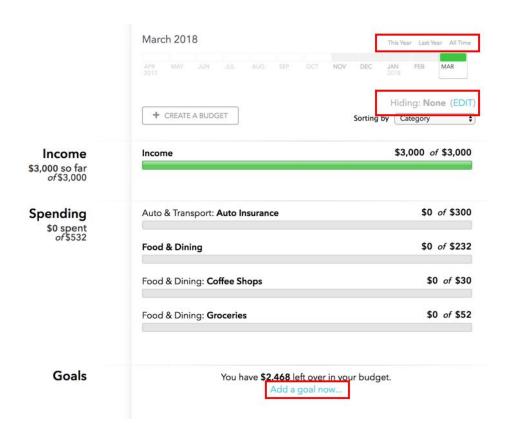
Recommendation: Rename navigation menu option to have less overlap. Consider grouping the 16 top-level tabs to its main functions, so it is easier to navigate. Possibly add tooltip-style descriptions providing a short overview of what to expect on each page.



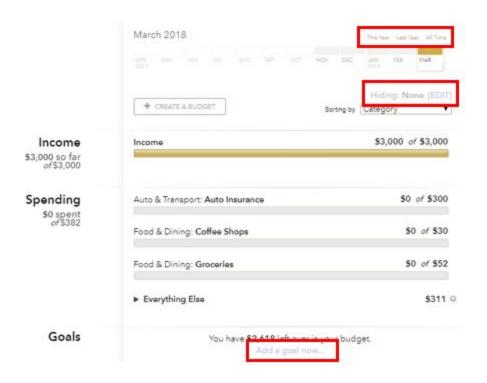
Legibility (Medium)

- 1 out of 6 participants mentioned that some of the text on the site is too hard to read and that light blue color didn't provide enough contrast.
- Having heard from participants that legibility is an issue, we have tested the site for color vision deficiency using Chrome plugin Spectrum. For users with protanopia (red-green color vision deficiency), the light blue color on the white background would turn into almost transparent grey making it very hard to read on the white background.

Recommendation: Increase contrast and font size to improve readability.



The view of the site with protanopia filter to illustrate how it would look like for users with red-green color vision deficiency.



Secondary Usability Issues

Emotional Design (Low)

While not necessarily a usability issue, we have heard this from 3 out of 6 participants and decided that it came up often enough to be included in this report.

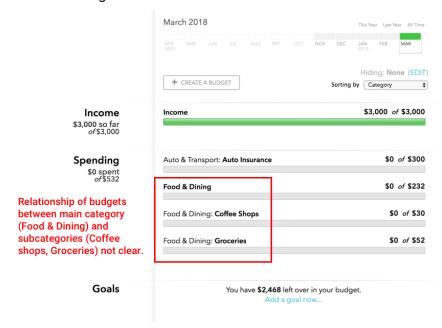
- During pre-study interview 3 out of 6 participants have mentioned that the main reason they don't follow a budget currently is because it makes them "feel guilty" when they overspend, they will have to "change their behavior" once they learn how much they spend on coffee, and that budgets are not "flexible enough."
- Taking the above sentiment into consideration, it is important to note that participants have described the application as "functional, but felt like a chore" (P1) and was "no fun" (P6).

Recommendation: Consider making the visual design more engaging, friendly, and motivational.

Budget Bars Hierarchy (Low)

• 1 out 6 participants was confused by the budget calculations for the subcategories. The participant did not realize that a subcategory budget amount is a portion of the main category budget, so the budget for the main category must be larger than the subcategory. However, those two line items show up as separate on the budget screen which caused users to be confused when they tried to adjust an amount for the main category, but couldn't.

Recommendation: Update design of the budget page to make the relationship between categories and subcategories more clear.



Additional Areas to Explore

During our usability study, participants have raised some issues and suggestions that we would recommend to consider for further testing.

- Calculators on Goals page ask a lot of information upfront and only act as calculators.
 Could this potentially be a good place to provide some personal finance guidance to users?
- 3 out 6 participants have mentioned in the pre-study questionnaire that getting a
 notification that they are approaching their budget would be useful. Would adding an
 option to notify users not only when they are over budget, but also as they are
 approaching their budget be useful to users?
- There was no text option in the notifications options. Would adding a text option to notifications be of use to users?
- Users can only choose from predetermined amounts to get low balance notifications. Would giving users ability to select percentages be of use?

Appendices

Appendix A: Screening Questionnaire

Appendix B: Testing Schedule

Appendix C: Script

Appendix D: Consent Form

Appendix E: Scenarios

Appendix F: Pre-Study Questionnaire

Appendix G: Post-Scenario Questionnaire

Appendix H: Post-Study Questionnaire

Appendix I: Link to Data Collection Sheet

Appendix J: Link to Participant Videos

Appendix A: Screening Questionnaire

Required questions are marked with an asterisk (*)

Intro

We are a team of University of Washington students in the Human Centered Design and Engineering Masters program seeking participants for a usability study. We are testing Mint.com's budgeting feature as part of a class project, and are looking for participants. We really appreciate your feedback and will compensate you for your time with delicious snacks and gratitude!

This questionnaire is a preliminary screening for interested study participants and will take no longer than 1-3 minutes to complete. If you qualify, we will schedule an hour-long session with you sometime between February 16th – 25th.

We will be using a dummy account for the test, you do not need to have your own account. We will not see your personal financial information.

All responses will be kept confidential and your personal information will not be shared with anyone outside of our team.

Survey

1.	Email a	address*
2.	How o	d are you?*
		<18
		18 – 25
		26 – 35
		36 – 45
		46 – 55
		56 - 65
		65+
2.	Do you	have an online banking account?*
		Yes, I have only 1 online bank account
		Yes, I have multiple online bank accounts
		No, I do not have any online bank accounts

3.	□ Yes □ No
4.	When was the last time you used Mint.com (or a similar tool: Personal Capital, etc.)?* □ 0 − 6 months ago □ 7 − 12 months ago □ 13 − 18 months ago □ 18+ months ago □ Never used
5.	How often do you use Mint.com (or a similar tool: Personal Capital, etc.)?* Never Once a year A few times a year Once a month A few times a month Once a week A few times a week Every day
6.	How do you usually access Mint.com? Desktop website Mobile/tablet website Mobile/tablet app I don't use Mint.com
7.	Have you ever created, or tried to create a budget in the past?* ☐ Yes ☐ No
8.	Have you ever worked for Intuit, or another company that makes personal finance management software?* — Yes — No
9.	Have you ever worked in the user experience or usability fields?* ☐ Yes ☐ No

	ould you be interested in participating in an in-person usability study? The study will be place between February 16th – 25th, 2018 and will take no more than one hour.* Yes No
bel	ank you for volunteering to participate in our usability study! Please sign up at the link low for a time that is convenient for you. We will contact you to finalize the location, ich will be in Downtown or North Seattle.
Se	ssion sign up link: https://calendly.com/mint-com/study
Do	n't forget to hit submit below!

Outro

Thank you for taking the time to complete our survey!

Appendix B: Testing Schedule

Thu, Feb 15				
Time	Participant	Moderator	Notetaker	Observer
3:00 pm ~ 4:00 pm	P1	Bermet	Sandy	Kairavi, Yoonbo

Sat, Feb 17				
Time	Participant	Moderator	Notetaker	Observer
2:00 pm ~ 3:00 pm	P2	Bermet	Kairavi	Sandy, Yoonbo
6:00 pm ~ 7:15 pm	P3	Kairavi	Bermet	Sandy, Yoonbo

Sun, Feb 18				
Time	Participant	Moderator	Notetaker	Observer
1:15 pm ~ 2:30 pm	P4	Bermet	Kairavi	Sandy, Yoonbo
6:00 pm ~ 7:15 pm	P5	Sandy	Bermet	Yoonbo, Kairavi

Mon, Feb 19				
Time	Participant	Moderator	Notetaker	Observer
3:00 pm ~ 4:00 pm	P6	Yoonbo	Sandy	Kairavi, Bermet

Appendix C: Scripts

Overview (5 min)

Smile, be friendly and neutral

Hi, my name is <insert name> and I'm going to be walking you through this session. This is <insert name> who will be taking notes. This is <insert name> and <insert name>, they are the other members of our team, and they are here to simply observe the session. I'm going to read an introduction from a script to ensure that all participants get the same information.

You probably already know, but let me explain what we'll do today. We are testing Mint.com's website to see how people use the budgeting feature. I'll show you the website and ask you to complete some tasks. When you've finished the task just let me know. After each task, I will ask you some follow up questions.

I want to make it clear right away that we're testing the site, not you. You can't do anything wrong here. There are no right or wrong answers to any tasks or questions I'll ask you today. If you can't figure out what to do, spend the same amount of time you'd normally spend on your own and move on.

If you have any questions, just ask. I may not be able to answer them right away, since we're interested in how people do when they don't have someone sitting next to them, but I will try to answer any questions you still have when we're done.

I'll be asking you to think out loud to tell me what's going through your mind. This will help us understand your thought process as you are going through the scenarios. Just give us a running commentary of your thoughts and opinions. When you read something on the screen, read it out loud. When you click on a link, say what you're clicking on so I can follow along. I'll be here to remind you to keep talking and I might ask you some questions.

Please tell us exactly what you think. We want your sincere impressions. You can't hurt our feelings, we are not associated with Mint.com. We're here to find out what is working and what is not working.

Consent (1 to 5 min)

With your permission, we're going to record the computer screen and what you have to say. The recordings will only be used to improve the web site and share the results of the study. I'm going to ask you to sign something for us. It simply says that we have your permission to record you and your screen. Let me know if you have any questions.

<< Provide consent form>>

Appendix D: Consent Form

Consent Form

Understanding Your Participation

We are a team of University of Washington students in the Human Centered Design and Engineering Master's program. We are testing the usability of Mint.com's budgeting feature as part of a class project. We really appreciate your participation and feedback!

During this study you will be asked to:

- Work with the website to do a set of tasks
- Think out loud while doing these tasks
- Answer interview and survey questions

☐ Lagree to participate in the session.

We will also be making video and audio recordings of the session, including the screen. We are independent researchers and are in no way affiliated with Mint.com or Intuit. The results from this session will be used to analyze the overall experience and usability of Mint.com.

By signing this form, you give our team permission to use your statements, recordings and any notes taken for the purposes of evaluating and suggesting improvements to the website. Your personal information will not be shared outside of this team.

You may request a break at any time during the study. You are also allowed to withdraw from the study if you feel the need to do so. Do not hesitate to ask us any questions you may have. You may also contact us at mint.bysk@gmail.com if you have any concerns after the study.

If you agree with these terms, please indicate your agreement by signing here:

= ragios to participato i		
☐ I agree to have the ses	ssion video recorded, which includes my vo	pice and image
Participant Signature	Print Name	Date

Appendix E: Scenarios

	Expenses-first Method (A)	Savings-first Method (B)
S0. Exploration	You just got a Mint.com account that pulls information from all your bank accounts. Take a few moments to explore and become familiar with Mint.com.	You just got a Mint.com account that pulls information from all your bank accounts. Take a few moments to explore and become familiar with Mint.com.
S1. Goal		You want to start saving for retirement and decide to set aside \$200 every month.
S2. Create a budget	To help you stay within your budget, you decide to set your grocery spending to \$500 a month and your clothing expenses to \$200 every three months.	To help you stay within your budget, you decide to set your grocery spending to \$500 a month and your clothing expenses to \$200 every three months.
S3. Review your budget	After using Mint.com for a few months, it is time to go back and review your budgets and see what works. You find that you are going over-budget in some categories. Tweak your budget to better reflect your spending.	After using Mint.com for a few months, it is time to go back and review your budgets and see what works. You find that you are going over-budget in some categories. Tweak your budget to better reflect your spending.
S4. Staying Informed	You like to be informed about your account. How would you go about setting up communications to be sent to you by the system?	You like to be informed about your account. How would you go about setting up communications to be sent to you by the system?
S5.Goal	You found that you have \$200 to spare since you stopped using your Auto-Insurance budget. Now is the perfect time to start saving for retirement. Set aside \$200 every month for retirement.	
S6. Overview	After putting aside \$200 a month for retirement, you want to see if you have any disposable income left, if you stick to your budget.	After putting aside \$200 a month for your retirement, you want to see if you have any disposable income left, if you stick to your budget.

Appendix F: Pre-Study Questionnaire

Moderator will administer t participant.)	his questionnaire befo	ore beginning the test. (F	rint 1 copy per
Participant:			Path A B
Q1: Can you describe your	experience with budg	geting? How do you usua	ally approach budgeting
Q2: What motivates you to	create and follow a b	oudget?	
□ Save for: retireme□ Buy a house□ Pay off a: credit ca□ Spend less on certa□ Other	ard student loan		
Q3: What do you expect a	budgeting app to be a	able to do?	
Q4: How tech-savvy would	you say you are?		
Extremely tech-savvy	Fairly tech-savvy	Slightly tech-savvy	Not-at-all tech-savvy
Great, thank you! Now I'm	going to open Mint.co	om and we can begin the	e study.

Appendix G: Post-Scenario Questionnaire

Moderator will administer this questionnaire after each scenario. (Print 7 copies per participant.)

Participant: Path A | B

Scenario: 1 | 2 | 3 | 4 | 5 | 6

Q1: On a scale of 1 to 5, how would you rate the ease or difficulty of the task you just completed. 1 = very easy 5 = very difficult.

Very easy	Somewhat easy	Neither easy nor difficult	Somewhat difficult	Very difficult
1	2	3	4	5

Q2: Why did you choose this rating?

[OPTIONAL] Did anything happen during the task that you did not expect?

Appendix H: Post-Study Questionnaire

Moderator will administer this questionnaire after all scenarios are completed. (Print 1 copy per participant.)

Participant: Path A | B

Q1: How did Mint.com's budgeting process match or not match your expectations of a budgeting app?

Q2: On a scale of 1 to 5, how would you rate the guidance Mint provided for you to create and track your budget? 1 = very insufficient 5 = more than sufficient?

Very easy	Somewhat easy	Neither easy nor difficult	Somewhat difficult	Very difficult
1	2	3	4	5

Q2: Come up with three words that describe your experience with Mint.com today.		

Q3: What was your favorite part about the budgeting feature? Mint.com?

Q4: What was your least favorite part about the budgeting feature? Mint.com?

Q5: On a scale of 1 - 5, rate how likely or unlikely are you to use Mint.com in the future? 1 - very likely and 5 - very unlikely.

Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Very unlikely
1	2	3	4	5

Q6. Why did you choose this rating?

Q6: [OPTIONAL] Which other budgeting/financial management apps have you used in the past, if any? What was your experience with it? Do you still use the app? If not, why did you stop?

Appendix I: Link to Data Collection Sheet

Link:

https://drive.google.com/open?id=17SnajTg9X4SjEcFQxBjUgYAl348vjH4jCZJ7GTJnH1 <u>A</u>

Appendix J: Link to Participant Videos

Participant	Highlights
	P1_1_Retirement_&_Wizard https://drive.google.com/open?id=1BsFliLroWk2kFVfyncs7CrsMCKBSqzWG
P1	P1_2_Goals_&_Budgets https://drive.google.com/open?id=1BmZX6tflpHdP7UZUTcxpDXFE2YnJ6Yht
	P1_3_Subcategories https://drive.google.com/open?id=1BzHwhi4kQN0B4HKhDJ_zCAwMBXvA5S1 j
Do.	P2_1_Investment_vs_Goals https://drive.google.com/open?id=1BKqAquKNZygw00ULkQUkv6qPExdFIR_7
P2	P2_2_Subcategories https://drive.google.com/open?id=1BMp8P_HqtbqHDCYUn7DScOv6bujgZ02g
Da	P3_1_Create_Subcategories https://drive.google.com/open?id=1C82OGqt5a0i_kq6lsg6MYnSjxZH7xOB2
P3	P3_2_Set_aside https://drive.google.com/open?id=1C9eSDIWeelfpB3JtqjHbeoBl1k9TjqCa
P4	P4_1_Calculation https://drive.google.com/open?id=1CMONSLRRGCMUef-QNX0cNd-nELr1lpM <a drive.google.com="" href="https://drive.google.com/open.google.c</th></tr><tr><th></th><td>P4_2_Expect_Autopopulate
https://drive.google.com/open?id=1CUUdeKlyvc3RbMVxprqlCZHBAYxjYsxs</td></tr><tr><th>P5</th><th>P5_1_Goals & Budgets
https://drive.google.com/open?id=1Cy54E02i36B5TGDs48ZSo0ZbZ6Zj5AIT</th></tr><tr><th>D6</th><th>P6_1_Subcategories https://drive.google.com/open?id=1CeQ9LJvnX6640ZyQVUD1s1kc7m52UblY
P6	P6_2_Set aside https://drive.google.com/open?id=1Ca7eWSovlUq1EcUoiPcZvkvZ8fm0wEJe