NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REACT PROJECT

on

SAFE DRINKING WATER

Presented by

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Signature of External Examiner

SAFE DRINKING WATER

- Safe drinking water is important for public health and can contribute to economic growth and poverty reduction.
- However, billions of people around the world still lack access to safe drinking water.
- Drinking Water Week, celebrated the first week of May each year.

- Learn how to protect groundwater during Groundwater Awareness Week, celebrated every March.
- Celebrate World Water Day on March 22 and promote the access to safe water for everyone.
- Improved water supply and sanitation, and better management of water resources, can boost countries' economic growth and can contribute greatly to poverty reduction

Principles of Safe Drinking Water

- Water pollution is a widespread problem that can contaminate drinking water sources with harmful substances.
- More than one billion people in the world do not have access to safe drinking water.
- Safe drinking water is essential for hygiene, which can help prevent diarrheal diseases, respiratory infections, and other tropical diseases.

- Disinfection is an important step in the treatment of drinking water, and is often done with reactive chemical agents like chlorine.
- Polluted drinking water is a major cause for many different diseases, e.g., cancers, and reproductive and digestive problems.

ADVANTAGES OF SAFE DRINKING WATER

Awareness of safe drinking water can have many benefits, including:

- **Improved health**: Access to safe drinking water can help prevent diseases and promote overall health. It can also reduce the risk of:
  - Diarrheal disease
  - Malnutrition
  - Dehydration
  - Disaster-related health impacts.
- **Reduced poverty**: Improved water supply and sanitation can contribute to poverty reduction.
- **Increased life expectancy**: Access to safe drinking water can increase life expectancy.
- **Improved education**: Women and girls who don't have to walk miles to fetch water have more time to learn.
- **Economic growth**: Improved water supply and sanitation can boost countries' economic growth.

SOFTWARE AND HARDWARE REQUIREMENTS

Software Requirements

Frontend Development:

- React Framework
- HTML5, CSS3, and

Backend Development:

- Node.js with Express.js
- Database: MongoDB / MySQL

Tools & Libraries:

- Visual Studio Code
- NPM (Node Package Manager)
- API Testing: Postman

Hardware Requirements

Development Machine:

- Processor: Apple silicon chip M2
- RAM: 8GB
- Storage: 256GB SSD

Testing Devices:

- Laptop/PC for Web Application Testing
- Smartphone for Responsive UI Testing

NO OF MODULES USED IN PROJECT :

- **Frontend Development:**
- Build the user interface using HTML, CSS, JavaScript, and frameworks like React or Angular.
- Create reusable components (e.g., navbar, forms, tables, modals).
- Implement state management (e.g., Redux, Context API).
- Integrate APIs for dynamic content.
- **Backend Development:**
- Set up a server using frameworks like Node.js (Express), Django, or Flask.
- Implement business logic, authentication, and authorization.
- Develop RESTful or Graph QL APIs for interaction with the frontend.
- **Database Setup and Integration:**
- Create tables and relationships in MySQL.
- Write optimized queries (CRUD operations).
- Ensure data security (encryption, validation).

Example Workflow Using MySQL:

Frontend (React):

1. A form allows users to enter data.
2. Upon submission, data is sent to the backend via an API.

Backend (Node.js + Express):

1. Receives data, validates it, and interacts with the MySQL database.
2. Example: Stores user details in a "users" table.

Database (MySQL):

1. Stores data in structured tables.

Return Data to Frontend:

Backend sends a response to the frontend to update the UI.

Overview of Frontend, Backend, and Database

- **Frontend (React, Angular, etc.):**
  - Provides the user interface (UI) for interacting with the application.
  - Sends requests to the backend and displays the data received.
- **Backend (Node.js, Django, etc.):**
  - Processes requests from the frontend and performs logic.
  - Connects to the database to perform CRUD operations (Create, Read, Update, Delete).
- **MySQL Database:**
  - Stores the application data in structured tables.
  - CRUD operations interact with the data.

4. Frontend and Backend Communication

- **HTTP Methods for CRUD:**
  - **Create:** POST - To send new data to the backend.
  - **Read:** GET - To fetch data.
  - **Update:** PUT/PATCH - To modify existing data.
  - **Delete:** DELETE - To remove data.
- **API Requests:**
  - Frontend sends HTTP requests to the backend with data in the request body (for POST/PUT).
  - Backend sends responses back with status codes and data.

5. Connecting the Backend to MySQL

Using Node.js:

- **Install dependencies:**

```
npm install express mysql2 body-parser
```

- **Set up a connection:**

```
const mysql = require('mysql2');
const connection = mysql.createConnection({
  host: 'localhost',
  user: 'root',
  password: 'yourpassword',
  database: 'yourdatabase'
});
```

SAMPLE CODE:

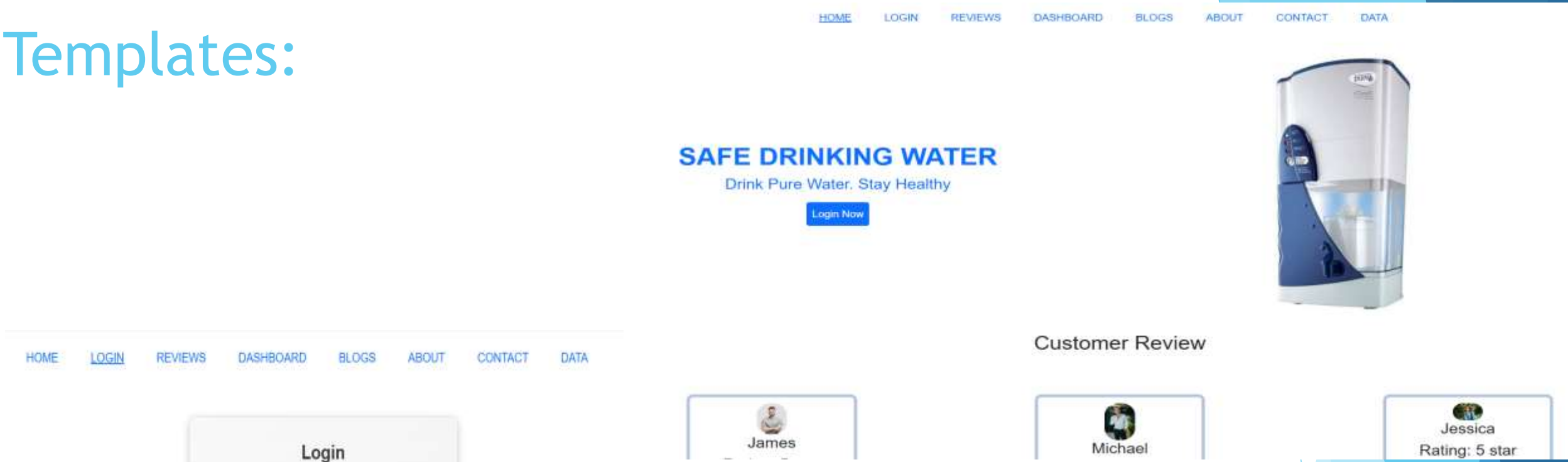
```
const express = require('express');
var cors = require('cors');
const connection = require('./connection');
const userRoute = require('./user’);
const app =express();
app.use(cors());
app.use(express.urlencoded({ extended: true }));
app.use(express.json());
app.use('/user', userRoute);
module.exports = app;
```

```
//server
PORT  = 8080
//connection
DB_PORT = 3306
DB_HOST = localhost
DB_USERNAME = root
DB_PASSWORD = 123456
DB_NAME = user
```

CONCLUSION & FUTURE DEVELOPMENT

- Participants greatly underestimated their personal direct and indirect water use and showed some lack of insight into which factors can threaten water quality. There is much ground to cover in communicating water quality issues to citizens, especially on the effects of climate change, the consequences of duck feeding, and the effects of water abstraction on water quality. On the positive side, people were very willing to help improve their local lake quality i.e. by means of citizen science.
- Once too much water is used, farmers can easily fall into the water shortage dilemma, and the limited water resources reserves prompt the farmers to cherish water resources more and tend to save water.
- Water shortage has become one of the most serious challenges faced by humans. Thus, improving water use behaviors and saving water are critical. In this paper, based on the extended Value-Belief-Norm (VBN) theory, we used the structural equation model and the survey data of 558 households in the Loess Hilly Region to analyze the key factors affecting water saving behaviors of farmers.

Templates:


HOME LOGIN REVIEWS DASHBOARD BLOGS ABOUT CONTACT DATA
SAFE DRINKING WATER
Drink Pure Water. Stay Healthy
Login Now
HOME LOGIN REVIEWS DASHBOARD BLOGS ABOUT CONTACT DATA
Customer Review
James
Michael
Jessica
Rating: 5 star
Login
Name:
Email:
Password:
Submit

HOME LOGIN REVIEWS DASHBOARD BLOGS ABOUT CONTACT DATA

James

Rating: 5 star

It is a great water filter. However, it will be greater adding a uploading pictures function. Thank you for the amazing filter.

Michael

Rating: 4 star

Hello. I'm using this water filter since several months now. And today, this filter doesn't work anymore. The reviews have desappear from my website. Could you please help me ?.

Jessica

Rating: 5 star

Every time a customer of mine leaves a review and I go to approve it, I get an error message saying the page doesn't exist. Please fix

Thomas

Rating: 5 star

Simple free water filter. Works well. Would be nice to have some extra features like linking

Melissa

Rating: 5 star

Water Level Indicator - 100% Ro Purified Water.what a pity! The filter works well but the

Nicholas

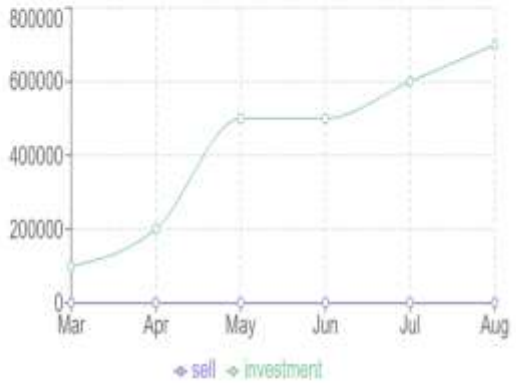
Rating: 5 star

No access to reviews or for customers to provide new reviews and no way to get

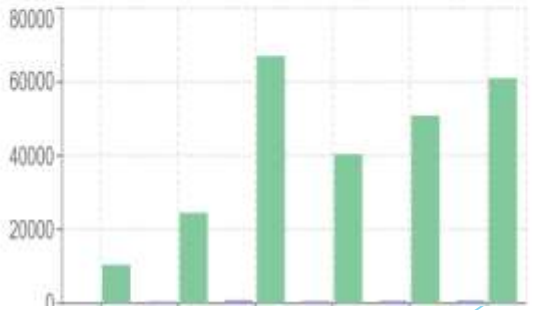
HOME LOGIN REVIEWS DASHBOARD BLOGS ABOUT CONTACT DATA

SELL VS INVESTMENT

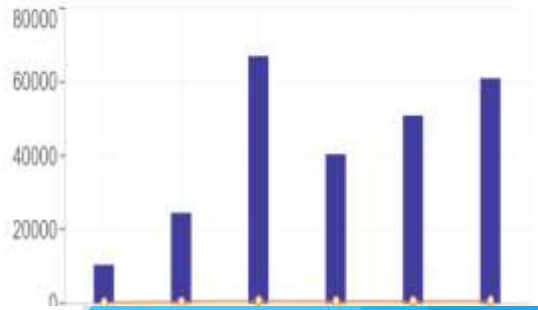
SELL VS INVESTMENT



SELL VS REVENUE



SELL VS REVENUE



HOME LOGIN REVIEWS DASHBOARD BLOGS ABOUT CONTACT DATA

A red cap usually indicates that the water is carbonated or sparkling

A blue cap usually indicates that the water is spring or mineral water

A green cap on a water bottle usually indicates the water has added flavor

It indicates that the water is processed or purified

It indicates that the water is breast cancer or charity events

HOME LOGIN REVIEWS DASHBOARD BLOGS ABOUT CONTACT DATA

Rotary Indore Professionals

SAFE DRINKING WATER

Drinking Water

Awareness Of Safe Drinking Water

Safe and readily available water is important for public health, whether it is used for drinking, domestic use, food production or recreational purposes. Improved water supply and sanitation, and better management of water resources, can boost countries economic growth and can contribute greatly to poverty reduction.

Sustainable Development Goal target 6.1 calls for universal and equitable access to safe and affordable drinking water. The target is tracked with the indicator of "safely managed drinking water services" available when needed, and free from faecal and priority chemical contamination.

THANKING YOU

FROM TEAM

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