Ideation Phase
Brainstorm & Idea Prioritization Template

Date	17 September 2022
Team ID	PNT2022TMID33019
Project Name	River Water Quality Monitoring and Control System
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference: https://www.mural.co/templates/empathy-map-canvas

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Step-2: Brainstorm, Idea Listing and Grouping

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Brainstorm

Write down any ideas that come to mind that address your problem statement.

⏱ **10 minutes**

Chim

amount of dissolved salt in a water body	Salinity	tend to know if there is an reduction in gowth of organisms
Negative if excess algal growth	Dissolved oxygen	total pure water
know about failure of eggs /larvae to survive	distilled water	Nitrogen

Kookie

Conductivity	typical deionized water	parameter of water disinfection
Monitoring via web application	Turbidity	provide healthy ranges for various water quality measurables
bracksih water	Alerting authority	due to suspended particles

Dore

Check out the PH value	Check the chemical compositions	finding out the harmful chemicals
Check for the disease causing microorganisms	Quality measure	check for any other impurities like plastics
Determine the water clarity	Monitor the colour of the waterbodies	Measure the temperature

Chan

Water should contain calcium	excessive amount of nitrate in drinking water can cause health problems	Eutrophication process ,results from accumulation of nutrients in lakes or other bodies of water
PHOSPHATES (containing PO43—) are the most common form of phosphorus in natural waters	Essential nutrients	It should contain potassium
It should have sufficient amount of magnesium	sufficient amount of sodium	Too much nitrogen and phosphorus in water can lead to an overgrowth of free-floating plants

Lisa

Presence of plastics	Presence of forever chemicals	PFAS (per- and polyfluoroalkyl substances).
To check the presence of heavy metals in the water	Monitoring the River Water Quality	Presence of Water hyacinth
Zinc , Cobalt , Copper, Manganese, Chromium, Nickel, Lead	The major herbicides atrazine (and its breakdown product deethylatrazine, or DEA), metolachlor, cyanazine, alachlor and DDT	presence of pesticides and herbicides

Jennie

Presence of algae bloom	To know if industrial waste are illegally dumped in the water	To know if sewage water is illegally dumped
checking the fertilizer,	cyanobacterial toxins	To check the toxins
Nitrates, phosphates and other organic matter	Sediment yield is the total quantity of particulate matter	pathogens like Giardia can survive for up to 13 months in water temperatures below 50°F (10°C).

San

economically affordable	Opt for water that's far from agricultural fields or pastures	Water quality gets improved
Coldwater is preferred to warm water	less complexity	Stay away from sources with clear sources of contamination (e.g. animal carcasses nearby)
low power consumption	Choose clear, silt-free water whenever possible	water pollution is reduced

Jisoo

Fast-moving water is better than stagnant water	share the data and warnings using different options such as SMS, WhatsApp and E-mail	commends either filtering water, boiling it, treating it with chemical purification tablets, or using ultraviolet lights.
compared with previous quality measured	Quality of water impacts the quality of life	location information on Google map for quick judgment
provides facility to analyze water quality data	boiling, filtration, chemicals, and ultraviolet light.	waterborne diseases like cryptosporidium, giardia, campylobacter, salmonella, hepatitis A, E. coli, and shigella.

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Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

🕐 **20 minutes**

check for any other impurities like plastics

TIP 💡

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

amount of dissolved salt in a water body

Turbidity

Measure the temperature

To check the toxins

Water quality gets improved

Step-3: Idea Prioritization

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Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕐 **20 minutes**

Importance

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

- Monitoring the River Water Quality
- Monitoring via web application
- finding out the harmful chemicals
- To check the toxins
- Check out the PH value
- amount of dissolved salt in a water body
- To check the presence of heavy metals in the water
- Measure the temperature
- Alerting authority
- share the data and warnings using different options such as SMS, WhatsApp and E-mail
- provide healthy ranges for various water quality measurables
- checking the fertilizer,

Feasibility

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)