Heuristic Evaluation of NightOwl

1. Problem

This is an evaluation for NightOwl, an iOS application that helps students finish their problem sets late at night if they are stuck and alone by matching them quickly with fellow classmates on their college campus to get help and finish the pset together.

2. Violations Found

1.   [H2-2 Match between System and Real World][Severity: 2][A, C]
After sending a new message, the application takes the user back to their home screen instead of going to their messages screen or remaining on the current "find night owls" screen as the user may expect. Instead of taking the user back to the original home page, perhaps the application could allow users to remain on the "find night owls" page or go to the messages page.

2.   [H2-5: Error Prevention] [Severity: 2] [B]
Something to consider--the user, based on other applications, may make the assumption that their search is automatically refreshed when they click the "Find Nightowls" button. Is this the case? When a user navigates away from a "NightOwls near you" page, does that page maintain its results or are they lost? Will the user have to submit a new status in order to find matches, or will this match page refresh automatically if he opens and closes the application? The user may lose data on potential matches, or worse, lose a status that was advertising a need for a study partner, if this isn't persisted in the design somehow. This would be less-visible to the user initially but would become a greater concern over time with more use. Be sure to make this clear in a readme or your design notes, although you most likely won't be able to implement this fully for your hi-fi prototype.

3.   [H2-3 User Control and Freedom][Severity: 3][A,C]
There is no way to get back to the main home screen after clicking "find night owls" for a class. Users cannot tap the home button and must navigate to either "Messages" or "Me" in order to navigate back to their home page. Making the home button take the user back or having a back button on the "find night owls" page would be helpful.

4.   [H2-6 Recognition & Recall] [Severity: 4] [A, B, C]
The way the current "Messages" feed is presented does not make it easy for a user to correctly identify which person is in which class, forcing the user to remember who they might have last spoken to in the class, or to retrieve extra information by clicking on the fellow user's name. It might be better to either include another screen where messages are sub-divided by classes, or else only show messages from the current day, current class, from people in the nearest geographic proximity, etc.

5.   [H2-5 Error Prevention] [Severity: 3] [A]
It is not clear how to stop working on a class. Users may tap the class just to try to see their status or location and accidentally go inactive. Having an "x", a clearer way of unselecting a class, or confirmation for unselecting a class would be helpful.

6.   [H2-4 Consistency and Standards] [Severity: 1] [A]
In the "Me" tab, the color of the current class names is gray. On the "Home" screen, the text is purple when a class is active and gray when a class is inactive. The gray font in the "Me" tab may confuse users and make them think the grayed out classes are inactive. Making the classes in the "Me" tab purple would help make the application more consistent and prevent confusion.

When adding a class, the instructions are in bold black font, which is inconsistent with the other pages. On other pages, the instructions are in purple. Changing the "Add a class" text to be purple would help users identify this text as the instruction.

In the application, the color gray is typically used for things that are inactive. Having the text for "Send a message to ___" be gray may confuse the user and lead them to think that the text box is "inactive" or unable to be typed in. Making the font purple would be more consistent with the rest of the application design.

The font detailing how far other night owls are from the user on the "find night owls" page is white on gray and does not contrast sufficiently. Having a darker gray may help the user read the text more easily.

7.   [H2-3 User Control & Freedom] [Severity: 4] [A, B, C]
There is no way to view what status or location users have posted. If a user made progress on a PSET, or changed their location, they would have no way of viewing or updating the status or location they posted. Allowing the user to see or edit their status would help them better use the application. Furthermore, one cannot edit or delete a status once it has been creation and has no control over the lifetime of that status.

8.   [H2-1 Visibility of System Status] [Severity: 4] [A, B]
If a user is working on PSETs for two classes, there is no way to identify which "night owl" is for which class after clicking "find night owls". Adding a color or class label may make it more clear.

9.   [H2-4 Consistency and Standards] [Severity: 1] [A, C]
Some of the buttons are labeled "cancel" while others are "x". To maintain consistency, both the labels should be named "cancel" or "x".

Two of the back or cancel buttons are located in the upper left corner (messaging and adding a class) while the "X" for cancelling creating a post is in the top left corner. Keeping buttons that serve the same purpose in the same location may be helpful and let the user navigate the application more easily. The "cancel" button on the "add new class" page should be moved to the top purple bar to maintain consistency.

There's a "setting" icon at the top right corner on the "Me" screen. However, it doesn't exist on the other two screens. The general setting should be able to be accessed from any screen.

When adding a class, it is unclear what the typing bar on the top of the page is meant for. Making the search bar the same design as the one on the messages page and adding the magnifying glass icon could reduce confusion.

10.   [H2-5: Error Prevention][Severity: 3][B,C]:
When a user goes to add a class, there is currently no check to make sure the user doesn't add a course by accident. A confirmation window to confirm this choice will help to reduce an accidental course add,

especially since the space the user has to select a specific course with a tap is very thin, and it is likely the user could choose the wrong one by mistake.

11.   [H2-3 User Control & Freedom] [Severity: 2] [A, B]
It is unclear what functionality the "edit" button on the "Me" tab has. If the only functionality is to delete classes, there may be a clearer for users to just have an "x" near the name of the class.

If a user does accidentally add a course or finishes the current quarter, there isn't a path to remove old courses. This limits the user's freedom throughout the app and leads to a misrepresentation of data (his classes) that is core to his experience in the application. Adding the ability to swipe left over a class and delete it from a list would be a simple fix for this issue.

12.   [H2-10 Help and Documentation][Severity : 1][A]
When setting a location while making oneself available for a class, the example text specifies "FloMo". If the application was going to be expanded to more college campuses, it would be more helpful to have less Stanford-specific example text, as many people who do not attend Stanford would not know what "FloMo" was.

13.   [H2-4: Consistency and Standards][Severity: 3] [B]
The Home Screen allows users to select either a class or "Find NightOwls." It isn't clear if the functionality is different between these two selections initially, which may be confusing for users who are trying to find the quickest path for getting help in a class. I would remove the "Find NightOwls" button, and include this as the "save" step for a particular status within a class.

14.   [H2-9: Help Users with Errors] [Severity: 2] [B]
If a user tries to post a blank status, the application does not provide clear instruction to the user as to why this input has been rejected. The application should prompt the user to enter strings in each of the fields to clarify this, or use color in a clearer manner.

15.   [H2-6: Recognition and Recall] [Severity: 2] [B, C]
On the "Post" screen, when users are setting their location, they may be in academic buildings whose rooms and floors they are less familiar with and can't recall directly. Automatically filling in this information using a combination of GPS and its known mapping to the buildings on the college campus in question will help reduce the user's memory load, or else allow the users to select their location from a map.

16.   [H2-6: Recognition and Recall] [Severity: 3] [B]

Both the "Set Location" and "Set Status" texts are somewhat vague. Although there are suggestions, it should be more clearly articulated to the user that this status should be about the current class they selected, or else instructions to explain what kind of status this should be will help direct the user. It might be better to clarify that this is a status directly intended only for other members of the same class, rather than the kind of universal status users are accustomed to on Facebook. The "Set Location" also doesn't prompt the user to provide the level of specificity necessary for the application to correctly match him with another student.

17.   [H2-8 Aesthetics and Minimalist Design] [Severity: 1] [B]
The "Messages" feed and the "Match" screen both rely heavily on text to identify a match for the user and preview that match's message and location. A better use of icons over text, or arrangement of

messages in accordance with proximity, as is currently done in the "Match" screen will help the user make logical decisions about who to message next without overcrowding the screen with too much text.

18. [H2-5: Error Prevention] [Severity: 2] [B]
Something to consider--the user, based on other applications, may make the assumption that their search is automatically refreshed when they click the "Find Nightowls" button. Is this the case? When a user navigates away from a "NightOwls near you" page, does that page maintain its results or are they lost? Will the user have to submit a new status in order to find matches, or will this match page refresh automatically if he opens and closes the application? The user may lose data on potential matches, or worse, lose a status that was advertising a need for a study partner, if this isn't persisted in the design somehow. This would be less-visible to the user initially but would become a greater concern over time with more use. Be sure to make this clear in a readme or your design notes, although you most likely won't be able to implement this fully for your hi-fi prototype.

19. [H2-1 Visibility of system status][Severity: 3] [C]
On the "Find NightOwls" screen, the system only shows part of the status info of the nearby users, and when we select on the user, we are taken directly to a prompt to send a message. There is no way to view full status details at any point in the workflow, so the "Find NightOwls" match page should give the user the opportunity to view this before sending a message.

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]				1	1	**2**
[H2-2: Match Sys & World]			1			**1**
[H2-3: User Control]			1	1	1	**3**
[H2-4: Consistency]		2		1		**3**
[H2-5: Error Prevention]			2	2		**4**
[H2-6: Recognition not Recall]			1	1	1	**3**
[H2-7: Efficiency of Use]						**0**
[H2-8: Minimalist Design]		1				**1**
[H2-9: Help Users with Errors]			1			**1**
[H2-10: Documentation]		1				**1**
Total Violations by Severity	**0**	**4**	**6**	**6**	**3**	**19**

4. Evaluation Statistics

Severity /	Evaluator A	Evaluator B	Evaluator C

Evaluator			
sev. 0	-	-	-
sev. 1	100%	25%	25%
sev. 2	17%	83%	33%
sev. 3	33%	50%	50%
sev. 4	100%	100%	67%
total (sev. 3 & 4)	56%	66%	56%
total (all severity levels)	52%	63%	42%

5. Summary Recommendations

Overall, this application is very strong right now, with a low number of high-severity errors. Your main task right now will be to establish clear logical paths for finding matches for each course the user is enrolled in. **Our biggest areas of confusion as evaluators were in this area.** You will have to make some choices about how much control you give to your users once they select a class for the sake of directing them clearly to matches, using color and button placement as tools to facilitate their movement through the "Find Classmates" task. This also means giving the user more insight into where their status is being shown, how long that status persists for, how long their matches persist for, and how to quickly sift through matches and messages to only connect with maximally helpful partners. Your other major area of improvement will be to fine-tune your UI design for consistency in color, exit paths, and icon use. Great work and good luck with your hi-fi prototype!

Severity Ratings

0 - don't agree that this is a usability problem
1 - cosmetic problem
2 - minor usability problem
3 - major usability problem; important to fix
4 - usability catastrophe; imperative to fix

Heuristics
[H2-1: Visibility of System Status]
● keep users informed about what is going on

[H2-2: Match Between System & Real World]
● speak the users' language
● follow real world conventions

[H2-3: User Control & Freedom]
● "exits" for mistaken choices, undo, redo
● don't force down fixed paths

[H2-4: Consistency & Standards]

[H2-5: Error Prevention]

[H2-6: Recognition Rather Than Recall]
- make objects, actions, options, & directions visible or easily retrievable

[H2-7: Flexibility & Efficiency of Use]
- accelerators for experts (e.g., gestures, kb shortcuts)
- allow users to tailor frequent actions (e.g., macros)

[H2-8: Aesthetic & Minimalist Design]
- no irrelevant information in dialogues

[H2-9: Help Users Recognize, Diagnose, & Recover from Errors]
- error messages in plain language
- precisely indicate the problem
- constructively suggest a solution

[H2-10: Help & Documentation]
- easy to search
- focused on the user's task
- list concrete steps to carry out
- not too large