Group 3

Weather App

ECS522U - Graphical User Interfaces

Assignment 3: Evaluation

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SECTION 1: SUMMARY OF THE EVALUATION

In order to conduct this evaluation our team decided to provide individual risk ratings for 10 selected heuristics. Based on the results we decided what were the main issues with the prototype presented and how these could be solved. In order to do so we first analyzed the results and found that the majority of the problems lay in the possible errors that the system could present, as no team member actually encountered them. The highest value of the severity ratings were on the following heuristics: error prevention, help user recognize and recover from errors, and user control and freedom.

After inspecting the results we came up with three solutions: making a search screen with a back button, making a screen letting the user know that the app could not load and changing the three dot icon for a magnifying glass. After finding the solutions we would work on we created visual aid in order to report them. All these solutions were designed taking into account the needs of students, which are our intended users.

SECTION 2: PROCESS OF EVALUATION

In order to carry out this evaluation our group was presented with the heuristic methodology. In this kind of evaluation 4 to 5 people, usually informed on the topic, choose 10 heuristics and provide a rating for them. The possible heuristics are: visibility of system status, match between system and real world, user control freedom, consistency standards, help user recognize and recover from errors, recognition rather than recall, flexibility and efficiency of use, aesthetics and minimalist design, error management, help and documentation, skills, pleasurable interaction with user and privacy. For this kind of assessment there is a pre-established rating which ranges from 0 to 4, the ratings are provided as discrete digits the larger the number is the more imperative it is to solve the issue.

As the group for this project was formed with 5 members we decided together which heuristics we would evaluate and then individually each of us would provide a rating for them. Along the process we kept in mind that the end users of the system were students which influenced how much we valued different issues. For the duration of the project we considered students as a user that benefits from a simplistic interface with big icons that only provides essential and immediate information.

The five heuristics we decided to evaluate are:

1. Visibility of system status - keep the user informed about what is happening
2. Match between system and real world - use of representative icons easy to understand
3. User control and freedom - option to go back if something fails
4. Consistency and standards - an action will always lead to an outcome
5. Error prevention
6. Recognition rather than recall - user shouldnt remember elements in order to use them, elements should be identifiable
7. Flexibility and efficiency of use - this tend to include shortcuts for experienced users
8. Aesthetic and minimalist design
9. Help user recognize and recover from errors
10. Help and documentation - information about the program for new users

After providing the ratings our group met, explained the reasoning behind the opinions, and wrote the evaluation. When writing the evañluation we created visual prototypes of the solutions.

SECTION 3: FINDINGS OF EVALUATION

Table of the severity rating assigned to each heuristic by the developers

Heuristic		Severity Ratings (0-4)				
		Member 1	Member 2	Meber 3	Member 4	Member 5
1	Visibility of system status	2	2	0	1	0
2	Match between system and real world	0	0	0	1	0
3	User control and freedom	1	1	0	0	0
4	Consistency and standards	0	0	0	0	0
5	Error prevention	1	2	1	1	1
6	Recognition rather than recall	0	0	0	1	0
7	Flexibility and efficiency of use	0	0	0	0	0
8	Aesthetic and minimalist design	0	0	0	0	0
9	Help user recognize and recover from errors	2	2	1	1	2
10	Help and documentation	0	0	0	1	0

As the table above shows our group had similar opinions about the severity ratings for various heuristics. As it can be seen 82% of ratings were either 0 or 1 meaning that on most occasions the evaluators believed that there was no violation towards the heuristic or that the issue was visual. On the other hand, the ratings of two mean that there is an issue but it has a low priority and does not largely affect the applications functionalities. To further illustrate the ideas covered we images of the user interface have been attached at the bottom of the section.

When discussing the ratings of the visibility of system status category some group members denoted that even though the application had not failed for any of us and it ran as expected, if it did fail we had not prepared an error screen for the user. This was arguably the only concern in this category as we assume that students have used other weather apps and know when the application is functioning properly as it loads and presents the information. In general there were no pressing concerns.

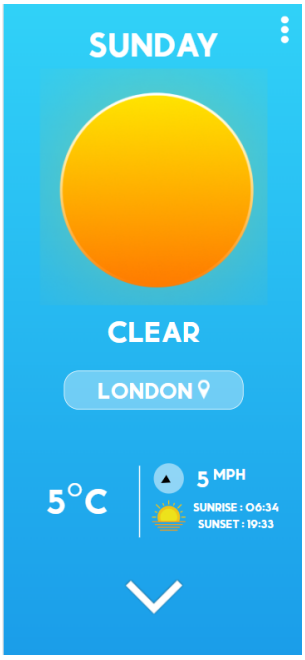
Another concern arose in the category match between system and real world as one of our colleagues mentioned that the three dots on the top right of the screen, used to open a search bar where the student can insert another location, could be a magnifying glass. On the internet magnifying glass icons are related to searching therefore it would be more instinctive for the user. In general there were no pressing concerns. This issue also applies to the recognition rather than recall section, as it is preferably to recognize the globally used magnifying glass icon instead of remembering that the three dots are used to insert a different location in this application.

As for the severity ratings of the category user control and freedom there was a group member who believed that the program needed a button to exit the search bar or its own separate screen. This is automatically exited when the user presses enter on the keyboard but it might not be user friendly enough. In general there were no pressing concerns.

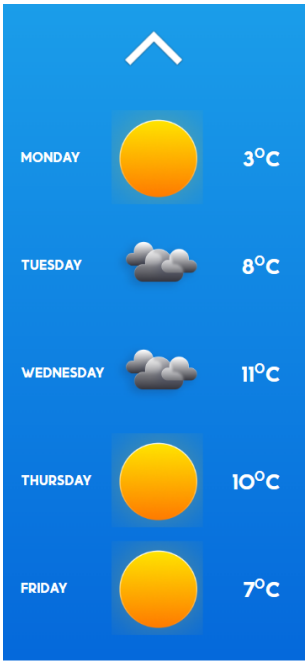
On error prevention is where the majority of the team members believe that there was a main concern. On the search, if the user enters a wrong location the application will provide information for the closest sounding location instead of letting the user know that the location couldn't be found. The error message applies to the concerns aroused in the help users recognize and recover from errors category.

As for the help and documentation, we believe that this area could be improved upon as there is no tutorial or screen explaining how to use the application but because it isn't too complex and most students use technology we assume that they can learn how to use it by themselves.

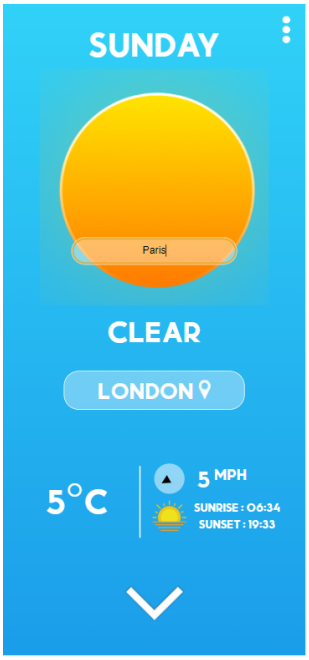
Lastly, for consistency and standards, flexibility and efficiency of use and aesthetic and minimalist design we believe that the current implementation is sufficient to satisfy students requirements.



Home screen



After scrolling down or interacting with the arrow



Search bar accessed through three dots on top right corner

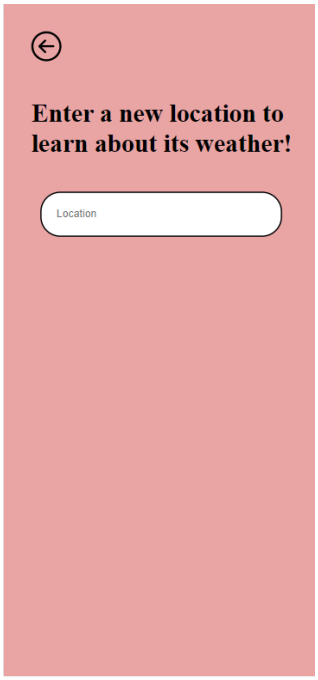
SECTION 4: PROPOSED IMPROVEMENTS

Seeing the results of the evaluation, our team noticed that there is a lot of room for improvement in the categories: help users recognize and recover from errors and error prevention. As a result, the majority of our improvements lie in those two areas. Furthermore, these two categories had the largest values for the severity ratings therefore, these issues should be the first to get solved.

We suggest the following improvements:

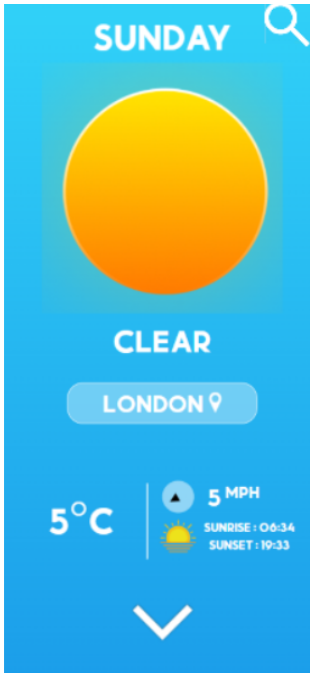
1. Making a search screen with a back button
2. Making a screen letting the user know that the app could not load
3. Changing the three dot icon for a magnifying glass

The images attached below depict the improvements.



First improvement
Making a search screen with a back button

Second improvement
Making a screen letting the user know that the app could not load



Third improvement
Changing the three dot icon for a magnifying glass

For the first improvement we would like to make a search screen that has some information about what the user should input as previously we assumed that the students would know to insert a location in the search bar. In addition, the students should be able to go back to the main screen through one interaction with a button as otherwise they might get furious with the system. These two improvements have led to the design of the first image presented above. This screen will only be accessed through a button in the top right corner of the main screen. As it can be seen, the screen consists of a button to return to the main screen, a short message saying, “Enter a new location to learn about its weather!” and a search bar with the placeholder “Location” where the user

inputs the place. This improvement helps solve the issues found with heuristics user control, as it allows returning to the main screen, and visibility of system status, as it opens a new screen just for searching.

For the second improvement we would like to make a screen that informs the user of when the application has failed to load. On our current prototype the product fails to include such an scenario and along with inputting the wrong location when the users enter the input this is the other error that could happen. Through the screen presented above we inform the user of the error and how to act upon it. This screen consists of a danger symbol explaining why the error occurred and how to proceed. This improvement helps solve the issues found with the heuristic to help users recognize and recover from errors.

Lastly, for the third improvement we would change the three dot icon on the top right corner, which is visible on the images in section 3, by a magnifying glass. This improvement would help the user recognize that the interaction with that button is probably to search for something related to weather. Interacting with this button leads to the screen presented on the first improvement.

Another possible improvement could be the inclusion of the phrase “Weekly forecast” on the screen presented after scrolling down or interacting with the arrow in the main screen. This would help with the heuristic visibility of system status as students would surely know what is being presented to them in that screen. However, this last improvement is of less significance as generally students have been to schools and can infer that the weekdays provided are for that week.

All these improvements were designed with our end user in mind. As it can be seen, on the newly created screens we valued the inclusion of icons that match between the system and the real world as students are more likely to have used them before. In addition, as our data collection resulted in students preferring simple user interfaces with large icons we drifted towards design including them when making these improvements. In general, we believed that the prototype presented was quite functional for our intended user and therefore didn't need too many changes.