

Summer Project

Designing & Conceptualizing  
Installation for  
**Cumulus Mumbai 2015**

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Interaction Design Student - M.Des (2014-2016)

Industrial Design Centre  
Indian Institute of Technology, Bombay



# Declaration

I declare that this written document represents our ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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# Acknowledgment

We thank our guide Prof. Ravi Poovaiah & Dr. Ajanta Sen for his kind support and guidance.

We also like to thank our colleagues who helped us.

Last, but not the least, we would like to thank the almighty for his blessings.

Rohan Verma

&

Indrajeet Roy



# Joining Letters



Centre of Social Media Innovations for Communities (COSMIC)

Reg. No. 200604393R

## Detailed Training Programme

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name of Applicant</b>        | Indrajeet Roy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Employing company name</b>   | Nanyang Technological University, Singapore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of Supervisor</b>       | Prof May Oo Lwin, Prof Ravi Poovaiah, Dr Ajanta Sen, Prof Phani Tetali                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Name of Research Project</b> | Design of Smart Media for Public Interactions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                 | <p>Design of Smart Media for Public Interactions. This is the challenge of this project.</p> <ul style="list-style-type: none"> <li>- look into current and past thoughts, theories, case studies surrounding this theme. We'll also understand the way the medias are used at present.</li> <li>- look at different ways of generating content that is accessed through gesture based tangible sensory interactions.</li> </ul> <p>Smart Media has the following Characteristics:</p> <ul style="list-style-type: none"> <li>- Media that can make sense on its own (sense making)</li> <li>- Media that encapsulates a variety of additional information/data (location, time, etc.) (information rich)</li> <li>- Media that responds and gets activated (self-activating)</li> <li>- Media that is intelligent and learns</li> <li>- Media that is socially interactive and responsive</li> </ul> <p>Steps in the design Process:</p> <p>Secondary Research, Existing examples and Installations</p> <p>Primary Research, Defining the problem and objectives</p> <p>Developing alternative concepts</p> <p>Soft prototyping one of the concepts</p> <p>Plan of action for actual prototyping</p> |
| <b>Duration of Training</b>     | 1.5 months – Mid May to end June 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



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|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name of Applicant</b>        | Rohan Verma                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Employing company name</b>   | Nanyang Technological University, Singapore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Name of Supervisor</b>       | Prof. May Oo Liwin, Prof Ravi Poovaiah, Dr. Ajanta Sen, Prof. Phani Tetali.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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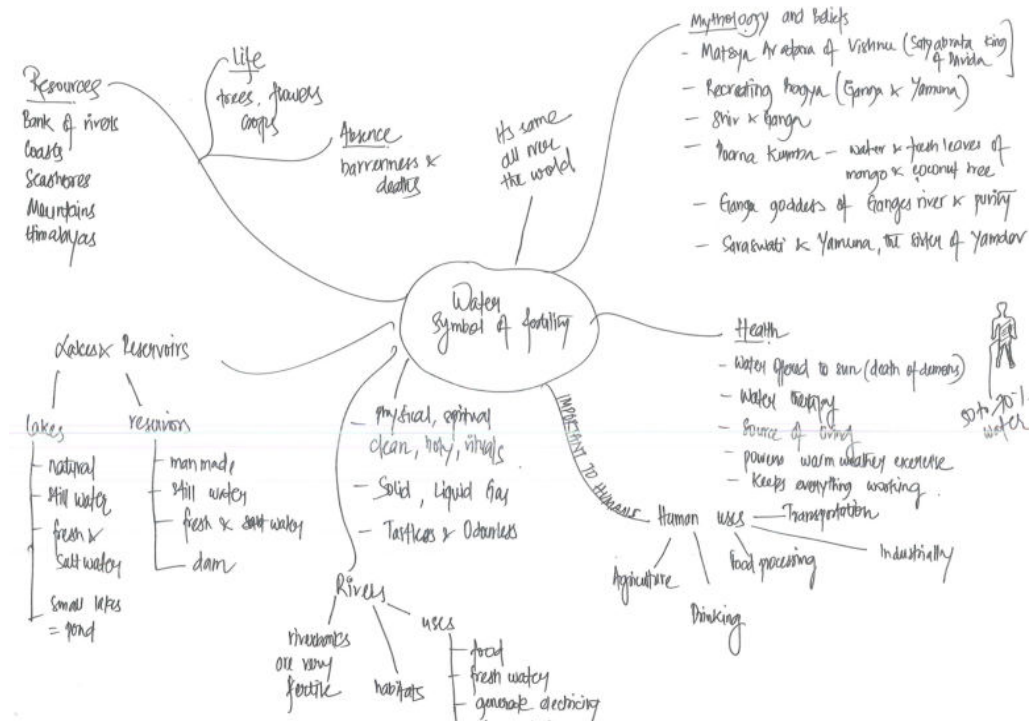
# About COSMIC

The Centre of Social Media Innovations for Communities (COSMIC) is a collaborative initiative between three centers of excellence – two from Singapore, the NUS (National University of Singapore) and the NTU (Nanyang Technological University), and one from India, IITB (Indian Institute of Technology Bombay, Mumbai).

COSMIC aims to empower communities, through social media innovations that improve the way they live, work and play, specifically those in the informal economy who are typically under served by existing technology.

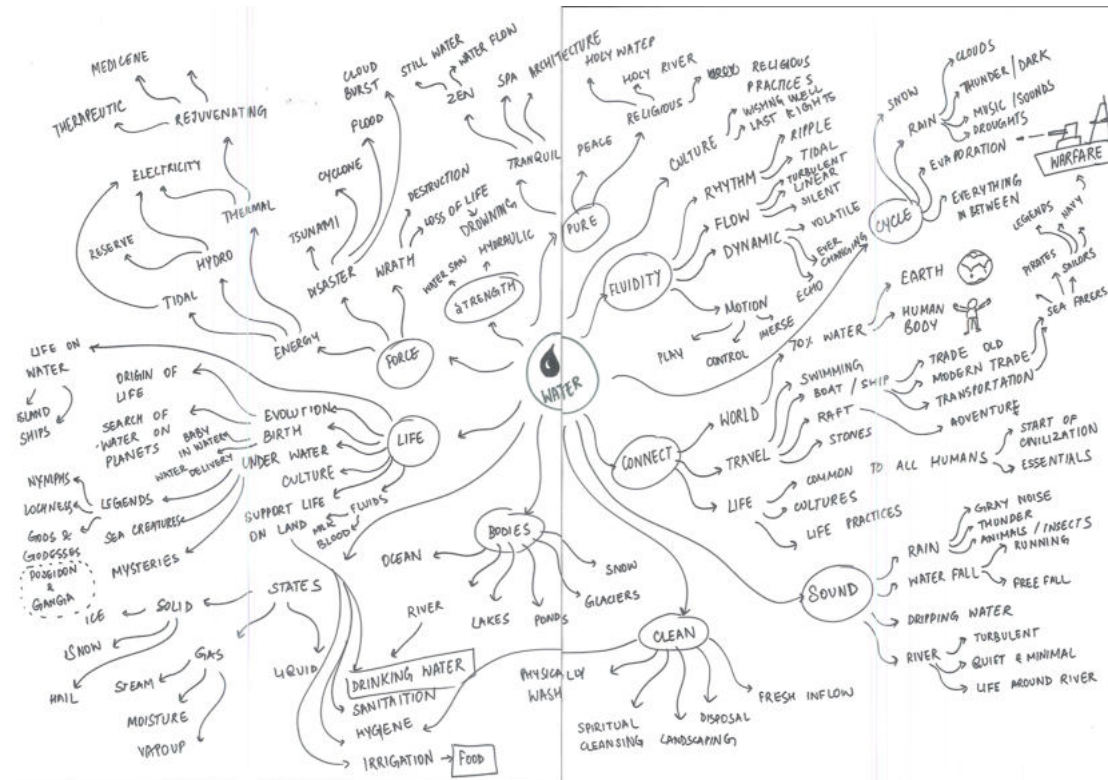
# Design Brief

Earth may be 70 percent water but the usable fresh water is only 0.25 percent. As hard as it might be to believe but the scarcity of water is a hard hitting and very urgent issue. Millions of people across countries do not have access to drinking water. On the other side, Industries like beef and beverage have been abusing freshwater by blatant consumption. The problem is real and a number of people have been working to sensitise general public about the same. This project explores the various possibilities of creating interactive installations that engage the audience and delivers the message about the plight of our water supply.



# Brainstorming

Earth may be 70 percent water but the usable fresh water is only 0.25 percent. As hard as it might be to believe but the scarcity of water is a hard hitting and very urgent issue. Millions of people across countries do not have access to drinking water. On the other side, Industries like beef and beverage have been abusing freshwater by blatant consumption. The problem is real and a number of people have been working to sensitise general public about the same. This project explores the various possibilities of creating interactive installations that engage the audience and delivers the message about the plight of our water supply.





# { TYPES OF MESSAGE FOR SUSTAINABILITY (WATER) }

THINGS FOR INSTALLATION :)

## 1 ALARM ABOUT THE EXISTENCE OF THE PROBLEM

- SLOW RAINFALL VS DEPLETING WATERBED

#1 GLOBAL RISK BASED ON IMPACT TO SOCIETY

#8 LIKE HOOD OF OCCURRING WITHIN 10 YEARS

750 M or 1 in 9 person lacks safe water

|               |      |                   |
|---------------|------|-------------------|
| WITHOUT WATER | LIFE | WOULD NEVER EXIST |
|---------------|------|-------------------|

WATER IS RENEWABLE BUT FINITE  
WATER IS NOT SCARCE BUT INACCESSIBLE

## 2 INFO ABOUT THE GRAVITY OF THE SITUATION

EVERY MINUTE A CHILD DIES

 DUE TO LACK OF WATER

→ STRESS ON EXISTING SOURCES

• RIVERS • GROUND WATER

Life's most basic need gone to dump.

IT STARTS WITH WATER BUT AFFECTS EVERYTHING

education  
Health women  
Poverty children

OPEN CONTAMINATED WATER

## 3 HOW CAN YOU HELP

→ SHARED VISION

→ LEADERSHIP COMMITMENT

→ PUBLIC & PRIVATE PARTNERSHIPS

WE CAN'T UNDO BUT WE CAN SUSTAIN

# Water Mythology

Water is elemental in all the traditions around the world. Being an important part of the survival, water is often considered as holy or religious in many practices. Water and mythology are inseparable. Mythologies across the world have been influenced by water bodies. Mythologies have a story that is retained longer than unstructured data. Therefore the mythologies related to water were an interesting narrative that can help communicate with the audience.

## Creatures of water:

### Ashenys (Scottish mythology)

- captured or exposed to sunlight, melts and puddle of water remains.

### Bachmannen (Mythological Horse)

- Appear near moors in foggy weather, whoever decides to ride on their backs, will be unable to get off again.

### Blue men of the Minch

- Supernatural sea creatures
- seen swimming alongside passing ships
- attempting to wreck them by conjuring storms
- If captives want to save their ship, they had to finish their rhymes & solve their riddles, & always make sure he got the last word

### Ceto (Greek mythology)

- dangerous to the sea
- it became the name of any sea monster.

### Charon & the Hellhound

- old ferryman, that ferried the dead into underworld.
- only took the souls of those buried properly with a coin in their mouth

### Dragon Kings (Chinese)

- four scaly dragons
- could shape shift to human form
- lived in a place guarded by snappers & crabs.

### fosse from

- water spirit played enchanted songs on the violin, luring women & children to drown in lakes & streams

### Grands leous. (British folk tales)

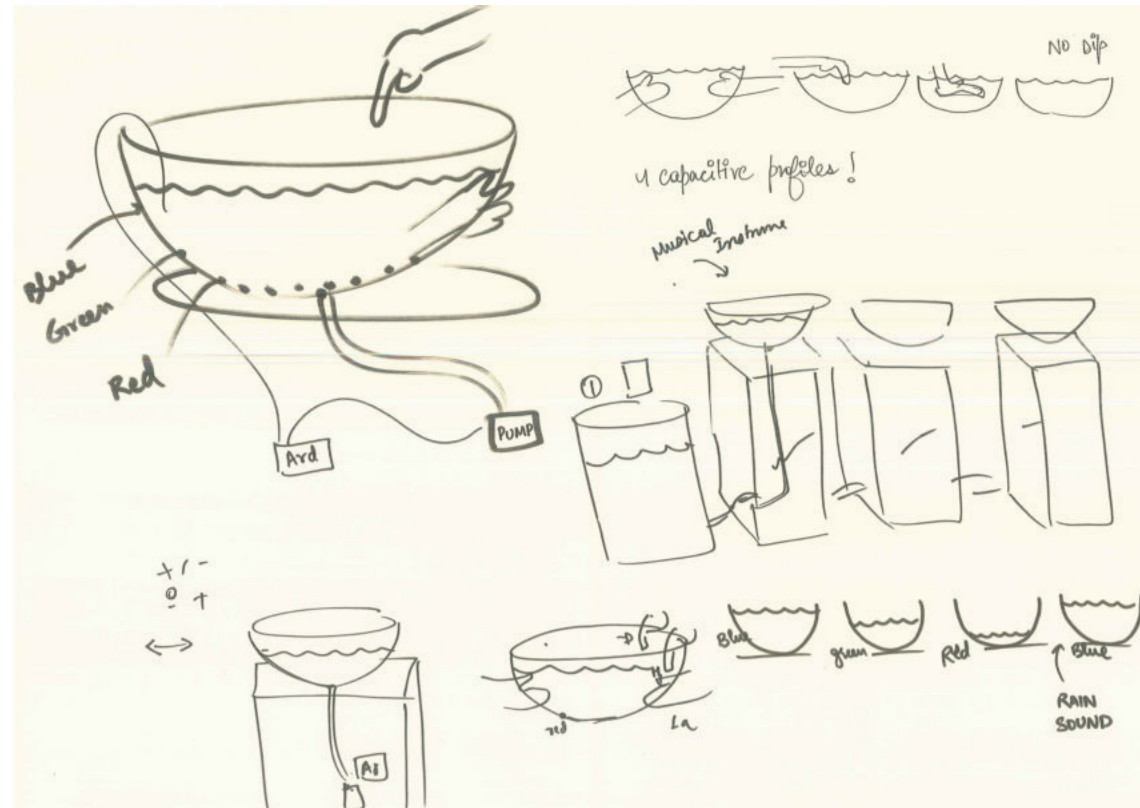
- supposed to have long fingers that would drag children into deep.

### Jengu

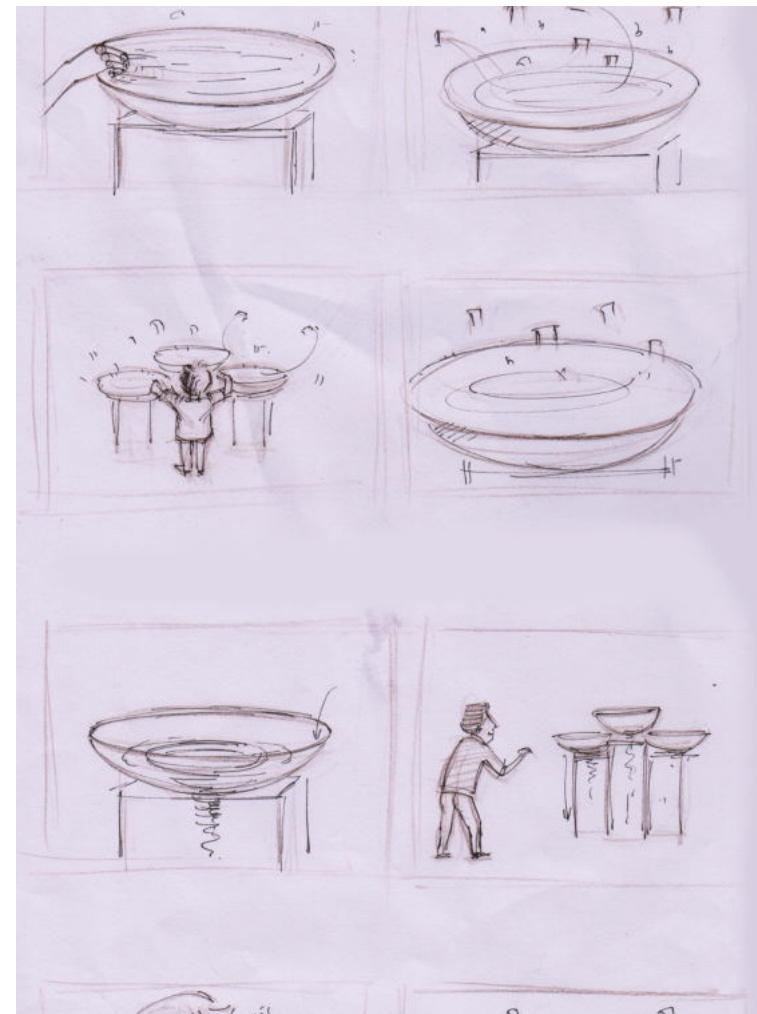
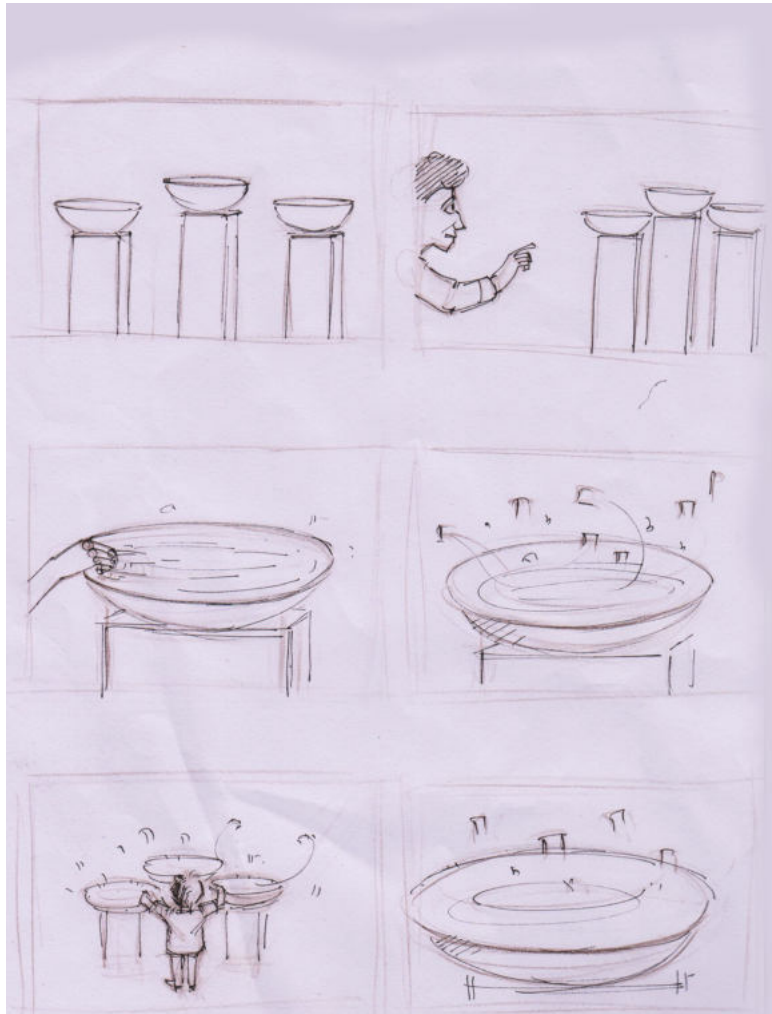
- resembled mer people
- Gray toothed & had long wavy hair.
- intermediate between the living & spiritual world.
- are diseases.

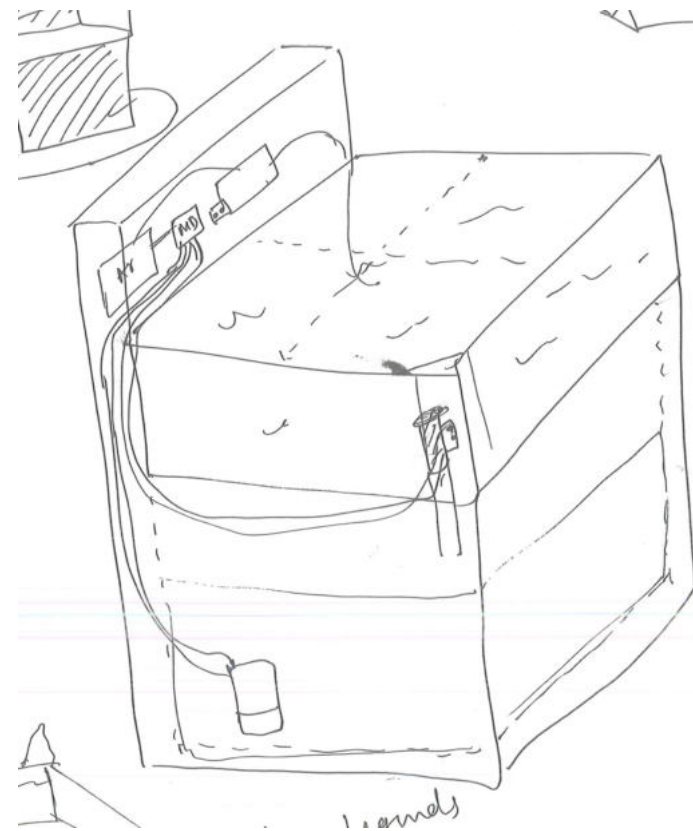
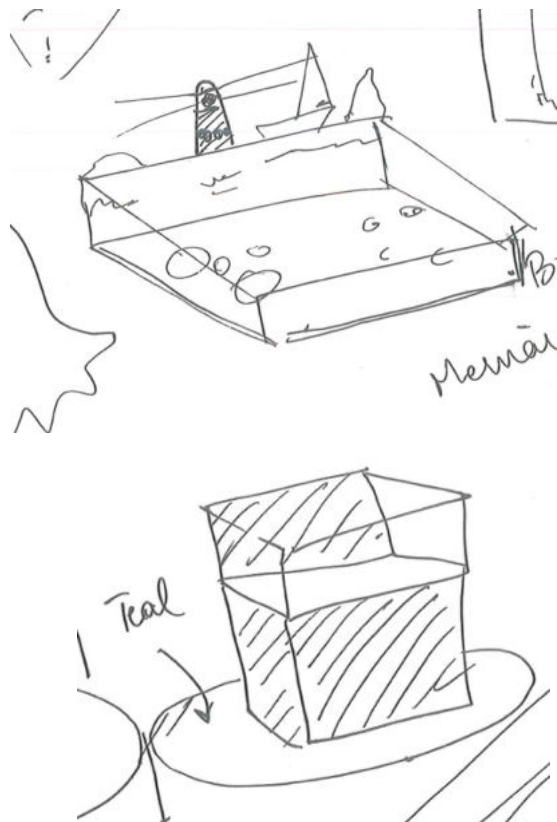
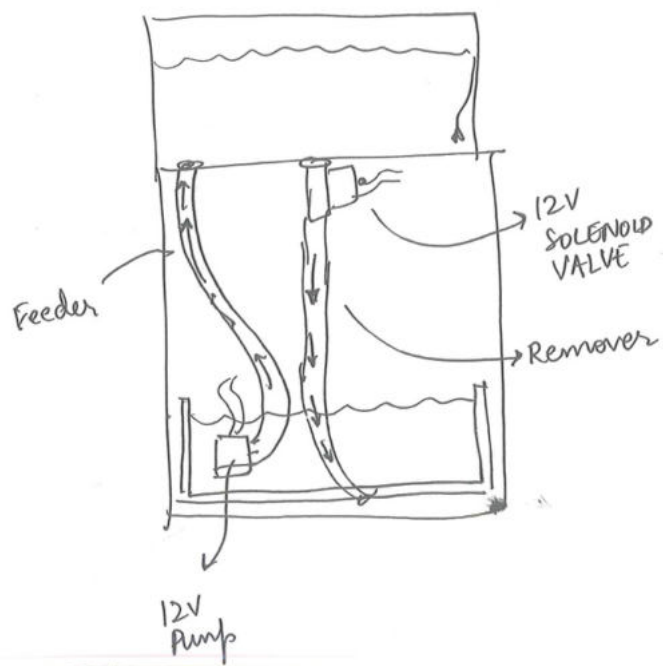
# Concept 1: Musical Bowl

Water can be fun, till it lasts. The experience of water is beautiful for humans and animals alike. Whether its the feeling of dipping your feet in it or the sound of rain. Music and water have been mixed together by humans for a long time. Musical instruments with water have been part of our culture. This concept allows the user to playfully interact with water to create sounds and music. But with every sound the level of the water reduces till there is none left. The bowl is filled back as the sound of pouring rain fills the scene. It makes the audience wait for the natural processes to recharge the water before its used further.



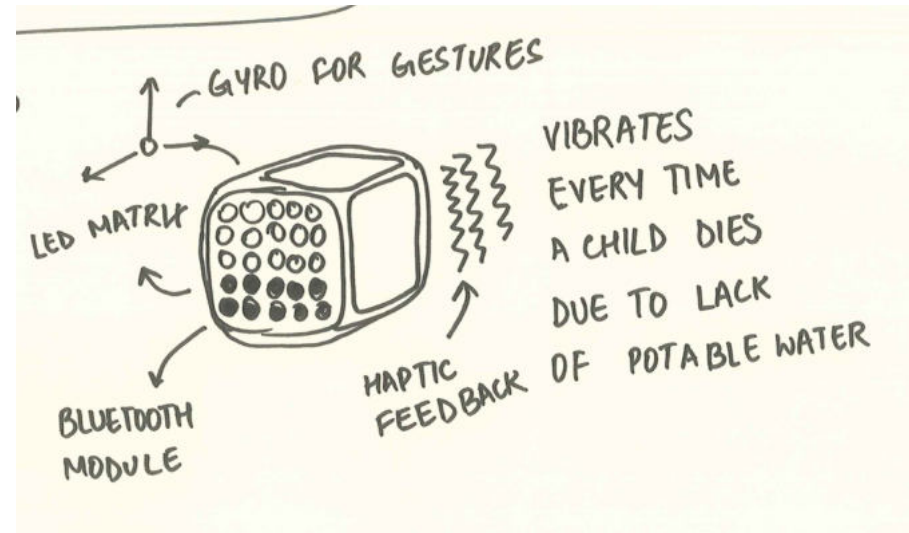
# Concept 1: Musical Bowl



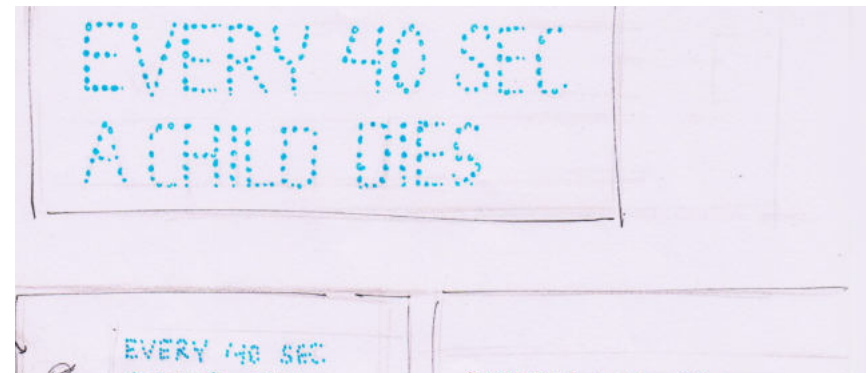
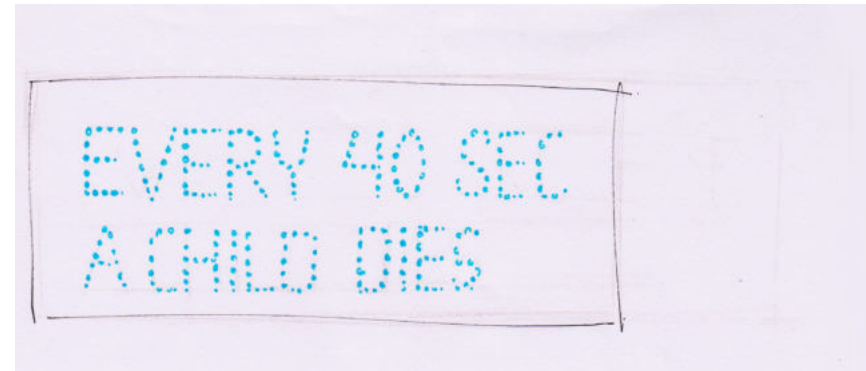


## Installation Concept 2 : Heartbeat

Every minute a child dies in india due to lack of water. Heartbeat project switches off an led periodically to symbolise the death of a child every minute. The LEDS switch off in a queue during the entire duration of the event. At the end there are no LEDS left glowing. The concept aims at making the audience face the harsh reality and come to terms with the urgency of the situation.



# Storyboard



# Prototype

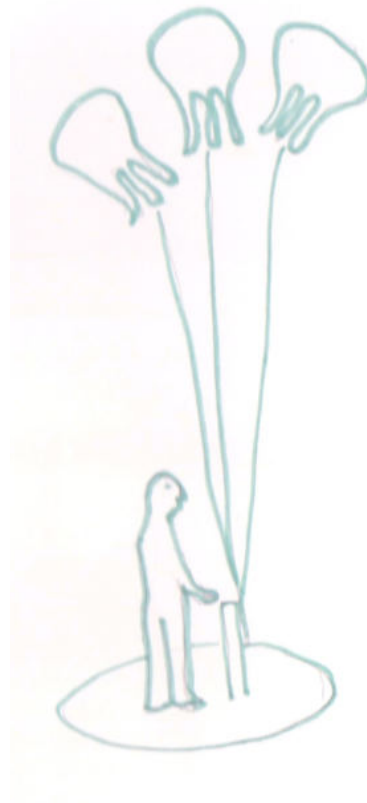
FREEZE

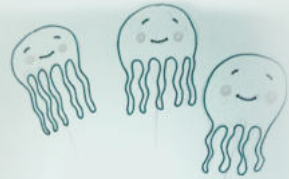
40 SECONDS

40 HILL TOPS

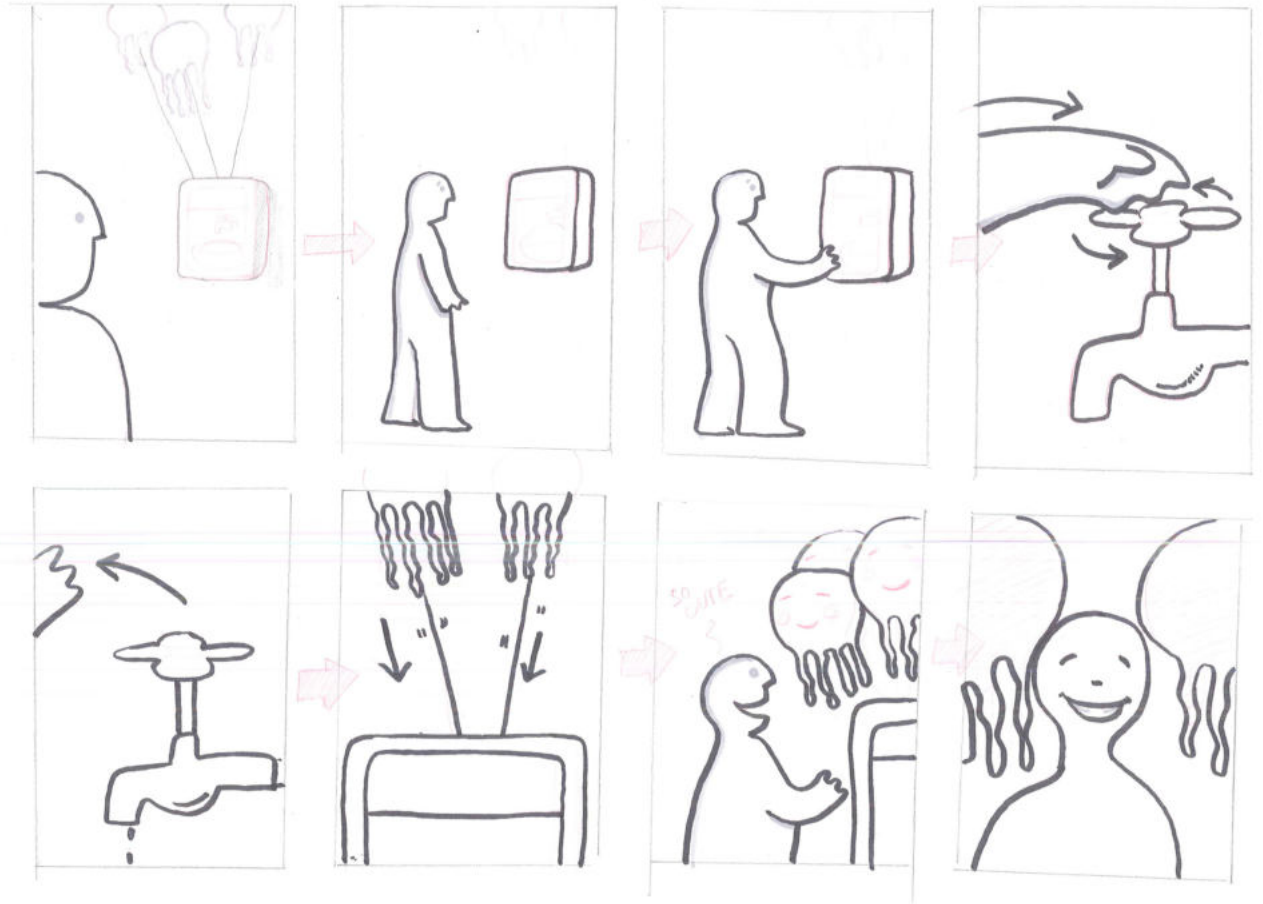
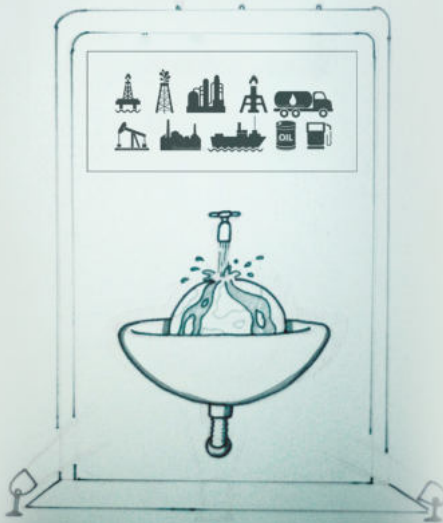
# Installation Concept 3 : Hanging Fish

Their water pollution is your water pollution. The experience of water is beautiful for humans and animals alike. Whether its the feeling of dipping your feet in it or the sound of rain. Music and water have been mixed together by humans for a long time. Musical instruments with water have been part of our culture. This concept allows the user to playfully interact with water to create sounds and music. But with every sound the level of the water reduces till there is none left. The bowl is filled back as the sound of pouring rain fills the scene. It makes the audience wait for the natural processes to recharge the water before its used further.



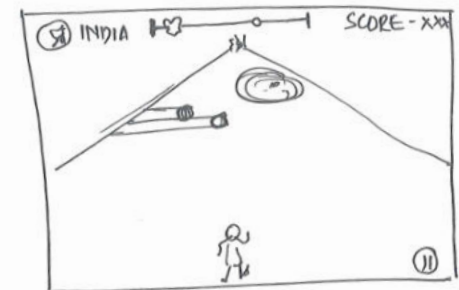
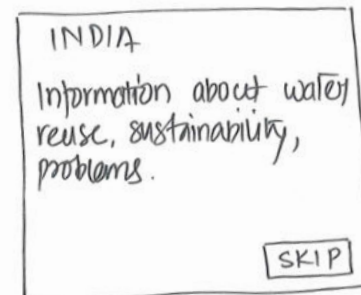
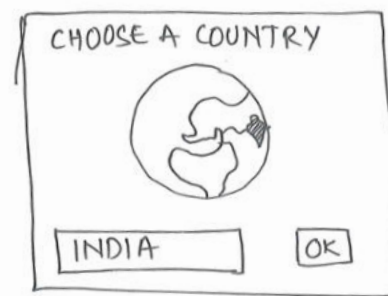


The person has to stop the flowing black sludge by closing the tap. As the person closes it jelly fish comes down.



# Installation Concept 4 : Water Run

To get drinking water women and kids have to fear for their lives. A walk for upto a km or half an hour is fairly common in rural india. The walk is burdened with the weight of the water that can be upto 20 kgs. The walk could be life threatening due to animal and human predators. The game Water Run is a sarcastic take on the common running character games on smartphones to illustrate the ludicrous distance that the person has to go for a basic necessity.



Jump, Dodge, left &  
Right gestures to cross  
hurdles.

# Installation Concept 5 : Water Aquarium

Someone wastes, another suffers. The humans have a history of exploiting resources with little or no sensitivity to the implications. The rampant consumption of water has been detrimental to the water ecosystem. This concept is a bold illustration of the relationship between water wastage and the marine ecosystem. To depict this effect, a washbasin is attached next to an aquarium that pseudo reduces the level of water in the aquarium when the faucet is running.

