

Evaluation Assignment 2 – Heuristic Evaluation

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Team Phoenix

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This Team is responsible for designing the interface for Beach Monitoring App. This app is used to collect data for the beach monitoring. This collected data is used to develop a model that predicts bacteria levels. The app will basically be a medium to update the data on the Wisconsin DNR and the health department or other entity responsible for the beach. Along with the interface team phoenix have to maintain a database for the data.

Application Design

- Login Page: The login page is simple it has a username and password field.
- Home page: This page lists all the surveys that have been submitted successfully in one group and other surveys which have not been submitted in one group.
- New survey form: A new button on the home page, will take you to a new survey form. This form consists of several pages with related data fields.
- Review and submit page: Submit button on survey form will take you to the review and submit page. This page will display all the data entered and allows to submit the data finally.
- Section page: In this page, the user can randomly select a section to enter the data. In this way the user does not have to follow a strict order in entering the data.

Identification of the UI domain and short description

Beach monitoring app is a mobile application which allows the users to enter the data collected during a beach survey. We can say it belongs to data collection or survey application domain. This collected data is used to

develop a model that predicts bacteria levels . The app will basically be a medium to update the data on the Wisconsin DNR and the health department or other entity responsible for the beach.

List of heuristic usability principles for the design's UI domain

- **Visibility:** Since the Beach monitoring application is used in sunlight during surveys, contrast/brightness adjustment must be provided.
- **Visibility of system status:** Once the user submit the survey, user must be notified about the status of the upload
- **Error prevention:** Beaches must be displayed in dropdown menus, so that the user may choose a beach with in Wisconsin area and do not enter any new beach data. Similarly other questions in the survey form must give options to choose the answer, so that the user does not enter irrelevant information. For example, questions like water conditions, amount of algae etc.,
- **Match between system and the real world:** The user interface must use the terms that are comprehensive to the user.. Beach monitoring application must contain simple understandable terms in the form.
- **User control and freedom:** User must have freedom to enter any data , he wants to add first. User should also have to have the freedom to edit the data, once entered. In beach monitoring app, the data form can be reviewed and edited before submission.
- **Help and documentation:** Although documentation is provided about how to use the Beach monitoring app, the users must still be able to use it without help. That is the application has to be self-sufficient to provide help to the user.
- **Consistency and standards:** In beach monitoring app, all related data fields should be grouped together. Buttons and icons must be consistent throughout the application.
- **Aesthetic and minimalist Design:** The font and background color used must be simple. The font size must be such that one can easily read the field name or button. The font and background color must be contrast to one another
- **Help users recognize, diagnose, and recover from errors:** In case of loss of network or WIFI connection, user must be notified. In Beach monitoring app, if the user misses any mandatory data field , the interface should clearly highlight for the user.
- **Recognition rather than recall:** The application must remember the user data and user need not have to remember it. In beach

monitoring application, the user selected beach should be displayed on the top of every survey page.

List of usability problems generated from the heuristic evaluation

- The beaches and status of survey upload is listed before the login. Since the surveys are corresponding to each user, the lists of surveys in completed or in progress state should be visible once the user logs in. The new survey can be started without user login.
- In the design, the data fields are grouped in separate pages. If the user wants to go back and check his data, the user has to navigate through pages. Therefore scrollable page would be helpful.
- The final review page before submit must have a cancel button. The review page must be editable
- Since all the fields are mandatory, user may want to save his data he has already collected before he can submit the survey form. So there has to be a 'save for later' button on each page (if the form has several pages) or on one page, if the form is scrollable.
- The list of forms and their statuses must also include incomplete forms.
- Password management must be included as part of the interface. Other account settings must also be made available.
- The user's online status must also be displayed along with the username. For example green means online and survey is ready to be uploaded and grey means offline, that is data will be in progress status once submitted.
- Every submitted or saved survey form must have a survey number for ease in recognition

Critical usability concern:

- If the user accidentally deletes the in progress survey. The application should be able to retain the data.
- If a user gives wrong data and he submits the survey. There is no way to correct it
- If a user forgets his password, he must be still allowed to create and save a survey form locally.
- Password recovery should be implemented.

Critical usability concerns with a short story

James is student intern hired to collect data on the beach. James is near a beach where there is no network connectivity. But James was able to enter and submit the data survey. Due to loss in network connectivity ,the survey is in progress state. Now if he accidentally deletes the data instead of editing it, he will lose all the collected data.

James now has good data connectivity and is able to submit the data successfully , but he has entered a wrong information in one field. Since the data is submitted , he is not able to edit it.

Erica is also a student intern hired to collect beach data. Erica has recently changed the password and was not able to recollect it. Since User has to login , before the data is submitted. So Erica is not able to submit or save the data. Also Erica's phone network is lost

Erica must be able to recover her password once the network is connected