

ADITYA

COLLEGE OF ENGINEERING

Aditya Nagar,ADB Road,Surampalem-533437

DEPARTMENT OF ELECTRONICS AND COMMUNICATION
ENGINEERING



PROGRAM BOOK FOR COMMUNTIY SERVICE PROJECT

A REPORT on our Community Service Project

WATER FACILITIES AND DRINKING WATER AVAILABILITY IN MANJERU VILLAGE

Submitted In Partial Fulfilment of the Requirements For The Degree Of

ELECTRONICS AND COMMUNICATION

ENGINEERING

SUBMITTED BY

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Department of COMPUTER SCIENCE AND ENGINEERING

ADITYA COLLEGE OF ENGINEERING

(Affiliated to JNTUK, Kakinada & Approved by AICTE, New Delhi and accredited by NAAC)

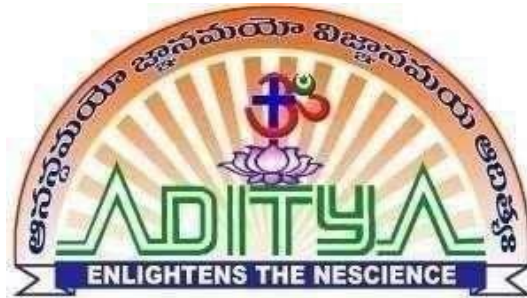
Surampalem, ADB road, East Godavari District, AP-533437

(2022-2026)

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CERTIFICATE

This is to certify the Community Service Project report entitled “**WATER FACILITIES AND DRINKING WATER AVAILABILITY**” is a bona fide work carried out by **Yalla v v v satya krishna varaprasad(22A91A04P9)**, **Buddaraju siva kumar varma (22A91A04J2)**, **Uppu Meghananjani(22A91A04P3)** at the college for the award of **Bachelor of Technology in **ELECTRONICS AND COMMUNICATION ENGINEERING**** from **ADITYA COLLEGE OF ENGINEERING** during the academic year of 2023-2024.

Head of the Departement

Dr.K.Vishnuvardhan reddy

ECE

EXTERNAL EXAMINAR _____

Community Service Project Report

Submitted in accordance with the requirement for the degree Of

ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the College: Aditya College of Engineering

Department: Electronics and communication Engineering

Duration of the CSP: From 21/7/2023 To 31/8/2023

Name of the Students: Yalla v v v satya krishna
varaprasad(22A91A04P9)

Program of Study: Bachelor in Technology

Year of Study: 2022-2026

Register Number: 22A91A04P9

Date of Submission:

Community Service Project Report

Submitted in accordance with the requirement for the degree of

ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the College: Aditya College of Engineering

Department: Electronics and communication Engineering

Duration of the CSP: From 21/7/2023 To 31/8/2023

Name of the Students: Buddaraju siva kumar varma(22A91A04J2)

Program of Study: Bachelor in Technology

Year of Study: 2022-2026

Register Number: 22A91A04J2

Date of Submission:

Community Service Project Report

Submitted in accordance with the requirement for the degree of

ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the College: Aditya College of Engineering

Department: Electronics and communication Engineering

Duration of the CSP: From 21/7/2023 To 31/8/2023

Name of the Students: U.Meghananjani(22A91A04P3)

Program of Study: Bachelor in Technology

Year of Study: 2022-2026

Register Number: 22A91A04P3

Date of Submission:

Student's Declaration

We, **Yalla v v v satya krihsna varaprasad, Buddaraju siva kumar varma, Uppu Meghananjani** students of B.tech Program, Reg.No. **22A91A04P9, 22A91A04J2, 22A91A04P3** of the Department of E c e , **Aditya College of Engineering** do hereby declare that I have completed the mandatory community service from 21/7/2023to 31/08/2023 in Manjeru village .

Endorsements

(Signature and Date)

Faculty Guide

Head of the Department

Principal

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ABSTRACT

Our main aim is to focus on the water facilities and drinking water availability in a village. We select the village MANJERU for the survey. We mainly focus on the activity such as problems faced by the people in the village on drinking water facilities for different reasons and how the government providing water facilities .

Finally we conclude that how the village panchayat helps the people in that village to get the water and we also bring awareness and ideas to the people living in that village about drinking water efficiency and important of saving those drinking water . So let us see in detail...

CHAPTER-1: EXCLUSIVE SUMMARY

Description of Community:

The main objective of our project is to educate the people about Water facilities and drinking water availability. So that we selected Manjeruvillage, which is in East Godavari district as a best place to teach them about drinking water and we also thought them about effects of the polluted water. We have spoken to the panchayat secretary, Kajuluru and took permission to conduct a survey and to give suggestions based on our survey reports.

Summary of activities done:

- Finding the village/town that is suitable for my project.
- Conducted a survey on people about water crisis and taught them the necessary ways to use it.
- From that information I found that most people are not aware of using water. Then we decided to taught them the necessary ways about the water usage.

Learning Objectives:

- To sensitize the people about Water facilities and drinking water availability.
- To bring about an attitudinal change in people and help them to make mindful choice of using purified water by considering their health.
- To aware the people about the effect of drinking unpurified water and the problems they have to face if they drink that unpurified water.
- To provide basic education and information to active members of community, to help the people to overcome the deficiency diseases.

Outcomes:

- Provided the basic education to the people about using the purified water to make their health efficient and also taught the people to save the water for the future purpose which helps to use it for our future generation.

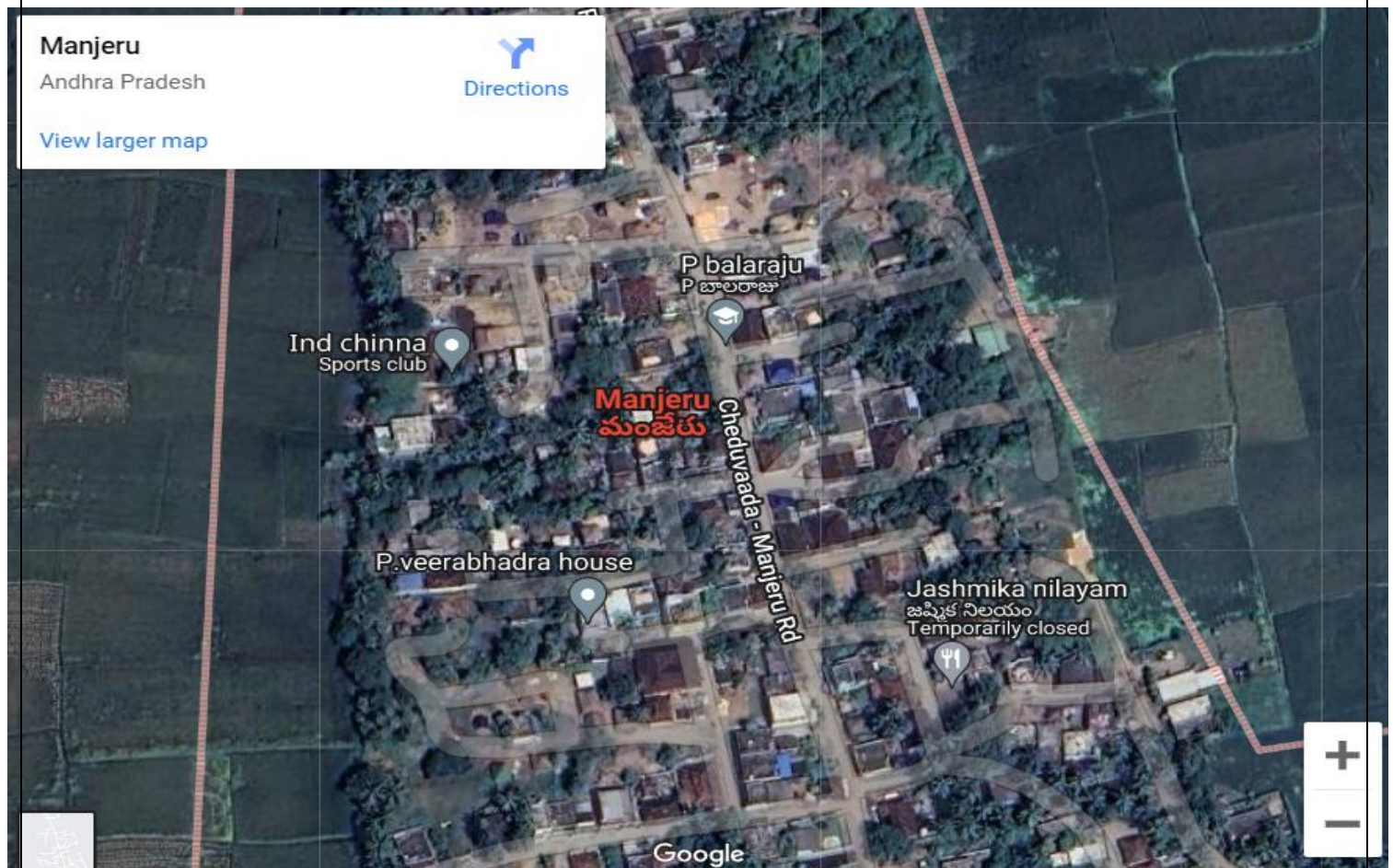
CHAPTER 2: OVERVIEW OF THE COMMUNITY

About the Community/Village/Habitation including historical profile of the community / habitation, community diversity, traditions, ethics, and values. Brief note on Socio-Economic conditions of the Community/Habitation.

According to Census 2011 information the location code or village code of Manjeru village is 587620. Manjeru village is located in Kajuluru mandal of East Godavari district in Andhra Pradesh, India. It is situated 7km away from sub-district headquarter Kajuluru (tehsildar office) and 18km away from district headquarter Kakinada. As per 2009 stats, Manjeru village is also a gram panchayat.

The total geographical area of village is 582 hectares. Manjeru has a total population of 3,541 peoples, out of which male population is 1,801 while female population is 1,740. Literacy rate of manjeru village is 55.75% out of which 58.52% males and 52.87% females are literate. There are about 927 houses in manjeru village. Pincode of manjeru village locality is 533468.

Kakinada is nearest town to manjeru for all major economic activities, which is approximately 18km away.



CHAPTER 3: COMMUNITY SERVICE PART

Manjeru Local Language is Telugu. Manjeru Village Total population is 3541 and number of houses are 927.
F Female Population is 49.1%. Village literacy rate is 55.7% and the Female Literacy rate is 26.0%.

Manjeru is a Village in Kajuluru Mandal in East Godavari District of Andhra Pradesh State, India. It belongs to Andhra region . It is located 18 KM towards South from District head quarters Kakinada. 6 KM from Kajuluru. 467 KM from State capital Hyderabad



CHAPTER-4 ACTIVITY LOG

ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Signature
Day – 1	Discussed about what project we have to do as our community service project.	Decided to do Water Facilities and Drinking Water Availability.	
Day - 2	Discussed about the place.	Decided to go to Manjeru village.	
Day – 3	Went for permission of panchayat secretary Kajuluru to conduct survey.	He granted permission to survey the people on that area.	
Day – 4	Discussed about what topics we need to explain to people	Decided topics which are helpful for people.	
Day – 5	Prepared an index of topics and ordered in a sequential way	Planned about topics need to explain in what sequence	
Day –6	Decided the roles of each team member	Planned the roles of each team member	

WEEKLY REPORT

WEEK – 1 (From Dt 21/07/2023 to Dt 27/07/2023)

Objective of the Activity Done:	Finding village/town and seeking permission from the panchayat secretary.
Detailed Report:	In the first week our mentor made a team of 4 members to do community service project at Manjeru village located in East Godavari district. We selected the project called Water Facilities and Drinking Water Availability. Before choosing this project we discussed that what type of project we need to take, discussed what topics need to explain, then we decided this project and formed as few members. Lastly we took the permission of panchayat secretary Manjeru.

ACTIVITY LOG FOR THE SECOND WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Signature
Day – 1	Prepared introduction on community service project.	Gathered key points about community service project.	
Day – 2	Explored about water crisis.	Prepared key notes on water crisis.	
Day – 3	Explored about effects of purified clean drinking water.	Prepared key notes on effects of purified clean drinking water.	
Day – 4	Explored about unpurified drinking water.	Prepared key notes about unpurified drinking water.	
Day – 5	Explored about effects of about drinking unpurified water.	Prepared key notes on effects of drinking unpurified water.	
Day –6	Explored topics about how to use and save water.	Prepared key notes on how how to use and save water.	

WEEKLY REPORT

WEEK – 2 (From Dt 28/07/2023 to Dt 03/08/2023)

Objective of the Activity Done:	Bring a clear knowledge on drinking purified clean water and drinking unpurified water and their effects on people.
Detailed Report:	In this second week we decided to teach about on drinking purified clean water and drinking unpurified water . For that we explored about different water bodies and identified some information about it.We explored about how water bodies effect on people and what type of precautions are required for a healthy life and community.

ACTIVITY LOG FOR THE THIRD WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Signature
Day – 1	Explored about water facilities.	Prepared a key notes on water facilities.	
Day – 2	Explored about water bodies in that village.	Prepared a key notes on water bodies in that village.	
Day – 3	Explored about polluted water.	Prepared a key notes about polluted water.	
Day – 4	Explored about Government providence of water.	Prepared a key notes on Government providence of water.	
Day – 5	Explored about causes and effects of polluted water.	Prepared a key notes on causes and effects of polluted water.	
Day –6	Explored about water efficiency.	Prepared a key notes on water efficiency.	

WEEKLY REPORT

WEEK – 3 (From Dt 04/08/2023 to Dt 10/08/2023)

Objective of the Activity Done:	Got a clear knowledge on water crisis, water bodies, water pollution and its effects.
Detailed Report:	In the third week first we explored about what happen if people use polluted water and effects of it. We also explored about types of water bodies and their purity. We explored about the causes and effects of using polluted water.

ACTIVITY LOG FOR THE FORTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Signature
Day – 1	Explored the Manjeru village.	Planned to do the project in that village.	
Day – 2	Explained about community service project for people.	People understood what is community service project.	
Day – 3	Conducted a survey about Water Facilities and Drinking Water Availability.	Got a report of the survey.	
Day – 4	Conducted a survey about Water Facilities and Drinking Water Availability.	Got another report of the survey.	
Day –5	Analyze the survey report	Observed that most people not known Water Facilities and Drinking Water Availability.	
Day – 6	Explained people about Water Facilities and Drinking Water Availability.	People understood about Water Facilities and Drinking Water Availability.	

WEEKLY REPORT

WEEK – 4 (From Dt 11/08/2023 to Dt 17/08/2023)

Objective of the Activity Done:	Conducted the survey and analyzed report and explained about Water Facilities and Drinking Water Availability.
Detailed Report:	<p>In the fourth week we explored our last topic- Water Facilities and Drinking Water Availability. Then we conducted a survey about how people are educated on that concept and how to use water. Then according to our survey most people not known about Water Facilities and Drinking Water Availability. So we decided to teach them about the basic concepts of Water Facilities and Drinking Water Availability.</p> <p>On day 6 we started explaining the concept of Water Facilities and Drinking Water Availability.</p>

ACTIVITY LOG FOR THE FIFTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Signature
Day – 1	Explained about water wastage.	People understood about water wastage.	
Day – 2	Explained about effects of water wastage on our future generation.	People understood about effects of water wastage on our future generation.	
Day – 3	Explained about how polluted water effect on us.	People understood about how polluted water effect on us.	
Day – 4	Explained about water scarcity.	People understood about water scarcity.	
Day – 5	Explained about effects of water scarcity.	People understood about effects of water scarcity.	
Day –6	Explained about droughts of water in various places.	People understood about droughts of water in various places.	

WEEKLY REPORT

WEEK – 5 (From Dt 18/08/2023 to Dt 24/08/2023)

Objective of the Activity Done:	Bring the knowledge on usage of water and wastage of water . Also taught them about effects of wasting water and its droughts.
Detailed Report:-	<p>In this fifth week first we have discussed regarding water usage then we discussed about effects of over usage of water.</p> <p>We also discussed about how water wastage will effect on people.</p> <p>People got a good knowledge on water wastage.</p> <p>After that we started the concept on droughts of water if we can't save water for future generation.</p>

ACTIVITY LOG FOR THE SIXTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Signature
Day – 1	Explained about precautions of using water.	People understood about precautions of using water.	
Day - 2	Explained about precautions of using water.	People understood about precautions of using water.	
Day – 3	Explained to save water for future generation. Also checked type of water.	People understood about saving water for future generation.	
Day – 4	Explained to save water for future generation. Also tested the water hardness.	People understood about saving water for future generation.	
Day – 5	Went to school and Explained them in detail about our project and surveys we did.	Students understood everything about project.	
Day –6	Conducted interaction sessions with students on what they understood and learn about Water Facilities and Drinking Water Availability.	Students got good knowledge on what we teach.	

WEEKLY REPORT

WEEK – 6 (From Dt 25/08/2023 to Dt 31/08/2023)

Objective of the Activity Done:	Bring knowledge on using water. Went to school and explained about our project. Also conducted interaction session with them on what they understood.
Detailed Report:	In the last week of project we decided to teach about precautions of using water and save for future generation. We have completed all topics that we want to teach to people. Then we went to school and taught them about our project. Then we conducted interaction sessions with students and people of village about what they have learned from us. Those session resulting that almost people have about what we have taught to them about Water Facilities and Drinking Water Availability.

CHAPTER 5: TYPES OF WATER FACILITIES

1. Surface Water For Drinking:

The campaigns against guinea worm and an increasing awareness about microbial contamination have seen more or less the end of use of surface sources for drinking water where they existed. Thus, groundwater is by and large the most common source of drinking water. The conditions and abundance of that resource varies by location.

Following an intervention by UNICEF that saw development of India Mark IV hand pumps and subsequent upgrades, most villages in middle and lower Gangetic plains and the entire northeast have easy access to groundwater that they tap by hand pumps. In several parts of these Eastern regions, there could be a hand pump in practically every household that claims some social standing. In hamlets and clusters of poor, landless, Dalit homes, there is a shared hand pump, usually installed by a public authority.

As electricity supply increases its reliability, a rather unlikely development by and large, a small electric pump replaces the hand pump within homes. The hand pump is also the ubiquitous source of drinking water in most of the other states like Madhya Pradesh, Rajasthan, etc. too. In Maharashtra, Karnataka, Andhra Pradesh, etc., for a long time dug wells supplied drinking water.

2. Role Of Dug Wells:

I remember visiting my ancestral village in Maharashtra and the daily trip we would make in or running behind the bullock cart in which water filled from a distant well would be ferried in large drums! In many places, this tradition continues till this day. More conscientious villagers have one or many pulley wheels fixed on a pucca wall at the mouth of the well. Women use the fixed rope and bucket to fill their respective vessels.

In more fractious villages, every woman brings her own rope and bucket, which she puts in the well water, often leaning over the wall as she stands over the slippery floor and pulls it up after it fills.

3. Village water supply:

First, in such prosperous places and gradually in most other villages, well-administered states have installed a village level water supply system characterized by a motorized bore well that fills an overhead tank and supplies water to a number of stand posts in different parts of the village. In some more prosperous villages, the system is extended by providing single tap connection to each house and fixed charges are levied on them.

As is to be expected, timely payment of water charges by citizens and the overall rate of recovery are less common than one would like to see. Arising out of this and due to cash flow problems, in a large number of cases there are issues connected with the state of payment of electricity bills by the Gram Panchayat, with the state of repairs of the system and the state of the stand posts.

The village panchayat is responsible for water supply in a Village. Now a days people in the village are dependent on the water that is supplied by the panchayat. Since the villages are declining the use of Wells. Now they are dependent on tap water.

4. Filter Water plants:

Filter water plants play a key role in supplying of clean drinking water in the villages. These filter water plants are of Two types:

- 1) Govt maintained filter water plants
 - 2) Corporate filter water plants
- The Filter water plants which are maintained by govt Produce drinking water at cheaper cost and this water Will be available are cheaper cost than the water Produced by corporate filter water plants.
 - The ap government has maintained filter water plants and supplied Water at a rate of 2rs per 1ltr while the water plants are maintained Privately supplied water as 5rs per lit.

5 State Responsibility:

However, with centralized Panchayat level systems, the matter is different. The state provision of safe drinking water is the responsibility of the state, specifically Gram Panchayats and if they recognize the problem of dissolved contaminants this legal obligation would need them to install corrective measures. The technical knowledge, the sensitivity for quick action and the funds are all in short supply and so denial of the issue is the most convenient resource.

An effective 'Nal se Jal' program will have to comprehensively address the associated water purification issue for microbial and dissolved contamination if it is to stand the scrutiny of an alert media keen to prove that everything that the government does is all wrong.

CHAPTER 6:

DRINKING WATER: ACCESS DOES NOT MEAN SAFETY

The condition of the raw water source and its watershed, seasonal variations, the efficiency of the panchayat water treatment system, and more importantly, household water treatment and storage (HWTS) and water, sanitation and hygiene (WASH) practices affect water quality and need attention.

1. How does the water get managed at the village level:

Drinking water is sourced from open wells and borewells and is electrically pumped through pipes to an elevated storage tank or an open well, treated with chlorine for disinfection and then distributed to households through taps around the village under gravitational pressure.

The gram panchayat and the sarpanch are responsible for the management of water supply, treatment and day-to-day maintenance. The actual implementation is done by the “waterman”, who is from the same village and is paid by the gram panchayat. The waterman has received training to do his duties, including chlorination practices, from the health department at the block level. The health department is in charge of taking monthly water samples and monitoring the water quality.

2. How safe is the water?

While piped water is used as a drinking water source by most people in villages, the water supply is not continuous and varies between half to two hours daily or every second day. The villagers have to withdraw water when available and store it until the next supply phase, increasing chances of contamination.

CHAPTER 7: WHAT PH SHOULD MY DRINKING WATER BE?

1. What Is pH?

- You may have heard the word “pH” used to describe drinking water quality, but do you know what it means?
- pH is a measurement of electrically charged particles in a substance. It indicates how acidic or alkaline. That substance is. The pH scale ranges from 0 to 14.
- Acidic water has a pH lower than 7. Strongly acidic substances can have a pH of 0. Battery acid falls into this category.
- Alkaline water has a pH of 8 or above. Strongly alkaline substances, such as lye, can have a pH of 14.
- Pure water has a pH of 7 and is considered “neutral” because it has neither acidic nor basic qualities.

2. What pH is safe for drinking water?

- The U.S. Environmental Protection Agency (EPA) is in charge of monitoring public drinking water quality across the United States.
- pH isn’t a quality that falls under EPA regulation because it’s considered an aesthetic quality of water. However, the agency recommends that municipal drinking water suppliers keep their water supply at a pH of 6.5 to 8.5.

What does a changing or unsafe pH mean?

- Freshwater pH varies across the world depending on weather patterns, human activity, and natural processes.
- Water with a very low or high pH can be a sign of chemical or heavy metal pollution.
- Water that doesn’t fall in the “safe” pH range of 6.5 to 8.5, particularly if it’s alkaline, isn’t necessarily unsafe.

Type of water	pH level
Tap water	Varies; typically about 7.5
Distilled reverse osmosis water	5 to 7
Common bottled waters	6.5 to 7.5
Bottled waters labeled as alkaline	8 to 9
Ocean water	About 8
Acid rain	5 to 5.5

Testing pH at home

- Municipal water suppliers normally do a good job of keeping their water at a normal pH of around 7, so there's usually no need to do your own home testing.
- But if you notice that your faucets and pipes have taken on a rusty red, white, or blue color, you might want to take steps on your own. This discoloration — as well as any discoloration of your drinking water — is a sign of corrosion caused by acidic water. Corroded pipes should be inspected by a professional plumber and replaced if necessary.
- It's fairly easy and inexpensive to test the pH of your drinking water at home. All you need is a home test kit. These come in many different forms at different price points.
- Some of the most highly rated pH test products are water quality tester “pens.” Simply dip the pen into a sample of your drinking water and a few moments later receive an accurate pH reading. Two popular models are the 7Pros and Jellas digital water meters.
- If your water falls within the EPA recommended range of 6.5 to 8.5, there's no need to take action.

Takeaways:

- If your drinking water pH falls outside of the safe range, it's time to act. Call your local drinking water company to alert them to your test findings.
- They may visit your residence to professionally test your water. They should handle the situation if their test also comes back abnormal. Since pH is often a sign of contamination, the water company may run several tests looking for various contaminants.
- In the meantime, if you suspect problems with your drinking water — whether it's pH, a strange texture, a bad taste, or a bad smell — you can purchase a pitcher like the one made by Brita or install a filter system in your kitchen sink. PUR has a popular filter system.
- Be sure to keep in communication with your local water provider. Ask for an annual report to stay on top of your drinking water quality.
- By taking survey of different people and get the information.

Ph readings taken from different water sample

Types of total dissolved solids:

The following list details common total dissolved solids that may be present in your water.

- Calcium
- Chloride
- Magnesium
- Potassium
- Zinc
- Aluminum
- Copper
- Lead
- Arsenic
- Iron
- Chlorine
- Sodium
- Fluoride
- Bicarbonates
- Sulfates
- Pesticides
- Herbicides

How to measure TDS:

If you have a reverse osmosis system, you can use the following formula to calculate the percent rejection of TDS and to measure your RO system's performance.

- Measure the TDS of **raw feed water** by submersing the tester's probes into a glass of tap water. Record the results.
- Measure the TDS of your **RO water** by filling a glass with RO water (from RO faucet) and submersing the tester's probes into the water. Record the results.

PACKAGED DRINKING WATER:

Packed drinking water is water that has been cleaned and disinfected in some way, such as through filtration, UV or ozone treatment, or reverse osmosis (RO), and then packaged in plastic or glass bottles or pouches for our use. Packaged drinking water is water that has undergone a distillation process and has been sourced from a spring, well, or drilled water source by a packaged drinking water facility. The water is then packaged in either plastic or glass water bottles and sealed, ensuring that it is extremely potable and safe to drink.

Differences:

PACKAGED DRINKING WATER	COIN OPERATED VENDING MACHINE
Regulated By Bureau Of Indian Standards (BIS) & ISI Licensed	Not regulated by BIS and Non ISI Marked
Water Quality test report send to BIS every month/year	No Quality Assurance certification or testing from external agency or government
Cans Pre-washed and rinsed with hot water	No Can washing before filling
Automated filling and packaging in controlled environment	Filling tap is exposed to dust, contamination and handled by multiple consumers
Value for money INR 45 - INR 85	Cheap price INR 2 - INR 5



MINERAL WATER:

Mineral water is a type of drinking water that contains minerals as well as other dissolved substances such as gases, sulphur compounds, and salts. It may comprise natural or synthetic minerals that have been added to the water using drops of balance. Mineral water is derived from natural underground reservoirs and mineral springs, and it contains more minerals than tap water.

Mineral water must have at least 250 parts per million of total dissolved solids, according to the Food and Drug Administration (FDA). Minerals are not allowed to be added to these goods by the FDA.

Filter Water Plant

We had visited filter water plant in my village ,they are supplying Filter Water at a rate of 5rs per litre.

This water is supplied from village water storage tanks and this water is Purified again.

And that purified waters are stored in a private water tanks which are

Show in the picture.

Health effects of high TDS in drinking water

Though an elevated TDS level can affect the taste of your water, it is not usually harmful to human health. However, readings above 500 ppm require further investigation for toxic particles and heavy metals, and readings above 1000 ppm are considered unsafe for human consumption. Again, it is important to remember that when it comes to your health, the type of dissolved solids in your water is more important than the amount. A home water test kit or lab analysis can help you determine if your water contains any harmful substances like lead or pesticides and herbicides.

Is low TDS water harmful?

No, low TDS water is not harmful. A low TDS level actually means you have high-quality water, but it may have a flat taste, as it is devoid of many minerals.

CHAPTER 8: OUTCOMES DESCRIPTION

8.1 How water gets contaminated

Germ and chemicals can get in drinking water at the water's source or in the distribution system after the water has already been treated. Harmful germs and chemicals can get in the water from many sources, including:

- Fertilizers, pesticides, or other chemicals that have been applied to land near the water
- Concentrated feeding operations (large industrial animal farms)
- Manufacturing operations
- Sewer overflows
- Storm water
- Wildlife
- Rocks and soil that naturally have chemicals and minerals such as arsenic, radon, and uranium
- Cracks in water pipes or other problems in the distribution system

8.2 Drinking Water Quality:

Surface waters and aquifers can be contaminated by various chemicals, microbes, and radionuclides. Disinfection of drinking water has dramatically reduced the prevalence of waterborne diseases (such as typhoid, cholera, and hepatitis) in the United States. Other processes may also be used to treat drinking water depending on the characteristics of and contaminants in the source water.

Common sources of drinking water contaminants include:

- **Industry and agriculture.** Organic solvents, petroleum products, and heavy metals from disposal sites or storage facilities can migrate into aquifers. Pesticides and fertilizers can be carried into lakes and streams by rainfall runoff or snowmelt, or can percolate into aquifers.
- **Human and animal waste.** Human wastes from sewage and septic systems can carry harmful microbes into drinking water sources, as can wastes from animal feedlots and wildlife. Major contaminants include Giardia, Cryptosporidium, and E. coli.
- **Treatment and distribution.** While treatment can remove many contaminants, it can also leave behind byproducts (such as trihalomethanes) that may themselves be harmful. Water can also become contaminated after it enters the distribution system, from a breach in the piping system or from corrosion of plumbing materials made from lead or copper.
- **Natural sources.** Some ground water is unsuitable for drinking because the local underground conditions include high levels of certain contaminants. For example, as ground water travels through rock and soil, it can pick up naturally occurring arsenic, other heavy metals, or radionuclides.

8.3 Effects on Human Health:

If drinking water contains unsafe levels of contaminants, it can cause health effects, such as gastrointestinal illnesses, nervous system or reproductive effects, and chronic diseases such as cancer. Factors that can influence whether a contaminant will lead to health effects include the type of contaminant, its concentration in the water, individual susceptibility, the amount of water consumed, and the duration of exposure.

- **Health effects of chemical exposure.** Chemical exposure through drinking water can lead to a variety of short- and long-term health effects. Exposure to high doses of chemicals can lead to skin discoloration or more severe problems such as nervous system or organ damage and developmental or reproductive effects. Exposure to lower doses over long periods of time can lead to chronic, longer-term conditions such as cancer. The effects of some drinking water contaminants are not yet well understood.
- **Health effects of consuming water with disease-causing microbes.** Most life-threatening waterborne diseases caused by microbes (such as typhoid fever or cholera) are rare in the United States today. The more common illnesses caused by viruses, bacteria, and parasites can result in stomach pain, vomiting, diarrhea, headache, fever, and kidney failure. Infectious diseases such as hepatitis can also occur. Hepatitis may be severe in people with weakened immune systems (e.g., infants and the elderly) and sometimes fatal in people with severely compromised immune systems (e.g., cancer and AIDS patients).

8.4 SURVEY

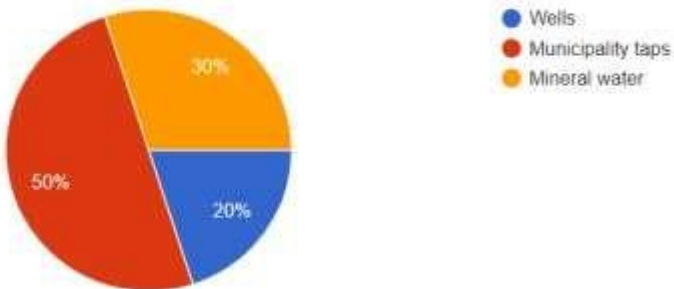
We take survey of different people and most of the people are interested in filter water and dug wells.



8.5: SURVEY QUESTIONNAIRES

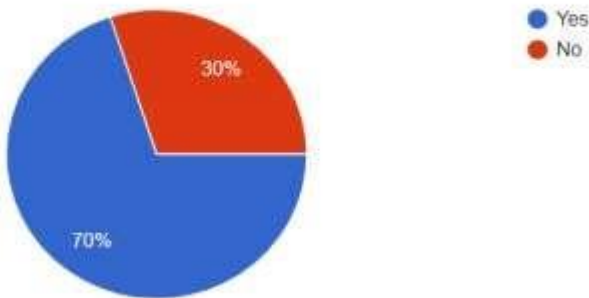
Your Source of drinking water

10 responses



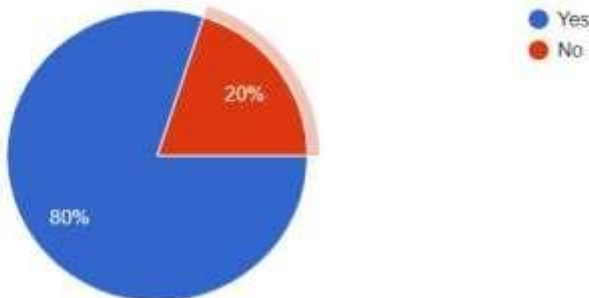
Do you buy drinking water from stores?

10 responses



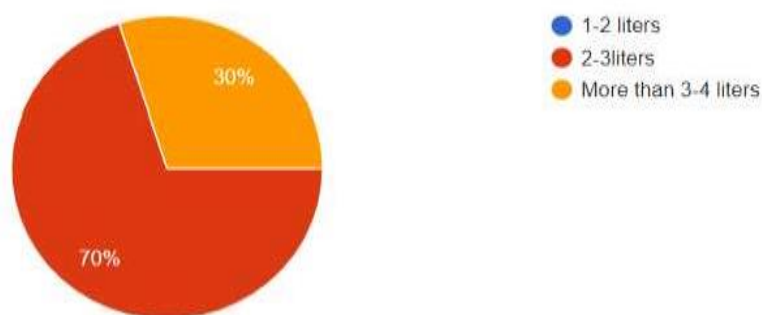
Do you think the water you buy from store is suitable for drinking

10 responses



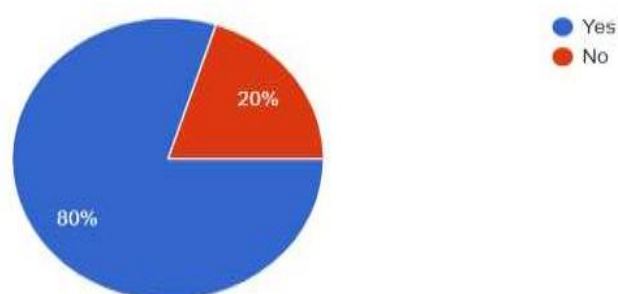
The amount of water consumed by the family for drinking per head in a day

10 responses



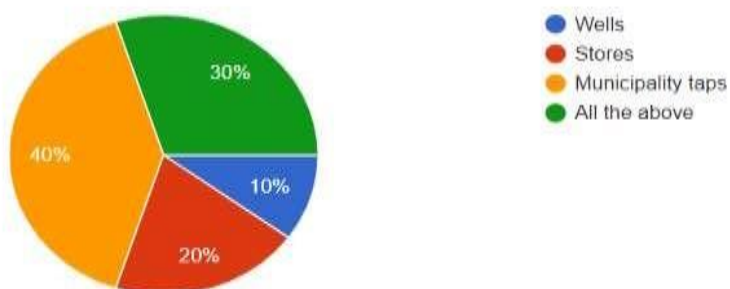
Are you satisfied with the quality of drinking water purchased from stores

10 responses



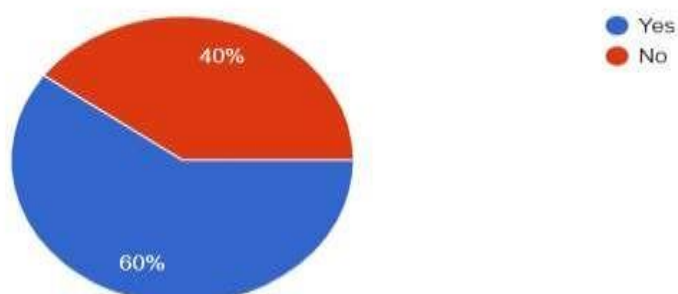
where, do you think, water of the highest quality is found?

10 responses



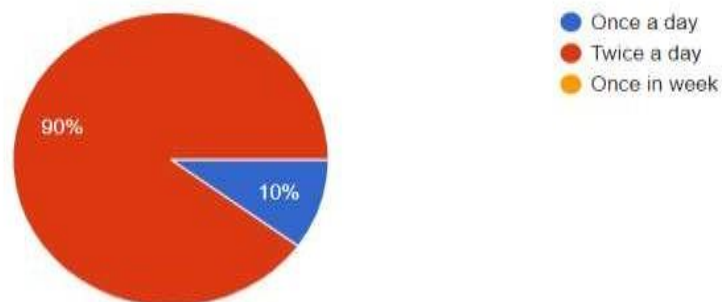
Do you know how to improve the quality of drinking water?

10 responses



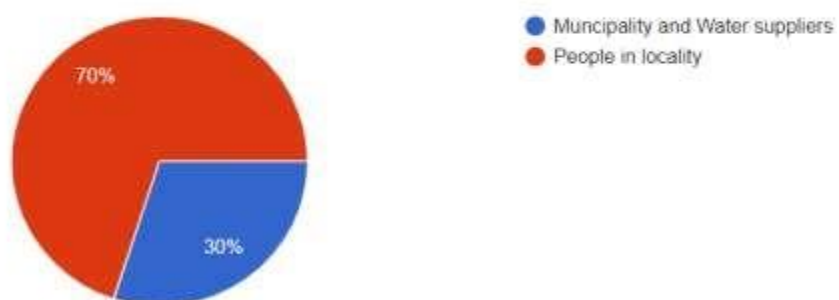
If you are using tap water, what is the frequency of water supply?

10 responses



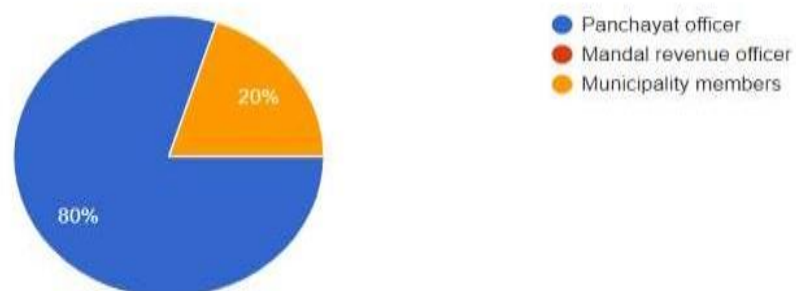
In your opinion, who should be responsible for drinking water quality?

10 responses



Whom do you complaint if the TDS of the water is not balanced?

10 responses



CHAPTER 9:

RECOMMENDATIONS AND CONCLUSIONS OF THE MINI PROJECT

Problems Identified:

- The problem we identified is government is supplying drinking water to villagers only 3 times a day for a certain period of time ,due to this many people are not available to fill drinking water into their vessels or pots which can be later used for drinking
- Second problem is most of the drinking water is supplied through taps,by using taps people get the drinking water.in the village many taps are close to sewage area ,so this can contaminate drinking water
- Third people is many people are still using ground water for drinking,but in balabhadrapuram ,the ground water is some what contaminated

Solutions:

- The solution is we have advised the village govt officials to supply drinking water continuously to help the people
- we have asked them to clean taps regularly and asked them to fix new taps far from sewage area
- we have advised people to filter the people before drinking like heating water

CONCLUSION:

Our water resources, irregularly distributed in space and time, are under pressure due to major population change and increased demand. Access to reliable data on the availability, quality and quantity of water, and its variability, form the necessary foundation for sound management of water resources. The different options for augmentation expand the boundaries of the water resource in a conventional sense, helping to match demand and supply. All components of the hydrological cycle, and the influence of human activities on it, need to be understood and quantified to efficiently and sustainably develop and protect our water resources.

- Climate change is having a significant impact on weather patterns, precipitation and the hydrological cycle, affecting surface water availability, as well as soil moisture and groundwater recharge.
- The growing uncertainty of surface water availability and increasing levels of water pollution and water diversions threaten to disrupt social and economic development in many areas as well as the health of ecosystems.
- Groundwater resources can, in many instances, supplement surface water, particularly as a source of drinking water. However, in many cases, these aquifers are being tapped at an unsustainable rate or affected by pollution. More attention should be paid to sustainable management of non-renewable groundwater.

CHAPTER 10: STUDENT SELF-EVALUATION FOR THE CSP

Student Self-Evaluation for the Community Service Project

Student Name: Yalla v v v satya krishna varaprasad

Registration No: 22A91A04P9

Period of CSP: From: 21/07/2023 To: 31/08/2023

Date of Evaluation:

Please rate your performance in the following areas:

Rating Scale: Letter grade of CGPA calculation to be provided

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Student Self-Evaluation for the Community Service Project

Student Name: Buddaraju siva kumar varma

Registration No: 22A91A04J2

Period of CSP: From: 21/07/2023 To: 31/08/2023

Date of Evaluation:

Please rate your performance in the following areas:

Rating Scale: Letter grade of CGPA calculation to be provided

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Student Self-Evaluation for the Community Service Project

Student Name: Uppu Meghananjani

Registration No: 22A91A04P3

Period of CSP: From: 21/07/2023 To: 31/08/2023

Date of Evaluation:

Please rate your performance in the following areas:

Rating Scale: Letter grade of CGPA calculation to be provided

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

CHAPTER 11: EVALUATION BY THE PERSON IN-CHARGE IN THE COMMUNITY

Evaluation by the Person in-charge in the Community / Habitation

Student Name: Yalla v v v satya krishna varaprasad

Registration No: 22A91A04P9

Period of CSP: From: From: 21/07/2023 To: 31/08/2023

Date of Evaluation:

Name of the person in- charge:

Please rate the student's performance in the following areas:

Please note that your evaluation shall be done independent of the Student's self-evaluation

Rating Scale: 1 is lowest and 5 is highest rank

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Signature of the Supervisor

Evaluation by the Person in-charge in the Community / Habitation

Student Name: Buddaraju siva kumar varma

Registration No: 22A91A04J2

Period of CSP: From: 21/07/2023 To: 31/08/2023

Date of Evaluation:

Name of the person in- charge:

Please rate the student's performance in the following areas:

Please note that your evaluation shall be done independent of the Student's self-evaluation

Rating Scale: 1 is lowest and 5 is highest rank

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
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10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Signature of the Supervisor

Evaluation by the Person in-charge in the Community / Habitation

Student Name: Uppu Meghananjani

Registration No: 22A91A04P3

Period of CSP: From: 21/07/2023 To: 31/08/2023

Date of Evaluation:

Name of the person in- charge:

Please rate the student's performance in the following areas:

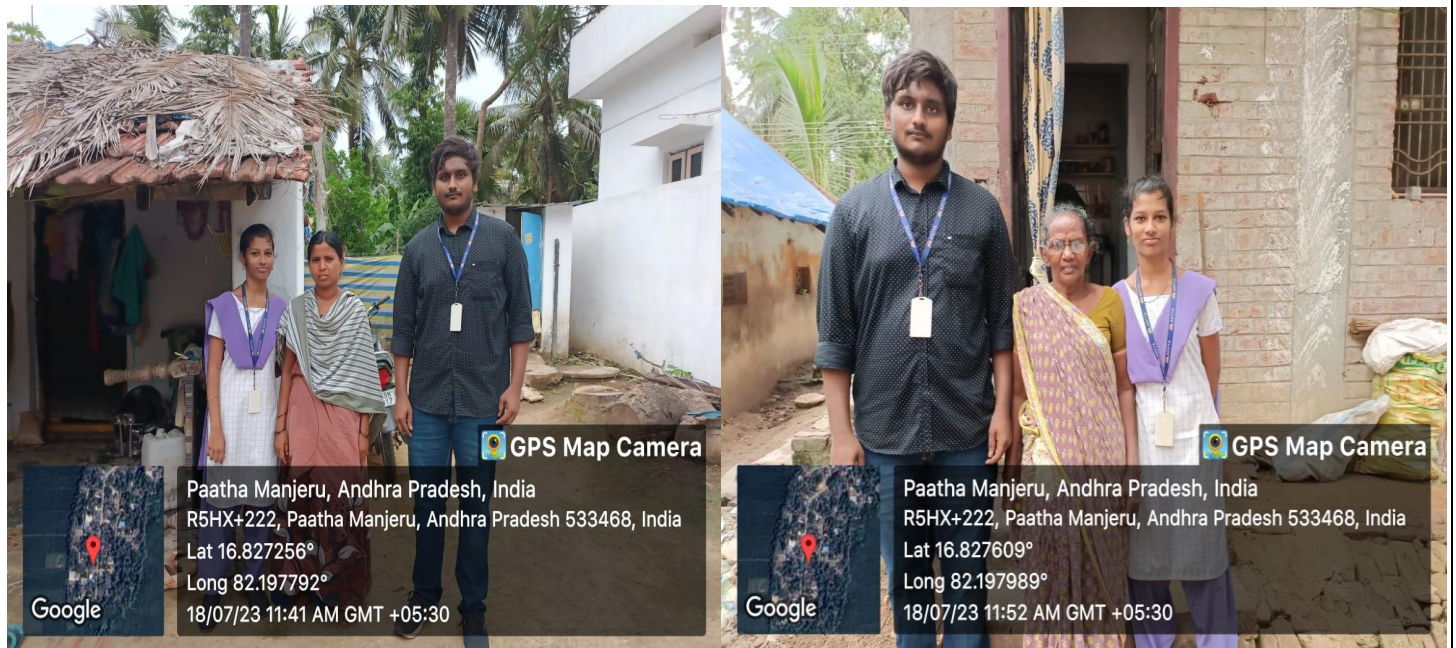
Please note that your evaluation shall be done independent of the Student's self-evaluation

Rating Scale: 1 is lowest and 5 is highest rank

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
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10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Signature of the Supervisor

CHAPTER 12: PHOTOS OF OUR SURVEY









CHAPTER 13: INTERNAL EVALUATION FOR THE COMMUNITY SERVICE PROJECT

Objectives:

- To facilitate an understanding of the issues that confront the vulnerable / marginalized sections of society.
- To initiate team processes with the student groups for societal change.
- To provide students an opportunity to familiarize themselves with the urban / rural community they live in.
- To enable students to engage in the development of the community.
- To plan activities based on the focused groups.
- To know the ways of transforming society through systematic programme implementation.

Assessment Model:

- There shall only be internal evaluation.
- The Faculty Guide assigned is in-charge of the learning activities of the students and for the comprehensive and continuous assessment of the students.
- The assessment is to be conducted for 100 marks.
- The number of credits assigned is 4. Later the marks shall be converted into grades and grade points to include finally in the SGPA and CGPA.
- The weightings shall be:
 - Activity Log 20 marks
 - Community Service Project Implementation 30 marks
 - Mini Project Work 25marks
 - Oral Presentation 25marks
- Activity Log is the record of the day-to-day activities. The Activity Log is assessed on an individual basis, thus allowing for individual members within groups to be assessed this way. The assessment will take into consideration the individual student's involvement in the assigned work.
- While evaluating the student's Activity Log, the following shall be considered -
 - a. The individual student's effort and commitment.
 - b. The originality and quality of the work produced by the individual student.
 - c. The student's integration and co-operation with the work assigned.
 - d. The completeness of the Activity Log.
- The assessment for the Community Service Project implementation shall include the following components and based on Weekly Reports and

INTERNALASSESSMENT STATEMENT

Name of the Student: Yalla v v v satya krishna varaprasad

Programme of Study: B. Tech

Year of Study: 2nd year

Group: ECE

Register No/H.T. No: 22A91A04P9

Name of the College: Aditya College of Engineering

University : Jawaharlal Nehru Technological University, Kakinada.

<i>Sl.No</i>	<i>Evaluation Criterion</i>	<i>Maximum Marks</i>	<i>Marks Awarded</i>
1.	Activity Log	20	
2.	Community Service Project Implementation	30	
3.	Mini Project Work	25	
4.	Oral Presentation	25	
	GRAND TOTAL	100	

Date:

Signature of the Faculty Guide

Certified by

Seal:

Signature of the Head of the Department/Principal

INTERNALASSESSMENT STATEMENT

Name of the Student: Buddaraju siva kumar

varma

Programme of Study: B. Tech

Year of Study: 2nd year

Group: ECE

Register No/H.T. No: 22A91A04J2

Name of the College: Aditya College of Engineering

University : Jawaharlal Nehru Technological University, Kakinada.

<i>Sl.No</i>	<i>Evaluation Criterion</i>	<i>Maximum Marks</i>	<i>Marks Awarded</i>
1.	Activity Log	20	
2.	Community Service Project Implementation	30	
3.	Mini Project Work	25	
4.	Oral Presentation	25	
	GRAND TOTAL	100	

Date:

Signature of the Faculty Guide

Certified by

Seal:

Signature of the Head of the Department/Principal

INTERNALASSESSMENT STATEMENT

Name of the Student: Uppu

Meghananjani

Programme of Study: B. Tech

Year of Study: 2nd year

Group: ECE

Register No/H.T. No: 22A91A04P3

Name of the College: Aditya College of Engineering

University : Jawaharlal Nehru Technological University, Kakinada.

<i>Sl.No</i>	<i>Evaluation Criterion</i>	<i>Maximum Marks</i>	<i>Marks Awarded</i>
1.	Activity Log	20	
2.	Community Service Project Implementation	30	
3.	Mini Project Work	25	
4.	Oral Presentation	25	
	GRAND TOTAL	100	

Date:

Signature of the Faculty Guide

Seal:

Signature of the Head of the Department/Principal

Certified by

Seal:

Signature of the Head of the Department/Principal
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