DESIGN THINKING IDEA LAB

TOPIC-RAINWATER HARVESTING

GROUP NO- 03

GROUP MEMBERS:-

01.Aditi Autade

02.Yuvraj Gaikwad

03.Krishna Bhad

04.Samruddhi Wagh

05.Aparna Gore

06.Tanuja Gaikwad

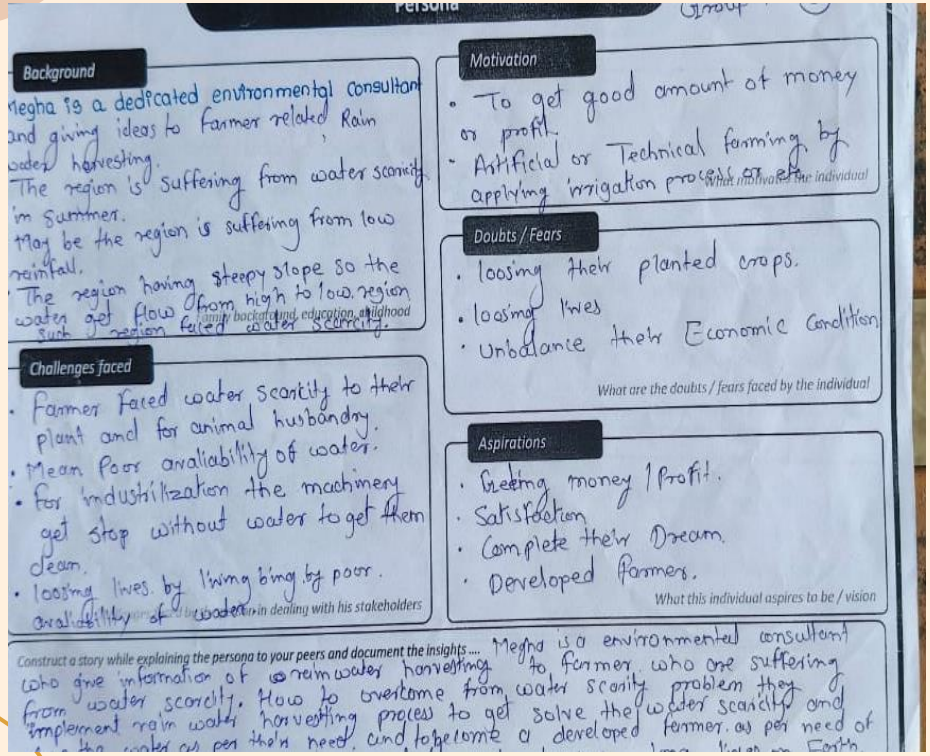
PROBLEM STATEMENT:-

- Many individuals were face challenges in accessing reliable and affordable rainwater harvesting services, along with limited awareness of government subsidies and maintenance practices. So our app aims to connect users with trusted service providers, offering best pricing and educational resources to promote sustainable water management.

social Cause of a Rainwater Harvesting App

1. **Connecting Service Providers and Users:**
Rain Saver makes it easy for you to find trusted professionals who can help with rainwater harvesting, from installation to maintenance
2. **Promoting Water Conservation:**
We empower you to save water by adoptin g simple and effective rainwater harvesting solutions in your home or community.
3. **Enhancing Accessibility and Transparency:**
With Rain Saver, you get access to reliable service providers, complete with honest reviews and clear pricing
4 **Empowering Communities Through Information:**
Rain Saver spreads awareness by providing valuable information, guides, and tips to help people understand and adopt rainwater harvesting solutions

Persona



Persona

Background

Megha is a dedicated environmental consultant and giving ideas to farmer related Rain water harvesting.
The region is suffering from water scarcity in summer.
May be the region is suffering from low rainfall.
The region having steepy slope so the water get flow from high to low region such region faced water scarcity.

Family background, education, childhood

Challenges faced

- Farmer faced water scarcity to their plant and for animal husbandry.
- Mean Poor availability of water.
- For industrialization the machinery get stop without water to get them clean.
- loosing lives by living by poor availability of water.

Challenges faced by the person in dealing with his stakeholders

Motivation

- To get good amount of money or profit.
- Artificial or Technical farming by applying irrigation process or etc.

What motivates the individual

Doubts / Fears

- loosing their planted crops.
- loosing lives
- Unbalance their Economic Condition

What are the doubts / fears faced by the individual

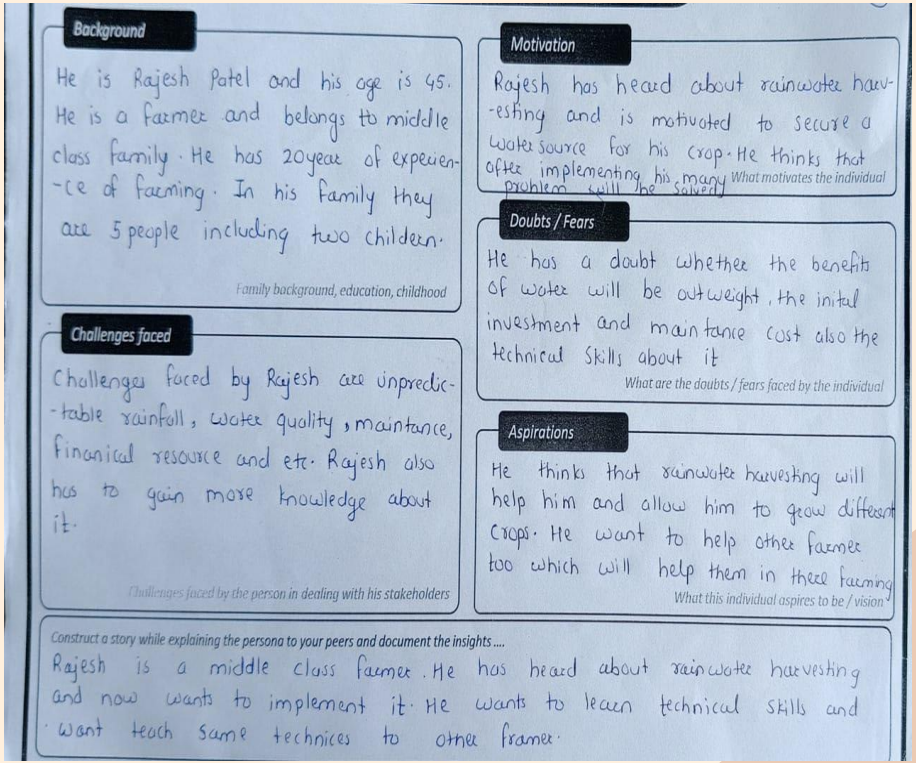
Aspirations

- Seeking money / Profit.
- Satisfaction
- Complete their Dream.
- Developed farmers.

What this individual aspires to be / vision

Construct a story while explaining the persona to your peers and document the insights ....

Megha is a environmented consultant who give information of rainwater harvesting to farmer who are suffering from water scarcity. How to overcome from water scarcity problem they implement rain water harvesting process to get solve the water scarcity and become a developed farmer. as per need of



Background

He is Rajesh Patel and his age is 45. He is a farmer and belongs to middle class family. He has 20year of experience of farming. In his family they are 5 people including two children.

Family background, education, childhood

Challenges faced

Challenges faced by Rajesh are unpredictable rainfall, water quality, maintance, financial resource and etc. Rajesh also has to gain more knowledge about it.

Challenges faced by the person in dealing with his stakeholders

Motivation

Rajesh has heard about rainwater harvesting and is motivated to secure a water source for his crop. He thinks that after implementing his many problem will be solved.

What motivates the individual

Doubts / Fears

He has a doubt whether the benefits of water will be outweight, the inital investment and maintance cost also the technical skills about it

What are the doubts / fears faced by the individual

Aspirations

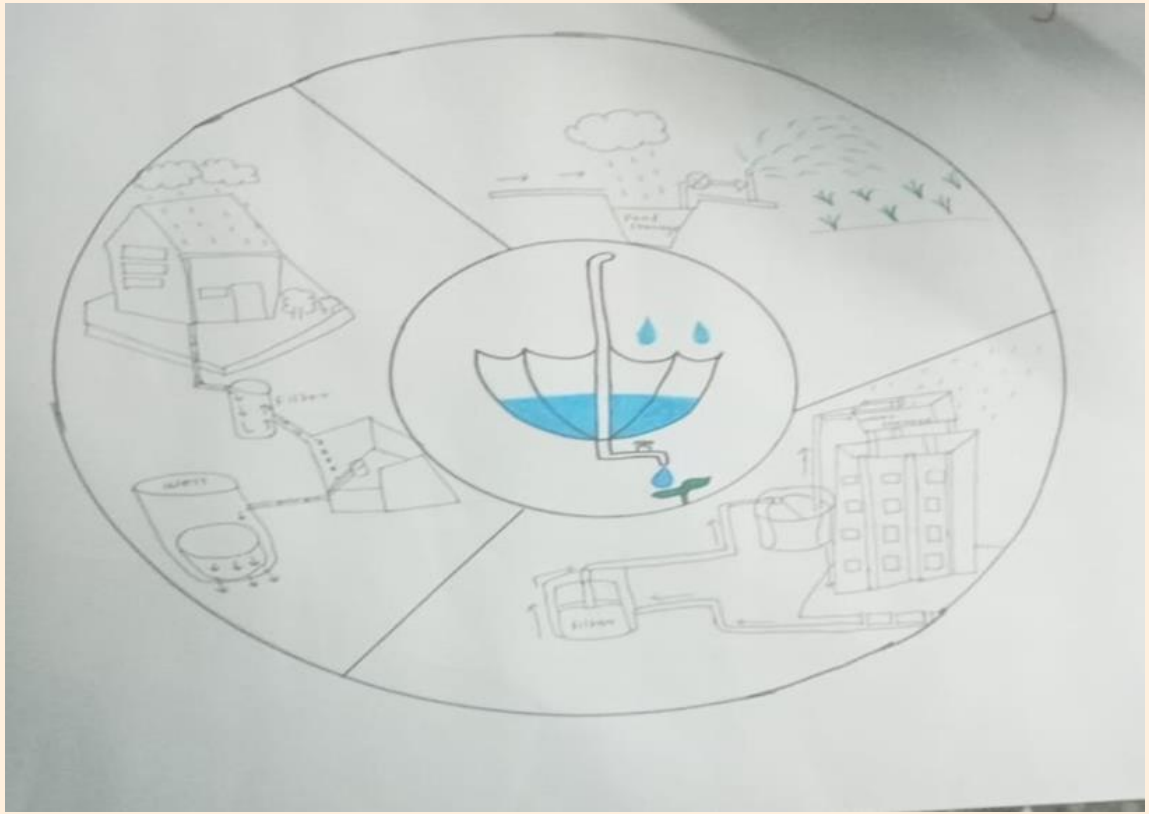
He thinks that rainwater harvesting will help him and allow him to grow different crops. He want to help other farmer too which will help them in their farming

What this individual aspires to be / vision

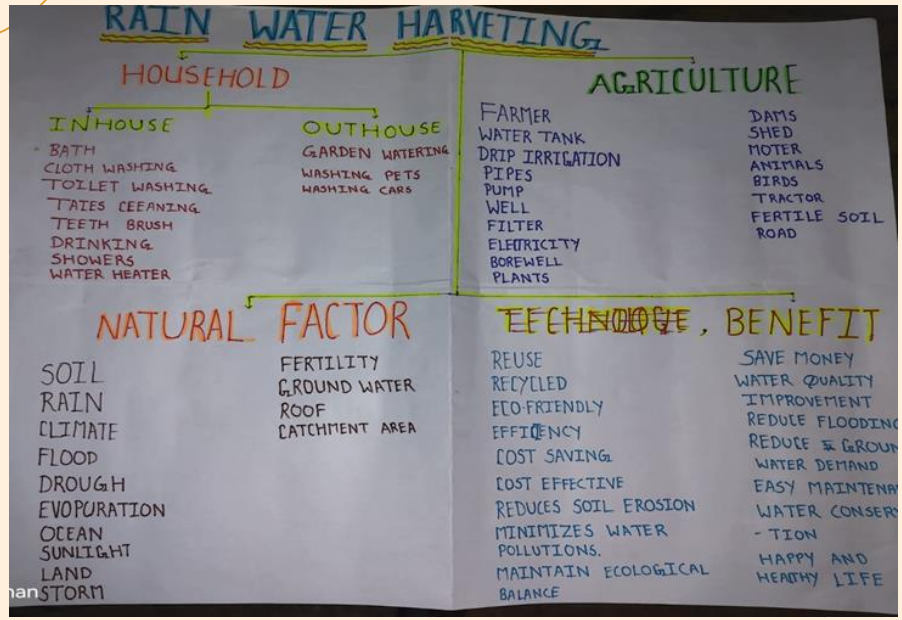
Construct a story while explaining the persona to your peers and document the insights ....

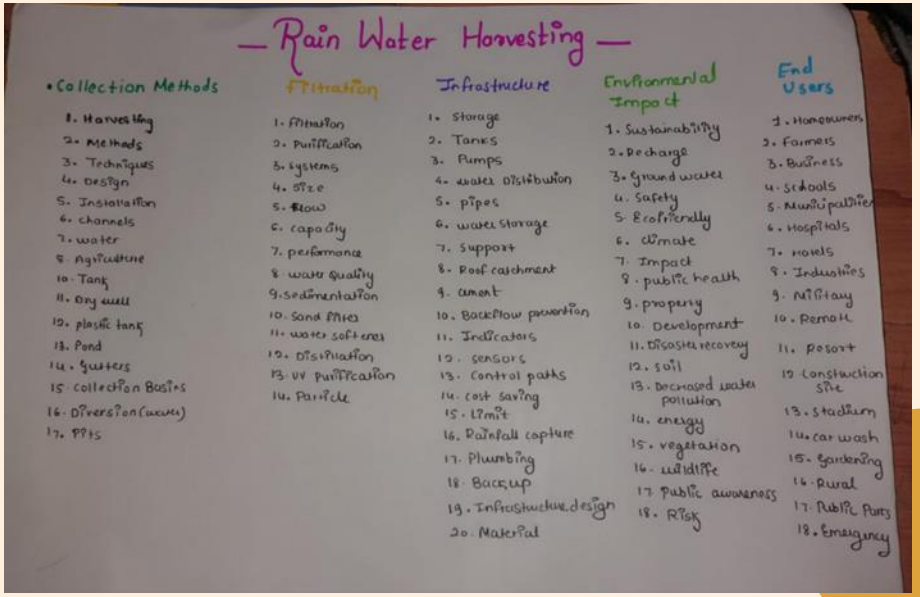
Rajesh is a middle class farmer. He has heard about rainwater harvesting and now wants to implement it. He wants to learn technical skills and want teach same technices to other framer.

GROUP VISUALISATION



WORD MINDMAPING





5W1H Questions

- **Why**

1. **Why is rainwater harvesting important?**
   It conserves water and reduces dependency on groundwater.
2. **Why is rainwater harvesting sustainable?**
   It replenishes natural resources and reduces environmental impact.
3. **Why is rainwater harvesting easy to install and operate?**
   It uses simple systems like tanks, pipes, and filters.
4. **Why is rainwater harvesting good for the environment?**
   It prevents waterlogging and reduces soil erosion.
5. **Why is rainwater cost-effective?**
   It lowers water bills and reduces the need for external water sources.

Where

1.Where can a rainwater harvesting system be installed?

On rooftops, open spaces, and catchment areas.

2.Where can rainwater harvesting be implemented?

In residential, agricultural, and industrial areas.

3.Where does rainwater harvesting support groundwater recharge?

In recharge pits, wells, and permeable soil areas.

4.Where is rainwater harvesting commonly practiced?

In water-scarce regions and urban areas with water shortages.

5.Where can I store rainwater?

In tanks, cisterns, or underground reservoirs.

- **How**

1. **How many methods of rainwater harvesting are there?**
   Two: rooftop harvesting and surface runoff harvesting.
2. **How can we increase the water-efficient irrigation system?**
   Use drip irrigation and rainwater storage for irrigation.

3.How can rainwater be used?

For irrigation, household use, and groundwater recharge.

4.How does rainwater harvesting work?

By collecting, filtering, and storing rainwater for reuse.

5.How can I monitor and maintain my rainwater harvesting system?

Regular cleaning of tanks and filters and inspecting pipes.

- **Who**

1. **Who started rainwater harvesting?**
   Ancient civilizations like Mesopotamia and India.
2. **Who can use harvested rainwater for irrigation?**
   Farmers and gardeners.
3. **Who can provide funding for rainwater harvesting projects?**
   Governments, NGOs, and environmental organizations.
4. **Who are the end users for rainwater harvesting?**
   Households, industries, and agriculture sectors.

What

1.What is the use of rainwater harvesting?

For drinking, irrigation, and groundwater recharge.

2.What are the causes of rainwater?

Rainfall due to weather systems like monsoons and cyclones.

3.What is the process to filter rainwater?

Using gravel, sand, and mesh filters.

4. What are diseases caused due to rainwater?

Waterborne diseases like cholera, typhoid, and dengue.

5. **What is renewable resources**?

Natural resources that replenish naturally, like sunlight, wind, and water.

When

1.**When are the benefits of rainwater harvesting?**
During water shortages or droughts.
2. **When should I use rainwater harvesting irrigation?**
In regions with irregular rainfall or during dry seasons.
3. **When is rainwater harvesting most beneficial for urban areas?**
To reduce urban flooding and groundwater depletion.
4. **When does rainwater harvesting support biodiversity?**
By maintaining water sources for plants and animals during dry periods.
5. **When does rainwater harvesting make the most sense?**
When water demand exceeds supply or during periods of heavy rainfall.

THEORY OF PRIORITIZATION

PRIORITY LIST	ADITI	SAMRUDDHI	APARNA	YUVRAJ	TANUJA	KRISHNA	
SERVICE DELAYS	1000	100	1000	100	100	10	2310
LACK OF AWARENESS	100	100	1000	10	1000	100	2310
GOVERNMENT INFO	10	1000	1000	1000	100	100	3210
PROVIDER TRUST	100	1000	100	1000	10	100	2310
COMMUNICATION	100	100	100	1000	100	1000	2400
BOOKING RELIABILITY	100	100	10	100	1000	100	1410
MAINTANACE	1000	100	100	1000	100	1000	3300
AFFORDABLE SERVICE	1000	1000	100	100	1000	1000	4200
LIMITED APPLICATION	100	100	1000	500	100	100	1500

SCAMPER

- **S - Substitute**

Think of what could be replaced.

- **C - Combine**

Consider combining multiple ideas, products, or processes.

- **A - Adapt**

Adapt existing ideas or processes from other fields to improve the current one.

- **M - Modify**

Modify the size, shape, or appearance, or enhance certain elements

- **P - Put to Another Use**

Think about alternative uses for the product or idea.

- **E - Eliminate**

Identify what could be removed or reduced

- **R - Reverse**

Try reordering or reversing components, steps, or the flow of the process.

Best SCAMPER Techniques for Our App

- Combine:

Combining different services like consultation, installation, and maintenance in one app strengthens its value as a one-stop solution for rainwater harvesting. Offering varied services within one app can encourage users to keep returning, making it more convenient and all-inclusive.

- Adapt:

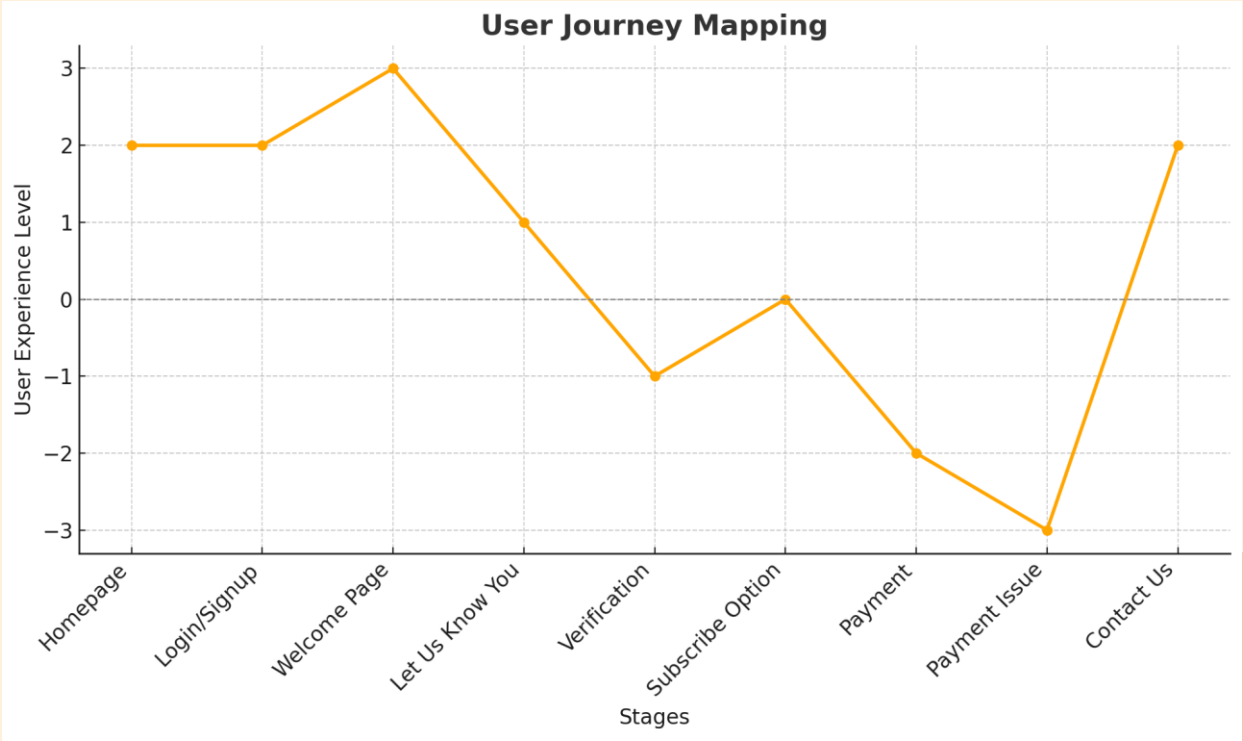
By adapting existing resources, such as using government guidelines for rainwater harvesting and adding real-time updates, your app can provide region-specific and legally compliant advice.

- Substitute:

Replacing traditional in-person consultation with virtual or on-demand consultations through the app can save users time and expand the range of accessible services. This substitution works well for users who prefer digital interactions and faster service

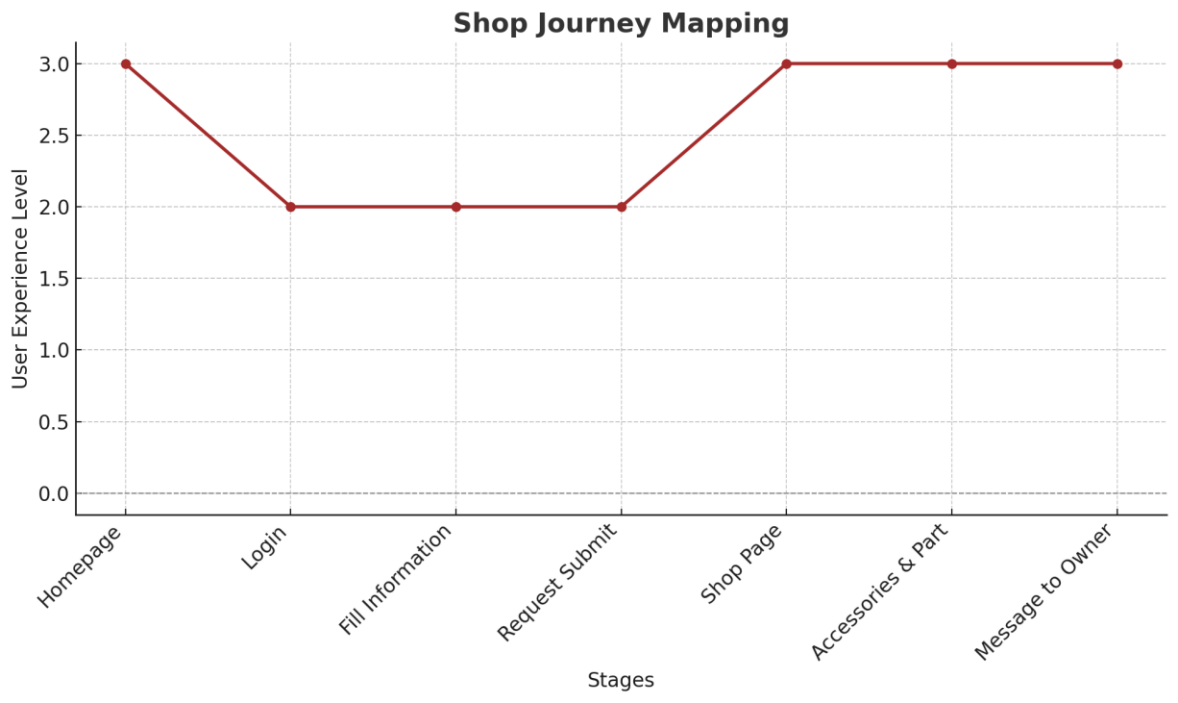
JOURNEY MAPPING

1. RAINWATER HARVESTING HOMEPAGE
2. LOGIN/SIGNUP
3. WELCOME PAGE
4. LET US KNOW YOU
5. VERIFICATION
6. SUBCRIBE OPTION
7. PAYMENT
8. PAYMENT DONE BUT DID NOT GET SUBSCRIPTION
9. CONTACT US



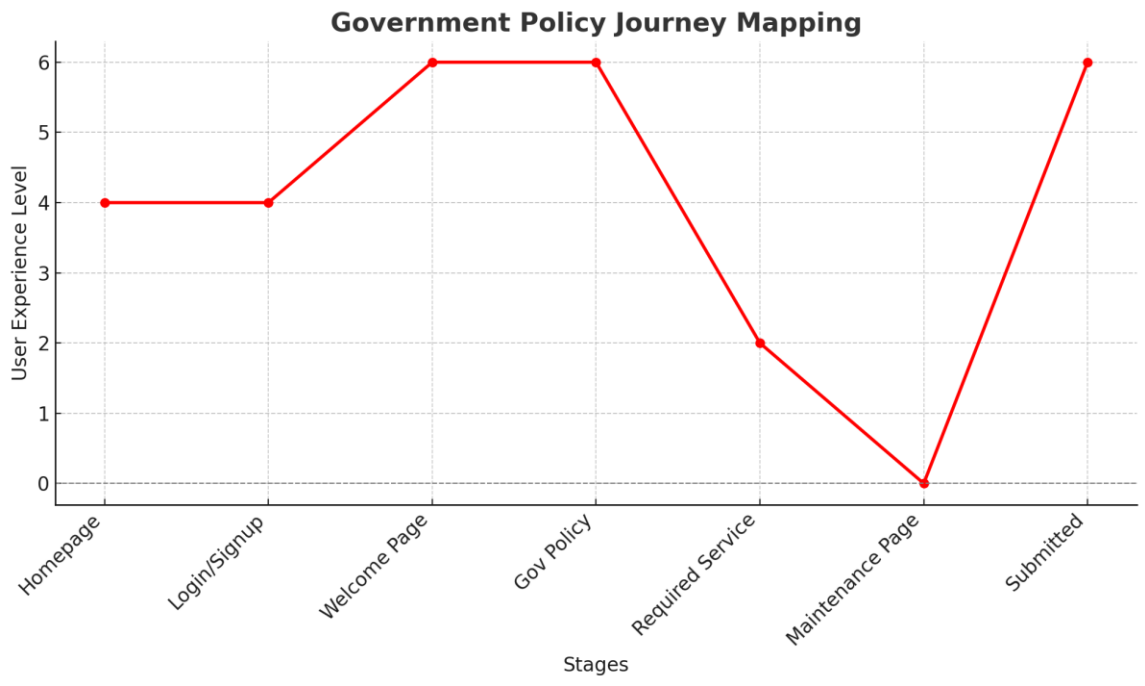
SHOP

1.HOMEPAGE
2.LOGIN
3.FILL INFORMATION
4.REQUEST SUBMIT
5.SHOP PAGE
6.ACCESSORIES AND PART
7.MESSAGE TO OWNER



GOVERNMENT POLICY

1. RAINWATER HARVESTING HOMEPAGE
1. LOGIN/SIGNUP
2. WELCOME PAGE
3. GOVERNMENT POLICY
4. REQUIRED SERVICE
5. MAINTANCE PAGE
6. SUBMITTED



INSTALLATION PAGE

1. RAINWATER HARVESTING HOMEPAGE
2. LOGIN/SIGNUP
3. WELCOME PAGE
4. INFORMATION
5. SERVICE PAGE
6. INSTALLATION
7. SUBMIT QUATATION