

Evaluation Report

Group-5

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1. Evaluation of Prototype for user-type: **Tourist:-**

We decided to choose **heuristic evaluation** for this user-type. The reason being that we mutually decided to prefer an expert evaluation method over user evaluation since the application is still not used by users and the application is still in the prototype phase. Further, expert evaluation had two options either to proceed with cognitive walkthrough evaluation or comprehensive(heuristic) evaluation. Performing cognitive evaluation is a hard task in an application where a lot of tasks are involved and identifying representative use cases it is very difficult to identify in advance when the product is not ready and used. Therefore we decided to use **10 heuristics of Neilson** to evaluate our prototype quickly and efficiently.

- Jacob Neilson's 10 heuristics:-

1. Visibility of System Status
2. Match between system and real world
3. User Control and freedom
4. Consistency and standards
5. Error Prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use

8. Aesthetic and minimalist design
9. Help users recognise, diagnose and recover from errors
10. Help and documentation

❖ Evaluation 1

- **Visibility of System Status:** ❌
 - The system status is not visible for any instances I did. For example, when I clicked on the save changes button in settings then no pop-up showed "saved successfully" visible on screen.
- **Match between system and real world:** ✅
 - All the symbols/words used in the system are matched to the real world. These are commonly used words/symbols.
- **User Control and freedom:** ✅
 - It was easy to navigate to wherever I wanted.
- **Consistency and standards:** ✅
 - Overall design of interface is consistent throughout the prototype.
- **Error Prevention:** ❌
 - When I was in the settings view, I mistakenly clicked on the cross button. It makes me exit the settings without even saving my changes.
- **Recognition rather than recall:** ✅
 - While entering the data in the input fields, I can see some text describing what to be written in the text field, which is an effective measure for recognition for the user.
- **Flexibility and efficiency of use:** ✅
 - Since the application is simple to use, hence from novice to expert users all have the same simple interface.
- **Aesthetic and minimalist design:** ✅
 - Only relevant details are shown in the system. No irrelevant details are asked or displayed in the system.
- **Help users recognise, diagnose and recover from errors:** ❌
 - There are some locations in map to which teleportation is not possible and I kept clicking on them but the system never showed any pop-up informing me about the impossibility of the action.
- **Help and documentation:** ✅
 - A detailed documentation was provided when I clicked on the help icon.

❖ Evaluation 2

- **Visibility of System Status:** ❌
 - The system status is not visible for any instances I did.
- **Match between system and real world:** ✅
 - Used red colour for delete and buttons performing similar actions.
- **User Control and freedom:** ❌
 - It was not able to exit the tour in between.
- **Consistency and standards:** ✅
 - Overall design of interface is consistent throughout the prototype.
- **Error Prevention:** ❌
 - When I was in the settings view, I mistakenly clicked on the cross button. It makes me exit the settings without even saving my changes.
- **Recognition rather than recall:** ✅
 - Navigation arrows were very useful in letting me know where I can move to and where I cannot.
- **Flexibility and efficiency of use:** ✅
 - Since the application is simple to use, hence from novice to expert users all have the same simple interface.
- **Aesthetic and minimalist design:** ✅
 - Only relevant details are shown in the system. No irrelevant details are asked or displayed in the system.
- **Help users recognise, diagnose and recover from errors:** ❌
 - No failing mechanism was there in the prototype.
- **Help and documentation:** ✅
 - A detailed documentation was provided when I clicked on the help icon.

❖ Evaluation 3

- **Visibility of System Status:** ❌

- The system status is not visible for any instances I did. For example, when I clicked on the save changes button in settings then no pop-up showed "saved successfully" visible on screen.
- **Match between system and real world:** ✓
 - Used blue colour to indicate instructions like save and green colour to indicate instruction like confirm.
- **User Control and freedom:** ✗
 - There was no logout button in case I wanted to exit the prototype in between.
- **Consistency and standards:** ✓
 - Overall design of interface is consistent throughout the prototype.
- **Error Prevention:** ✗
 - When I was in the settings view, I mistakenly clicked on the cross button. It makes me exit the settings without even saving my changes.
- **Recognition rather than recall:** ✓
 - While entering the data in the input fields, I can see some text describing what to be written in the text field, which is an effective measure for recognition for the user.
- **Flexibility and efficiency of use:** ✓
 - Since the application is simple to use, hence from novice to expert users all have the same simple interface.
- **Aesthetic and minimalist design:** ✓
 - Only relevant details are shown in the system. No irrelevant details are asked or displayed in the system.
- **Help users recognise, diagnose and recover from errors:** ✗
 - There are some locations in map to which teleportation is not possible and I kept clicking on them but the system never showed any pop-up informing me about the impossibility of the action.
- **Help and documentation:** ✓
 - A detailed documentation was provided when I clicked on the help icon.

Evaluation Summary

Heuristics	Evaluation 1	Evaluation 2	Evaluation 3
1.)Visibility of System Status	✗	✗	✗
2.)Match between system and real world	✓	✓	✓
3.)User Control and freedom	✓	✗	✗
4.)Consistency and standards	✓	✓	✓
5.)Error Prevention	✗	✗	✗
6.)Recognition rather than recall	✓	✓	✓
7.)Flexibility and efficiency of use	✓	✓	✓
8.)Aesthetic and minimalist design	✓	✓	✓
9.)Help users recognise, diagnose and recover from errors	✗	✗	✗
10.)Help and documentation	✓	✓	✓

❖ Conclusion:-

- Evaluators noticed that no system state was visible. A message can be shown on successful completion of an action.
- According to the evaluators, they were not able to logout midway in the prototype. An exit tour button can be added in settings.
- Evaluators pointed out that there was no error prevention mechanism. A pop-up message can be shown when a user mistakenly clicks on a cross button without saving changes.
- Evaluators suggested that there should be a fail pop-up on tasks which cannot be performed.
Since, data about all places was not available that's why the system didn't have a feature to teleport to each and every location in the map. Though, it teleported to the majority of the locations. We can add a pop-up which will notify users when they click on locations to which teleportation is not possible at the moment.

After performing the evaluation we concluded that our current version of the prototype is not enough to satisfy some usability requirements. That is why we created another one final version of our prototype with above changes to counter the issues faced by evaluators.

Evaluation Summary of Final Version

Heuristics	Evaluation 1	Evaluation 2	Evaluation 3
1.)Visibility of System Status	✓	✓	✓
2.)Match between system and real world	✓	✓	✓
3.)User Control and freedom	✓	✓	✓
4.)Consistency and standards	✓	✓	✓
5.)Error Prevention	✓	✓	✗
6.)Recognition rather than recall	✓	✓	✓
7.)Flexibility and efficiency of use	✓	✓	✓
8.)Aesthetic and minimalist design	✓	✓	✓
9.)Help users recognise, diagnose and recover from errors	✓	✓	✓
10.)Help and documentation	✓	✓	✓

❖ Conclusion(Final Version):-

- One of the evaluators wanted a confirmation for every cross button to prevent non-intentional button click.
- Asking for confirmation after every click can result in frustrating some users(this can result in decreased satisfaction). We added it after the evaluation of version 1 for the buttons where user was trying to exit without saving changes.
- Moreover, majority of evaluators approve of the error prevention, therefore no change in prototype is required.

All these conclusions confirm that the prototype has no usability issues. Thus, we are sure to say that this is the final version of our prototype.

2. Evaluation of Prototype for user-type: **Local Residents:-**

Prototype for local residents has some extra features as compared to Prototype for tourist. So we can make use of the heuristic evaluation done on prototype for tourist and since the additional tasks are small in number we can perform cognitive walkthrough method of evaluation for these additional tasks.

Task 1

While using the tour view you noticed that some information given in the tour was not correct or you want to suggest some extra information for that place.

Interface-Level Task

1. Go to the login screen and login as a local resident. Make sure that email and password are filled correctly.
2. Go to the place about which you want to report or suggest.
3. Click on the report/suggest button on the lower left of the screen.
4. Add the subject and the description.
5. 5.Press the submit button.

Questions

1. were you able to login properly?

Expert_1: Yes , it was easy to login properly.

Expert_2: I forgot my password but I was able to recover it easily by using the forgot password button.

Expert_3: Yes, I was able to login properly.

2. Was going to the desired place easy?

Expert_1: Yes, going to the desired place was easy with the help of the given compass.

Expert_2: Yes, the desired place was easy to find .

Expert_3: By using teleportation I easily reached the desired place.

3. Was the report/suggest button visible clearly?

Expert_1: Yes it was clearly visible on the lower side of the screen.

Expert_2: I felt that it should have been some other than red as it is a sign of danger but it was easy to locate it.

Expert_3: Yes, clearly visible.

4. Were you able to verify that your report has been submitted?

Expert_1: Yes I got confirmation that it has been submitted.

Expert_2: Verification was received after submitting the report.

Expert_3: I received the confirmation.

Task 2

You think that you can contribute to the project by adding some media content(photos/videos) and you want to upload that from your device.

Interface-Level Task

1. In the tour view , click on the Settings button on the upper left side of the screen.
2. In the Settings panel, click on the contribute button.
3. Now upload media to the 'Contribute Media' panel.
4. Add some description for that.
5. Send it to the administrator for reviewing your request by clicking on the submit button.

Questions

1. Was the setting button clearly visible in the tour view?

Expert_1: Yes, the setting button was clearly visible in the left upper corner .

Expert_2: Yes, it was easy to locate.

Expert_3: Yes, very easy to find and I clicked the cross button by mistake but a dialogue appeared to prevent that mistake.

2. Was it easy to find the 'Contribute' button ?

Expert_1: yes it was right in between exit tour and save changes buttons.

Expert_2: Yes, I did not face any difficulty while finding the button

Expert_3: I could not find the button at first glance but later found it. It should be more clearly visible.

3. Did you face any difficulty while uploading the media?

Expert_1: No difficulty was faced by uploading.

Expert_2: Yes, it was very easy to upload the media.

Expert_3: I uploaded the wrong file but there was no option to remove the file and upload another file.

4. Did you face any difficulty adding description in the Contribute Media panel?

Expert_1: Yes because there was a word limit on description which does not allow to give detailed information about the uploaded media.

Expert_2: No, there was no difficulty in adding description . It was easy and user friendly.

Expert_3: I did not face any difficulty in adding the description.

5. Did you get confirmation for your contribution request submission?

Expert_1: Yes, verification was received.

Expert_2: Yes, I got confirmation that it has been submitted.

Expert_3: Yes,I received the confirmation

Result and Analysis

- Each evaluator was able to perform the tasks smoothly and achieve the required objective. They were all satisfied with the overall experience.
- Whenever the user performed some action, the app went through visible changes. The feedback was provided by the app to the user, whenever the user performed the action.
- Although errors were made by the evaluators at some point, they were able to recover from the error. One evaluator faced an error when he mistakenly selected the wrong file to upload and had to go through the process again to upload the correct file. It would be better if we could give some option for removing the file selected for uploading.
- For the first time user, some difficulty may be faced in finding some option but since it is not a large number of evaluators, we may keep it as it is.

Analysis for Functional Requirements

1. Reporting/Suggesting any cultural information

- Button to report was easily visible to users. No user had difficulty finding it.
- The interface provided was user friendly and did not cause any problem while reporting.
- There was space for the subject and the description for the report.
- The user received confirmation at the end of the process.

2. Contributing some media content

- The procedure to upload the media and add the description is quite clear and intuitive.
- In the settings panel we can find the contribute button.
- By simply clicking on the contribute button, we can open the 'Contribute Media' panel.
- Used feedback was received after contributing.

3. Evaluation of Prototype for user-type : **Researchers:-**

Prototype for researchers has some extra features as compared to Prototype for tourist

So we can make use of the heuristic evaluation done on prototype for tourist and since the additional tasks are small in number we can perform cognitive walkthrough method of evaluation for these additional tasks.

Task 1

While using the tour view you want to create a note or view previously saved notes.

Interface-Level Task

1. Go to the login screen and log in as a Researcher. Make sure that email and password are filled correctly.
2. Go to the place at which you want to create or view notes related to that place.
3. Click on the notes icon on the upper left of the screen.
4. To create new notes, click on the add icon in the lower middle of the screen.
5. Enter note title and content of the note
6. Press the 'save note' button.
7. For viewing all notes, there is a **notes** button on first screen after login, from there you can navigate to all notes screen

Questions

1. Were you able to locate the 'notes' button?

Expert_1: Yes , it was easy to find a notes option.

Expert_2: Yes, Notes option was present along with commonly used options

Expert_3: The Notes button was easy to locate.

2. Were you able to view/modify all saved notes?

Expert_1: Yes, I was able to view as well as modify my notes

Expert_2: Yes, all features worked, even I was prompted to confirm that i want to delete a note

Expert_3: There can be an option to download a note/all notes.

3. Were you able to locate the Notes icon in the 3D view of the tour?

Expert_1: Yes it was clearly visible on the top-left side of the screen.

Expert_2: I felt that it should have been some other than grey as it sometimes does not contrast well with the background while navigating.

Expert_3: Yes, clearly visible.

4. Was the note management handy?

Expert_1: Yes I got an alert and confirmation according to my actions.

Expert_2: Yes, all features are integrated nicely

Expert_3: There should be an option to view individual notes in detail, as note content may become larger and overflow the size of the notes component.

Task 2

While using the tour view you want to Download a image/video.

Interface-Level Task

1. Go toTour of your choice.
2. Go to the place for which you want to Download multimedia.
3. Click on the download icon on the upper left of the screen.
4. A download settings screen will open
5. Choose desired settings and path for download
6. Press the 'Download Now' button.

Questions

1. Were you able to locate the 'download' icon in the 3D view of the tour?

Expert_1: Yes , it was easy to find the download option.

Expert_2: I felt that it should have been some other than grey as it sometimes does not contrast well with the background while navigating.

Expert_3: The Download icon was easy to locate.

2. Were you able to choose the quality and format of download?

Expert_1: Yes, I was able to choose options for downloading contents

Expert_2: Yes, all features worked, even I was prompted to success screen on clicking download now button

Expert_3: There can be an option to choose image and video format like:-
png,jpg,svg,mp4,mkv etc.

3. Was the option to browse a different download folder path useful?

Expert_1: Yes it was useful as we don't have to copy paste files.

Expert_2: Yes, it felt very useful

Expert_3: Yes, It saves a lot of time as the default download folder is very much cluttered.

Task 3

While using the tour view you want to Flag a place or view all saved places.

Interface-Level Task

1. Go to Tour of your choice.
2. Go to the place for which you want to Save/Flag.
3. Click on the Map icon on the upper right corner of the screen.
4. A Map screen will open
5. Choose the desired location for Saving.
6. For viewing all saved places, there is a **saved places** button on first screen after login, from there you can navigate to all saved places screen and do the required

Questions

1. Were you able to locate the Flag in the 3D view of the tour?

Expert_1: Yes , it was easy to flag a place on a map.

Expert_2: Yes, it was very easy, also a flag icon appeared where we clicked, it provided good feedback to users.

Expert_3: Yes, I was able to easily save a place from a location map.

2. Were you able to locate the 'Saved places' button?

Expert_1: Yes , it was easy to find the Saved places option.

Expert_2: Yes, Saved places option was present along with commonly used options

Expert_3: The Saved Places button was easy to locate.

3. Were you able to see all the saved places in one place?

Expert_1: Yes it was very useful and I was able to view all my saved places

Expert_2: Yes, it found all saved places easily

Expert_3: Yes, it felt very easy and useful.

4. Were you able to change saved places from the Starting map also?

Expert_1: Yes it was very easy to save/unsave a place from that portal

Expert_2: Yes, it was easy and also colour was changing on action which provided good user feedback

Expert_3: Yes, it was very useful feature, also a note below the screen was provided to aid users in the process

Result and Analysis

- Each evaluator was able to perform the tasks smoothly and achieve the required objective. They were all satisfied with the overall experience.
- Whenever the user performed some action, the app went through visible changes. The feedback was provided by the app to the user, whenever the user performed the action.
- Although errors were made by the evaluators at some point, they were able to recover from the error. Some problem was faced in the download button because it was not contrasting with the background.
- Also one evaluator required the functionality to download all the notes so we could add that if more evaluators had suggested it.
- For the first time user, some difficulty may be faced in finding some option but since it is not a large number of evaluators, we may keep it as it is.

Analysis for Functional Requirements

1. Creating and view notes

- The procedure was very easy and intuitive.
- The interface provided was user friendly and user was able to create the note easily.
- Management was easy but one user felt that there should be functionality for downloading the notes.
- The user received confirmation at the end of the process.

2. Download image/video

- The procedure to upload the media and add the description is quite clear and intuitive.
- The user was able to find the download icon easily but one user find it less contrasting with the background.
- User were able to select the quality of downloads.
- 'Download Successful' message was given as user feedback.

3. Flag Places

- User was able to follow the procedure.
- 'Flag' button was easy to locate.
- By simply clicking on the flag button, we can save the current location.
- User was also able to view all the flagged locations at once.
- Used feedback was received after flagging the place.

4. Evaluation of Prototype for user-type : **Administrators:-**

Prototype for administrators has some extra features as compared to Prototype for tourist

So we can make use of the heuristic evaluation done on prototype for tourist and since the additional tasks are small in number we can perform cognitive walkthrough method of evaluation for these additional tasks.

Task 1

While using the tour view you want to change your user mode

Interface-Level Task

1. Go to the login screen and log in as an Administrator. Make sure that email and password are filled correctly.
2. You will be prompted to choose your user mode
3. There you can opt for either **User Mode** or **Admin Mode**.
4. On choosing User Mode you will be directed to all the features which a tourist has.
5. On choosing Admin Mode, you will be directed to admin panel, there you can control various settings

Questions

1. **Were you able to choose your User mode?**

Expert_1: Yes , it was easy Switch between those two modes.

Expert_2: Yes, it was very easy, also there was an option to come back to the user choosing the window and proceed in a different mode.

Expert_3: Yes, it was prompted just after login, which was very useful.

2. **Were you able to change your mode?**

Expert_1: Yes , it was easy to change user mode.

Expert_2: No, on entering tourist mode, i was only able to logout, but with admin mode, i was able to change the mode.

Expert_3: Yes, I was able to change my mode

Task 2

While using the admin panel, you are able to add/remove a place from the map.

Interface-Level Task

1. Go to the login screen and log in as an Administrator. Make sure that email and password are filled correctly.
2. You will be prompted to choose your user mode
3. Then opt for **Admin Mode**.
4. Choose Map option from sidebar
5. Add/Remove Place according to your requirements.

Questions

1. **Were you able to locate the Map option from the sidebar of the admin panel?**

Expert_1: Yes , it was easy to find the option

Expert_2: Yes, it was very easy, also a the colour scheme was clearly differentiating the selected option from the rest

Expert_3: Yes, I was able to easily navigate to the add/remove place page.

2. Were you able to Add/Remove Place?

Expert_1: Yes , it was easy to manage places

Expert_2: Yes, also I was prompted to choose a place on a map and then on saving I was asked to confirm my choice.

Expert_3: The Add/Remove Places button was easy to locate and worked fine.

3. Were you able to navigate to other admin settings?

Expert_1: Yes it was very useful and I was able to view other admin settings

Expert_2: Yes, it found all related settings at one place

Expert_3: Yes, it felt very easy and useful.

Task 3

While using the admin panel, you are able to block/unblock current users or approve/deny a new registered user.

Interface-Level Task

1. Go to the login screen and log in as an Administrator. Make sure that email and password are filled correctly.
2. You will be prompted to choose your user mode
3. Then opt for **Admin Mode**.
4. Choose Users option from sidebar
5. Approve/Deny Users according to your requirements. Also Block/Unblock already approved users.

Questions

1. Were you able to locate the Users option from the sidebar?

Expert_1: Yes , it was easy to find the option

Expert_2: Yes, it was very easy, also a the colour scheme was clearly differentiating the selected option from the rest

Expert_3: Yes, I was able to easily navigate to the managed users page.

2. Were you able to approve/deny user registration?

Expert_1: Yes , it was easy to do this job.

Expert_2: Yes, the approve/deny button had colour according to their functions.

Expert_3: This function was easy to do and is useful.

3. Were you able to see all the users in one place?

Expert_1: Yes, The button for viewing all users was easy to locate and I was able to easily see all users.

Expert_2: Yes, it found all users easily.

Expert_3: Yes, it felt very easy and useful.

4. Were you able to Block/Unblock users?

Expert_1: Yes it was very easy to block/unblock a place from that portal

Expert_2: Yes, it was easy and also colour was changing on action which provided good user feedback

Expert_3: Yes, it was a very useful feature, also there should be an option to filter users based on name,blocked status.

Task 4

While using the admin panel, you are able to approve or deny a report/suggestion

Interface-Level Task

1. Go to the login screen and log in as an Administrator. Make sure that email and password are filled correctly.
2. You will be prompted to choose your user mode
3. Then opt for **Admin Mode**.
4. Choose Requests option from sidebar
5. Approve/Deny reports from local residents according to your requirements.

Questions

1. Were you able to locate the Requests option from the sidebar?

Expert_1: Yes , it was easy to find the option

Expert_2: Yes, it was very easy, also a the colour scheme was clearly differentiating the selected option from the rest

Expert_3: Yes, I was able to easily navigate to the managed reports page.

2. Were you able to approve/deny reports?

Expert_1: Yes , it was easy to do this job.

Expert_2: Yes, the approve/deny button had colour according to their functions.

Expert_3: This function was easy to do and is useful.

3. Were you able to see all the reports in one place?

Expert_1: Yes it was very useful and I was able to view all the reports

Expert_2: Yes, it found all saved places easily, but there should be an option to filter the reports based on location or content

Expert_3: Yes, it felt very easy and useful, also there should be an option to view the report in detail, the shown prompt is just providing its name and info.

Result and Analysis

- Each evaluator was able to perform the tasks smoothly and achieve the required objective. They were all satisfied with the overall experience.

- Whenever the user performed some action, the app went through visible changes. The feedback was provided by the app to the user, whenever the user performed the action.
- Although errors were made by the evaluators at some point, they were able to recover from the error. One evaluator faced an error when he switched to User mode then there was not any option present to go back to switch back the mode, he has to logout and login again
- For the first time user, some difficulty may be faced in finding some option but since it is not a large number of evaluators, we may keep it as it is.

Analysis for Functional Requirements

1. Add/Remove Places from Map

- Button to Add/remove was easily visible to users. No user had difficulty finding it.
- The interface provided was user friendly and did not cause any problem while adding/removing a place on map.
- The user received confirmation at the end of the process.

2. Approve/Deny/Block/Unblock users

- The procedure to manage users is quite clear and intuitive.
- In the Admin panel we can find the Users button.
- By simply clicking on the Users button, we can access the all Users Settings.
- Used feedback was received after contributing.

3. Approve/Deny Reports given by Local Residents

- Managing incoming reports/suggestions is very easy
- In the Admin panel we can find the Reports button.
- By simply clicking on the Report button, we can access the Report Page..

Link of Prototypes:-

Prototype_Tourist(V-1):[https://www.figma.com/file/HtasFT0OhG8O4GWn2jKqwp/Prototype-\(V-1\)?node-id=0%3A1&t=7NGSpGdGGR0a9gp8-1](https://www.figma.com/file/HtasFT0OhG8O4GWn2jKqwp/Prototype-(V-1)?node-id=0%3A1&t=7NGSpGdGGR0a9gp8-1)

Prototype_Tourist(final_version):[https://www.figma.com/file/V97i2iGhJBzdQ4tjVwOxot/Prototype_Tourist\(Final-Version\)?node-id=0%3A1&t=2PV8hNwaC8gs0fOj-1](https://www.figma.com/file/V97i2iGhJBzdQ4tjVwOxot/Prototype_Tourist(Final-Version)?node-id=0%3A1&t=2PV8hNwaC8gs0fOj-1)

Prototype_Local_resident:https://www.figma.com/file/2h1MiXZULM3pirx0IUzwvf/Prototype_Local_resident?node-id=0%3A1&t=i5YrlnSNTg04uRk-1

Prototype_Researcher:https://www.figma.com/file/P6EfVlhgCZ7pHk0HH56Zhw/Prototype_researcher?node-id=0%3A1&t=24hwLR48Q8TKuoDG-1

Prototype_Administrator:https://www.figma.com/file/2PfR0Fk9EikZfNPUIz2UGo/Prototype_Administrator?node-id=0%3A1&t=LvgZVgw1askA3Bgw-1