

Design Support Document

Urban Green Infrastructure and Flood Risk

Team 4

App Idea: The basic idea of the App is to educate people about green areas and Flood areas risks and their medications. The app also supports adding new green areas to list on the app by uploading the images. These photos are collected with timestamps and location which are used for mapping the images with better mapping and Researchers, scientists map these images and provide better measures.

Team Members:

UX Consultants

1. Ram Sudda
2. Haoyang Chen

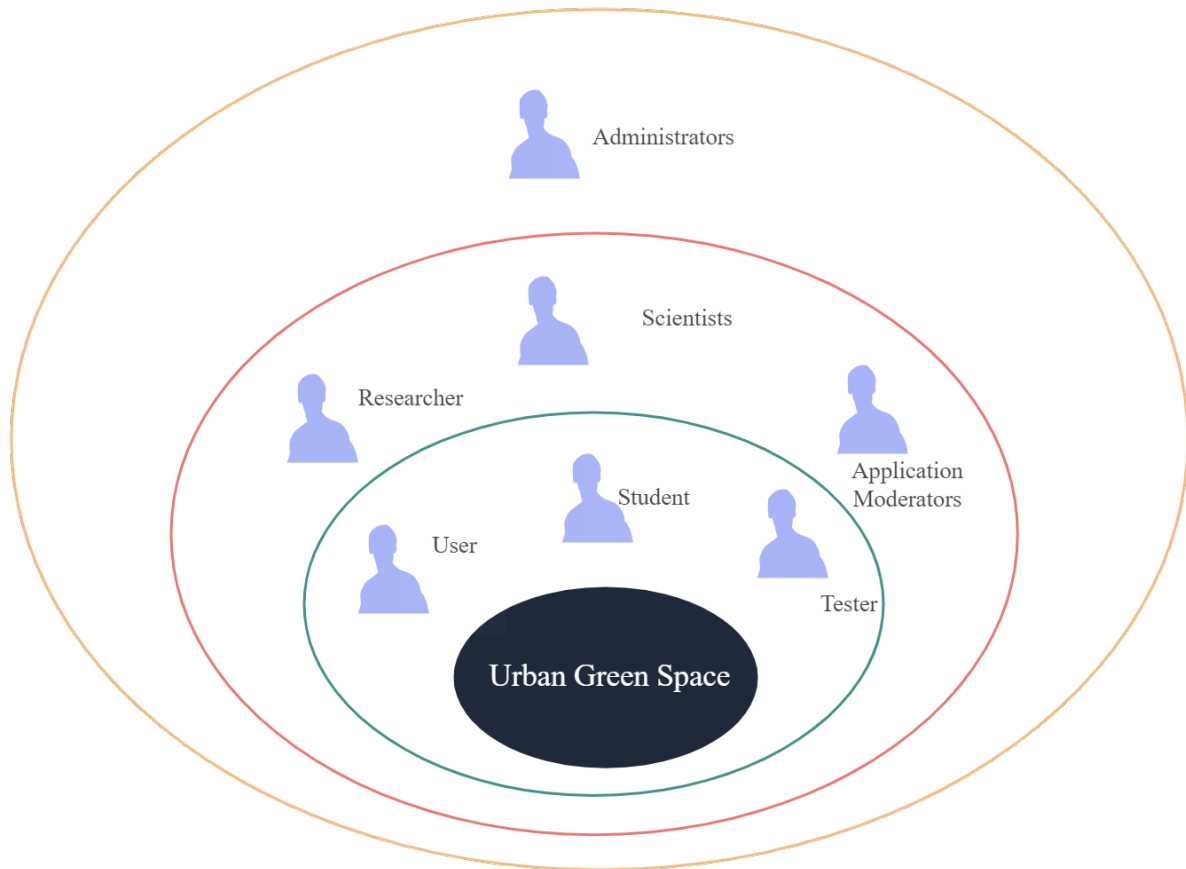
Developers:

1. Austin Gennrich
2. Jordan Bramer
3. Kyle McIntyre
4. Michael Romero
5. Coli Dohne
6. Sid Regmi

Scientists:

1. Jesse Alger
2. Mary Ellen Miller

Onion Model for Green Space App



Stakeholders Description

Students: These stakeholders include Students from 5th grade to Researchers, these people learn a few things and with their understanding upload images with tags such as green space and other categories.

Researcher: The researcher will approve the images uploaded by the users. Sometimes this is also controlled by Application moderators (but this is still in progress). They map the data and images with flood areas. App moderators also upload and edit information about green spaces.

Developers: Undergrad people are the developers of this app for greenspace app. Students implement the project by taking the requirements from scientists under the Professor's guidance.

Administrators: These are the admins of the Application, they have access to the app at all levels. They can delete update and modify the data according to usage.

Stakeholders Goal-Influence Table

User	Goal	Influence
User	Upload the images with relevant information	As their input is considered as primary data source, they can influence design and Data.
Researchers	To verify if the images sent by user are valid and map them according to the category	If they need they can change the design and requirements of the app and control the data flow
Developers	These the primary source for building the app, by considering the scientist requirements.	They influence the design by optimizing the best structure and best design to provide better functionality
Administrators	They can manage all levels of the app, there is no restriction for them	All levels of app can be influenced with these people.

Personas:

1. Primary User 1:

- a. A Primary school student
- b. Name is Joe
- c. Goal: Need information about rainwater saving and Floods.

Joe wants to learn about how green spaces work and how to save rainwater. She can log in to the App for learning about rainwater saving. As she logged in for the first time with her student credentials, she is greeted by a Learning guide for the app. The application provides different types of rainwater-saving methods using previous data filled in by Researchers or users. She can also navigate to pages and learn about Flood risk management using the previous information provided by the users.

2. Primary User 2:

- a. A College Student interested in Environmental things
- b. Name is Henry
- c. Goal: Upload the relevant information about green space around.

Henry is an environmental student who wants to contribute to Urban Space App. With his knowledge of the environment, he identifies a few flood-risk areas and other green spaces. He then uploads the topic with the relevant information and maps its coordinates. He also attaches a few rainwater-saving techniques that could be helpful.

3. Secondary User

- a. A Researcher or Application moderator
- b. Jack
- c. Goal: To approve the images uploaded by the user

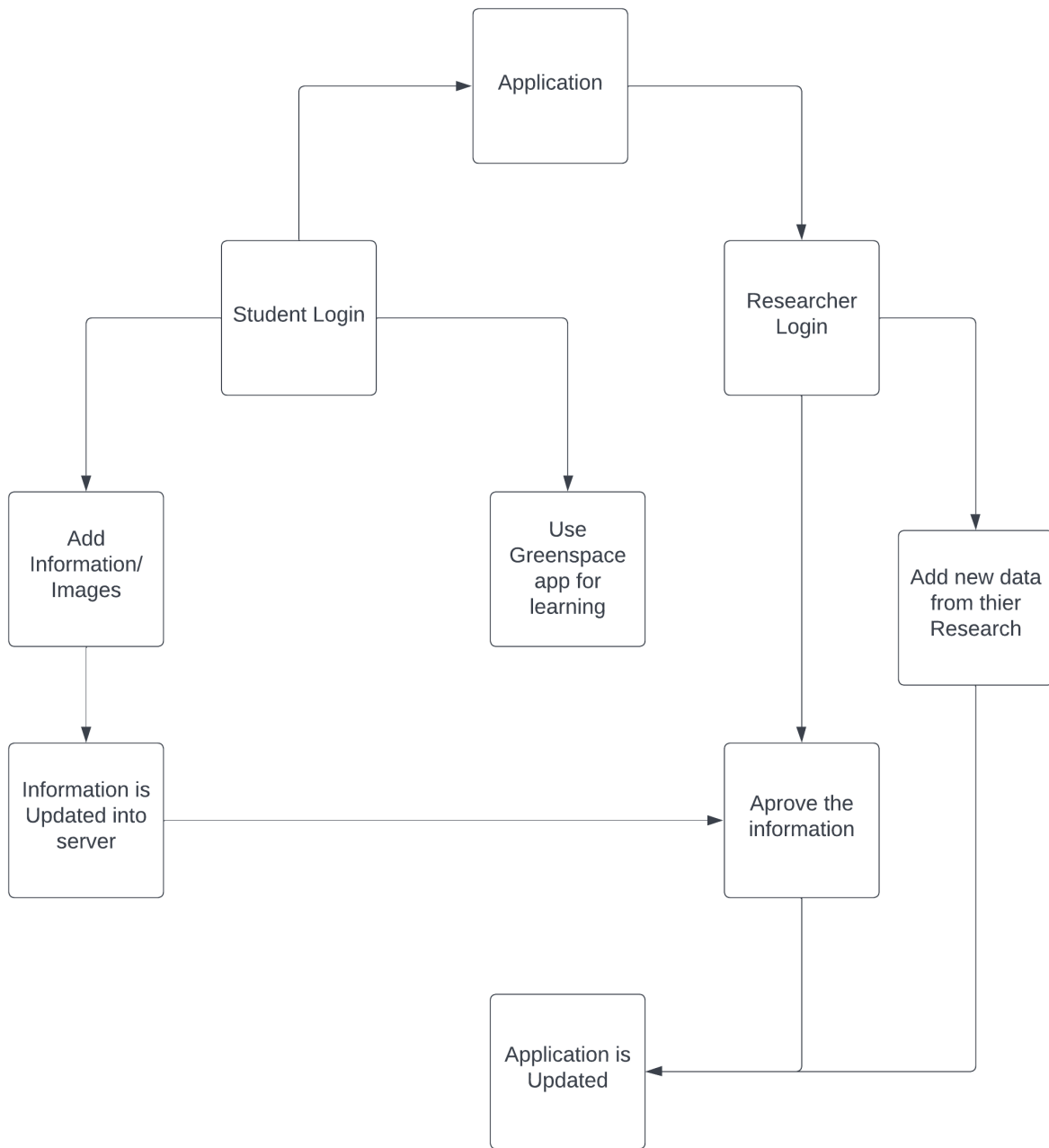
Jack is an App moderator, or a Researcher influenced by the Green Space application. Once he logged in with his credentials, He can then verify the images and content uploaded by the user and approves it. He can modify or delete the data if it is unrelated or inappropriate.

4. Secondary User:

- a. A Researcher or Application Mode
- b. Ali
- c. Goal: To Approve and add data

Ali as. A researcher wants to upload data into an app about greenspaces and flood risk. He logged in with his credentials, and he then starts uploading relevant information with images and text. He then connects a few location points to information provided by the user of the Greenspace App.

Hierarchical Task Analysis:



Hierarchical Task Analysis Summary:

Student:

1. Access the Application and login
2. Once logged in with valid credentials
 - a. If logging in is the first time he is prompted with a learning guide
 - b. Else he can check the app
3. Upload information
 - a. Once he finds something interesting or relates something with the greenspace
 - b. He can take pictures from the app and upload them to Greenspace.
4. Use the application for learning
 - a. Users can see the information as normal users learn about greenspaces flood risk management.

Researcher:

1. Access the Application using their login credentials
2. Once they logged in with valid credentials
 - a. If logging in is the first time he is prompted with a learning guide
 - b. Else he can check the updates such as posts or information waiting for approval
3. Approve the information
 - a. Once information is verified, he can approve them and categorize them accordingly
 - b. If information is inappropriate or wrong they can delete the data.

Second Interview Questions

1. We asked about database implementation and authentication systems.
 - a. MTU Hosted Database would work
2. Need some example apps or websites which could be visually the same or something
 - a. Still, in research, we may get in the next meeting.
3. Looking for specific areas for research
 - a. ArcGIS could help with that, we can also use ArcGIS
4. What should we call the app?
 - a. Michigan Green spaces?
 - b. I speak for the trees?
 - c. Urban greening?
 - d. Other ideas?
5. Discussed a few other usability cases and examples
6. They showed a PPT and overview of the application.