# PathMates: Cognitive Walkthrough

## Task Descriptions For Testing

* 1. **Task Description #1 :**

*Context:* It’s 9:00 PM, and Jane’s night class at Bruininks Hall has just ended. She needs to walk back to her apartment in Dinkytown but feels uneasy about walking alone in the dark. She doesn’t have any friends in her class who live in the same direction and doesn’t feel comfortable approaching strangers directly on campus. She also does not converse well with other students unless she has things in common, making her want to avoid awkward long walks with others.

*Task:* Jane wants to find another University of Minnesota student who is also heading toward Dinkytown around the same time to walk with her. She hopes to:

1. Identify a fellow student nearby who is also going to Dinkytown.
2. Ensure the person is a legitimate UMN student for safety assurance.
3. Coordinate a meeting point and time to start the walk together.
4. Feel more secure during her walk home by having a companion.
5. Have a joyful experience, no awkward silent walks.
   1. **Task Description #2 :**

*Context:* It’s midnight, and George has been studying late at Walter Library. He plans to walk back to his apartment in Prospect Park. He is aware that others might feel unsafe walking alone at this hour, so he is considering forming a group.  
  
*Task:* George aims to:

1. Connect with other students who are heading toward Prospect Park.
2. Offer to walk together to enhance safety for everyone.
3. Potentially meet new people with shared interests, making new friends.
4. Coordinate logistics such as meeting time and place at the hour.

## Scenario Walkthrough

1. **Scenario #1:**
2. Press the “Login” button
3. Enter your UMN username and password in the log-in screen
4. Press the “Sign In” button
5. Click the “From:” field and enter “Bruininks Hall” (the address of your current location)
6. Click the “To:” field and enter the address of your apartment
7. Click the “When:” field and enter 9:00 pm
8. Click the search button (the button with the search icon)
9. Click on “Show List”
10. Click on “Jane Doe” to look through Jane Doe’s profile.
11. Click on ‘Match’
12. Click on ‘Start Walk’
13. On the Active Walk screen, click on “Message Jane”
14. Type in your message to coordinate with Jane
15. Click on the “Send” button (Up arrow)
16. Once you have coordinated a meeting point, click the back arrow button in the top left corner of the message screen and walk to the meeting point
17. Walk to your apartment with Jane. When you and Jane have parted ways, click “Complete Walk”
18. On the “How was your walk with Jane” screen, click on the 5th star.
19. **Scenario #2:**
20. Press the “Login” button
21. Enter your UMN username and password in the log-in screen
22. Press the “Sign In” button
23. Click the “From:” field and enter “Walter Library” (the address of your current location)
24. Click the “To:” field and enter the address of your apartment in Prospect Park
25. Click the “When:” field and enter 12:00 am
26. Click on “Create Group”
27. Hold on the user pins to look through the profiles of the users you want to add to your group.
28. Once done viewing the profile, click on the “Back” button to go back to the map.
29. Select the users you want to add to your group (One click per profile on map).
30. Once you have selected the users you want to walk with, click on the “Next” button located at the bottom above the navigation bar
31. Click “Confirm”
32. Click on ‘Start Walk’
33. On the Active Walk screen, click on “Message Group”
34. Type in your message to coordinate with your group
35. Click on the “Send” button (Up arrow)
36. Once you have coordinated a meeting point, click the back arrow button in the top left corner of the message screen and walk to the meeting point
37. Walk to your apartment with your group. When you have parted ways with your group members, click “Complete Walk”
38. On the “How was your walk” screen, click on the 5th star.

## [Low-Fidelity Prototype.pdf](https://drive.google.com/file/d/1j_TaUPFldx5Kmnh9kMWHdS9cS3EfrPui/view?usp=sharing)

## Debrief ([PathMates - Cognitive Walkthrough scores](https://docs.google.com/spreadsheets/d/1MkuQ0MsWzvK6TZh1qwPYaI99YCuLLCO6-dqjwM87tTk/edit?usp=sharing))

In conducting our team’s cognitive walkthrough (linked above) of the prototype, several strengths and limitations became evident, giving us insights into user engagement with each task and highlighting areas that require refinement. The walkthrough demonstrated that some elements, particularly the primary login flow, worked seamlessly. Users were able to enter their credentials and proceed without difficulty, which reinforced the functionality of this initial task. However, as we moved deeper into the tasks, we identified a few interface issues that could potentially disrupt user experience, especially during tasks involving repeated or intricate interactions.

One of the most notable issues was the ambiguity in button labeling and inadequate feedback, which at times left users uncertain about the next action. For example, the “First time?” prompt on the login screen implied unnecessary additional setup steps, which could cause hesitation and confusion among users when trying to log in. Another recurring usability issue was the manual entry required for the “From” location field. Users may anticipate that the system would autofill their current location or suggest nearby options, due to which, a lack of this feature can disrupt the flow and possibly add to task completion time. A similar problem emerged with the search button, which was not immediately recognizable due to its muted color and lack of clear labeling, complicating users’ ability to initiate a search easily and intuitively.

As our team proceeded through other tasks, we found additional potential obstacles in navigation and task clarity. For example, the “Show List” button had ambiguous labeling, which may leave users unsure of its purpose and lead to unnecessary delays. The back button in this section was also poorly visible, which may make some users feel stuck in the list view without a clear escape route. Another issue was observed with the “Match” button: it lacked a confirmation prompt, increasing the risk of accidental clicks. Without an option to undo this action, users would be forced into an unintended match, which could compromise the app's usability in scenarios where careful selection is critical. Communication features also presented challenges, particularly the messaging function on the active walk screen. Users don’t receive any prompts that suggest they should message their match, leaving them unaware of a key interaction that would enhance coordination and overall experience. This gap in user guidance could diminish engagement and task completion efficiency. Additionally, the “Complete Walk” button had no confirmation dialog, which can make it easy for users to unintentionally end their walk, a mistake that would require them to restart the entire process.

The feedback process toward the end of the walkthrough revealed further usability constraints. Upon completing a walk, users would encounter a rating screen that lacked clear guidance on submitting the feedback. With no skip option, some users can feel restricted, as they are forced into a rigid flow that does not accommodate their preference to bypass feedback. Additionally, there is no submit button on the rating screen, so once the user clicks on a rating, they’re automatically navigated to the next screen. This could lead to users giving incorrect ratings.

The cognitive walkthrough brought to light these critical areas for improvement in button clarity, user guidance, and action confirmations. While the prototype demonstrated functionality in facilitating core tasks, addressing these usability issues would make the interface more user-friendly, responsive, and aligned with user expectations, ultimately enhancing the app's intuitiveness and fluidity.

## Summary Document: Identified Problems in the Prototype Interface

1. **Ambiguity in Button Labels and Prompts**

* The “First time?” prompt on the login screen is unclear and implies extra steps, which could confuse users by suggesting additional setup requirements.
* The “Show List” button label lacks specificity, making it unclear what the user can expect upon clicking it.
* The search button lacks clear labeling and visibility, which may cause users to overlook it or question its function.

1. **Lack of Autofill or Contextual Suggestions**

* The “From” location field does not autofill or suggest the current location, forcing users to manually enter this information, which can disrupt the user flow and add unnecessary friction.
* Similarly, the “When” field does not provide an option to default to the current time, which could make setting the walk time more cumbersome.

1. **Inconsistent Feedback and Confirmation Prompts**

* The “Match” button lacks a confirmation prompt, increasing the risk of users accidentally matching with someone. Without an undo or confirmation option, users are locked into a match they may not have intended.
* The “Complete Walk” button does not have a confirmation popup, making it easy for users to accidentally end their walk prematurely, with no easy way to correct the mistake.

1. **Poor Visibility of Navigation Elements**

* The back button in the list view is difficult to locate, potentially making it hard for users to return to the previous screen without confusion.
* In the profile and group views, the absence of clear navigation elements can create a sense of being “trapped” within a specific section, leading to a more restrictive experience.

1. **Lack of Guidance on Key Interaction Features**

* No prompt or banner encourages users to message their matched partner, so some users may be unaware of the need or option to coordinate with their match.
* In the group creation section, the process of holding pins to view profiles lacks an instructional prompt, which can leave users unclear on how to proceed when trying to learn more about potential group members.

1. **Inflexible Feedback Submission Process**

* On the walk feedback screen, there is no skip option, forcing users to provide feedback when they may not want to. This rigidity can detract from the overall user experience, especially if they are in a hurry or prefer not to rate every walk.
* There is no submit button on the rating screen, so once the user clicks on a rating, they’re automatically navigated to the next screen. This could lead to users giving incorrect ratings.

1. **No Error Recovery Mechanism**

* Accidental actions, such as clicking “Complete Walk” or selecting “Match,” do not provide any recovery options, which can trap users in unintended situations and force them to restart processes.
* The feedback screen's submission process does not clearly indicate how to proceed after rating, potentially leading to confusion on whether the rating was successfully recorded.