

CLIENTSYNC – FREELANCER CRM (REACT + JSON SERVER)

A Project Report

Submitted by

STUDENT'S

Syed Arsh - AP23110010587

Surya Teja Annam – AP23110010525

Hrushikesh Bhaskar Gopale – AP23110010129

Hitesh Karthikeya Adusumilli – AP23110010480

In partial fulfilment for the requirements of the Final Project

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING



INTRODUCTION

Welcome to ClientSync, an elegant and modern CRM application designed specifically for freelancers and small businesses. Built using the power of **React.js**, **Tailwind CSS**, and **JSON Server**, ClientSync simplifies client management, project tracking, and financial invoicing — all under one streamlined dashboard.

ClientSync combines simplicity with functionality, giving freelancers a centralized platform to organize their workflow effortlessly. Whether you're managing multiple clients, handling multiple projects simultaneously, or keeping track of payments and invoices, ClientSync ensures everything is accessible, fast, and beautifully presented.

Crafted using React's component-driven architecture, the UI is responsive, engaging, and easy to use. Every section—from client management to revenue insights—is designed with clarity and efficiency in mind, ensuring a smooth experience across all devices.

ClientSync redefines how freelancers operate daily by turning complex workflows into an enjoyable and productive experience.

SCENARIO-BASED INTRO

Imagine you're a freelance developer or designer managing four clients at once. Each client has ongoing projects, and each project has invoices with different due dates.

Normally, keeping track of all this manually becomes stressful. But with **ClientSync**, your workday becomes organized and stress-free.

You open the app and instantly see:

- Total clients
- Total ongoing projects
- Total invoices
- Revenue paid vs. pending

You click on the *Clients* section to update a client's email, then move to the Projects tab to change a project's status from "In Progress" to "Completed".

Finally, in the Invoices section, you mark an invoice as "Paid", and instantly the Dashboard updates your revenue insights.

With ClientSync, your daily freelance workflow becomes automated, organized, and visually clean.

TARGET AUDIENCE

ClientSync is designed for:

1. Freelancers

Developers, designers, writers, marketers, and other freelancers who need a simple CRM to manage clients, projects, and invoices.

2. Small Agencies

Small teams or startups who manage multiple clients and projects.

3. Independent Consultants

Professionals who track billable work, payments, and clients.

PROJECT GOALS AND OBJECTIVES

The main goal of ClientSync is to provide freelancers with a lightweight yet powerful CRM solution.

Objectives:

1. User-Friendly Interface

Create a clean, modern UI that helps users manage clients, projects, and invoices effortlessly.

2. Organized Data Management

Provide structured data handling using JSON Server for CRUD operations.

3. Insightful Dashboard

Offer real-time analytics like:

- Total clients
- Revenue statistics
- Recent activity
- Project status distribution

4. Modern Tech Stack

Use React.js, Tailwind CSS, Axios, React Router, and JSON Server to build a fast, responsive, and interactive experience.

KEY FEATURES

- **Dashboard Overview**

A visually appealing dashboard showing summary statistics, charts, and recent activity.

- **Client Management**

Add, edit, delete, and view client details (email, phone, company, etc.).

- **Project Management**

Track project status, amount, associated clients, and deadlines.

- **Invoice Management**

Generate invoices, assign them to clients and projects, mark as paid or pending.

- **Real-Time Statistics**

Revenue insights, project progress tracking, and recently added data.

- **Clean Navigation**

Navbar with smooth routing between Dashboard, Clients, Projects, and Invoices.

- **JSON Server Backend**

Stores and manages all CRUD operations easily.

- **Responsive Design**

Fully responsive UI made using Tailwind CSS.

PRE-REQUISITES

Node.js and npm

To run JavaScript and React applications locally.

Download: <https://nodejs.org/en/download/>

React.js

Modern library for building user interfaces.

Commands:

```
npm create vite@latest  
cd clientsync  
npm install  
npm run dev
```

Tailwind CSS

Utility-first CSS framework for styling.

JSON Server

Used as a lightweight backend for storing clients, projects, and invoices.

Axios

For making API calls to JSON Server.

React Router

For handling navigation across multiple pages.

Code Editor (VS Code)

Recommended for writing code.

Version Control

Use Git for version control, enabling collaboration and tracking changes throughout the development process. Platforms like GitHub or Bitbucket can host your repository.

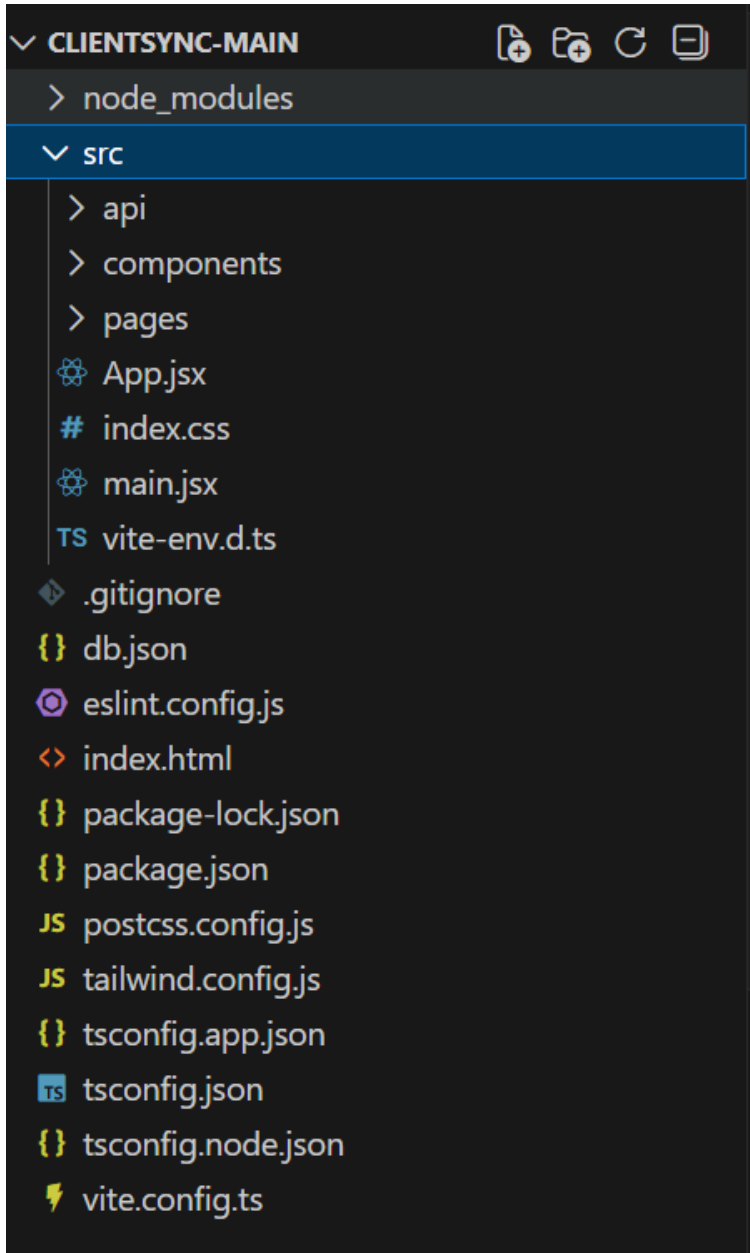
- **Git:** Download and installation instructions can be found at: <https://git-scm.com/downloads>
- **Development Environment:** Choose a code editor or Integrated Development Environment (IDE) that suits your preferences, such as Visual Studio Code, Sublime Text, or WebStorm.

Visual Studio Code: Download from <https://code.visualstudio.com/download>

Sublime Text: Download from <https://www.sublimetext.com/download>

WebStorm: Download from <https://www.jetbrains.com/webstorm/download>

PROJECT STRUCTURE



The **App.jsx** handles routing.

The **pages** folder contains all CRUD views.

The **api.js** file manages all API requests.

PROJECT FLOW

1. Project Setup

- Created the project using Vite
- Installed React Router, Axios, JSON Server, Tailwind CSS
- Set up API base URL and CRUD routes

2. UI Development

- Built the Dashboard
- Created pages for Clients, Projects, Invoices
- Added forms for Add/Edit functionality

3. API Integration

- Connected CRUD pages with JSON Server
- Used Axios for GET, POST, PUT, DELETE
- Synced Dashboard insights with live data

4. Styling

- Implemented Tailwind CSS utilities
- Added custom gradients and themes
- Designed responsive layout

5. Project Execution

- Run backend:
`npm run server`
- Run frontend:
`npm run dev`
- The app opens at:
`http://localhost:5173`

The app launches with the Dashboard as the home page.

```
PS C:\Users\ASUS\OneDrive\Desktop\Sem - 5\FS\ClientSync-main> npm run dev

> clientsync@1.0.0 dev
> concurrently -n "JSON-SERVER,VITE" -c "blue,green" "npm run server" "vite"

[JSON-SERVER]
[JSON-SERVER] > clientsync@1.0.0 server
[JSON-SERVER] > json-server --watch db.json --port 5000
[JSON-SERVER]
[JSON-SERVER] --watch/-w can be omitted, JSON Server 1+ watches for file changes by default
[JSON-SERVER] JSON Server started on PORT :5000
```

```
[JSON-SERVER] Press CTRL-C to stop
[JSON-SERVER] Watching db.json...
[JSON-SERVER]
[JSON-SERVER] 💖( ͡° ͜ʖ ͡° )
[JSON-SERVER]
[JSON-SERVER] Index:
[JSON-SERVER] http://localhost:5000/
[JSON-SERVER]
[JSON-SERVER] Static files:
[JSON-SERVER] Serving ./public directory if it exists
```

```
PS C:\Users\ASUS\OneDrive\Desktop\Sem - 5\FS\ClientSync-main> npm run dev

[JSON-SERVER] Endpoints:
[JSON-SERVER] http://localhost:5000/clients
[JSON-SERVER] http://localhost:5000/projects
[JSON-SERVER] http://localhost:5000/invoices
[VITE]
[VITE] VITE v5.4.8 ready in 2457 ms
[VITE]
[VITE] → Local: http://localhost:5173/
[VITE] → Network: use --host to expose
[VITE] Browserslist: caniuse-lite is outdated. Please run:
```

SYSTEM REQUIREMENTS

Hardware Requirements

- Minimum 4 GB RAM
- Any modern processor (Intel i3 or above)
- 500 MB of free disk space
- Monitor with minimum 1366×768 resolution

Software Requirements

- Windows / macOS / Linux
- Node.js (Latest LTS version)
- Visual Studio Code
- Google Chrome or Firefox browser
- JSON Server
- React dependencies installed

TECHNOLOGY STACK

Frontend – React.js

- Component-based UI
- Fast rendering
- Virtual DOM
- Smooth navigation using React Router

Styling – Tailwind CSS

- Utility-first CSS
- Responsive by default
- Modern gradients, shadows, spacing utilities

Backend – JSON Server

- Acts as a mock REST API
- Stores data inside db.json
- Supports GET, POST, PUT, DELETE

HTTP Client – Axios

- For all API communication
- Handles requests and responses cleanly

Build Tool – Vite

- Very fast development server
- Bundles optimized production build

MODULE DESCRIPTION

1. Dashboard Module

- Displays total clients, projects, invoices
- Shows revenue insights
- Shows recent activity
- Provides quick action shortcuts

2. Clients Module

- Add new clients
- Edit client details
- Delete clients
- View full list of clients

3. Projects Module

- Create new projects
- Assign multiple clients
- Change project status
- Track project amounts

4. Invoices Module

- Generate invoices linked to clients and projects
- Mark invoices as paid or pending
- View financial details

5. API Module

- Handles Axios requests
- Connects frontend with JSON Server
- Reusable functions for CRUD

6. Navigation Module

- Navbar for smooth routing
- Uses React Router DOM
- No page reload while navigating

PROJECT FLOW& CODE DEMO LINKS

Project Flow Demo:

https://drive.google.com/file/d/17sSAnwemQ_XgFLNWN41db2w4rx7ZCAg/view?usp=sharing

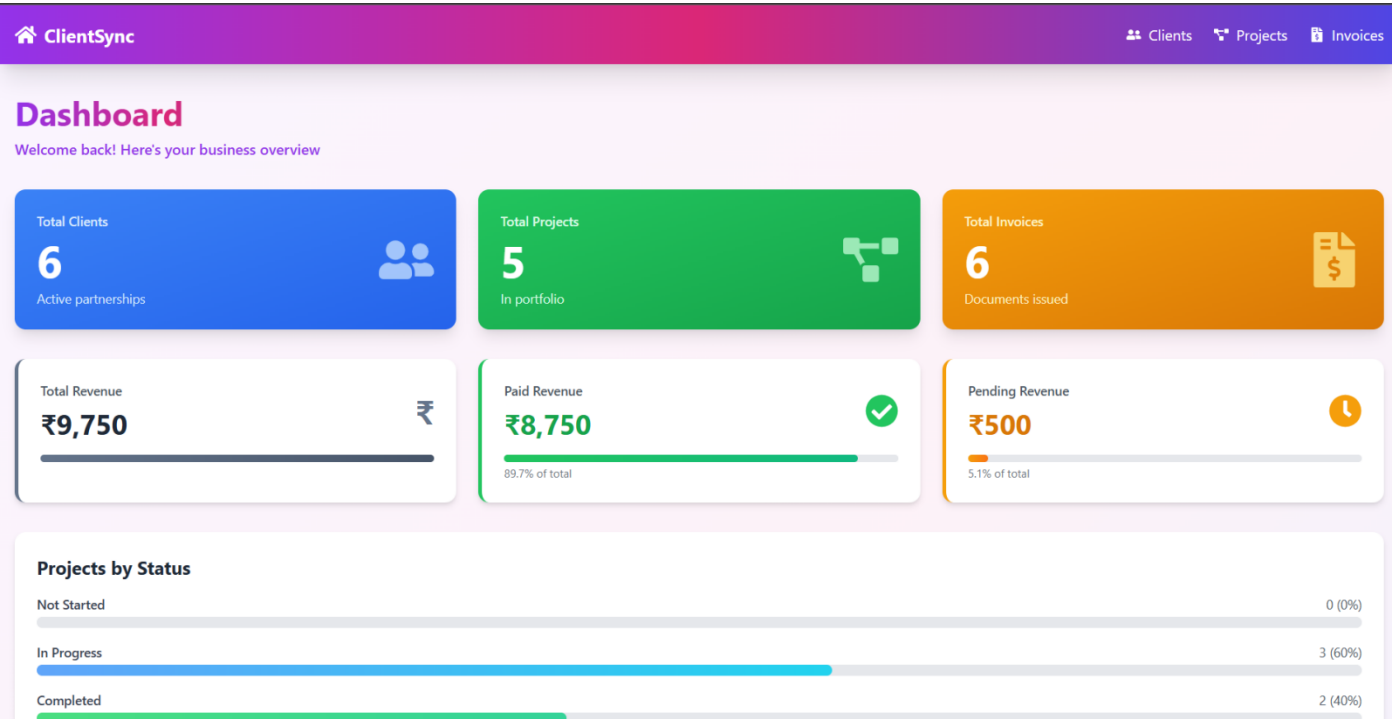
Project Code Demo:

https://drive.google.com/file/d/185M_c223JyRU2-Pgu1FYkzQuh-ll49Kr/view?usp=sharing

USER INTERFACE SCREENS

Dashboard Screen

Shows all statistics, charts, and activity.



On Hold

0 (0%)

Recent Activity

Recent Clients

Asha Web Studio
contact@ashastudio.com
Asha Web Studio

arsh
arsh@gmail.com
srm

Sairam
sairam@gmail.com
SRM

View all clients →

Recent Projects

E-commerce Website Redesign
completed ₹5,000

SRM WORK
in progress ₹1,000

SRM Work
in progress ₹1,000

View all projects →

Recent Invoices

INV-2025-001
paid ₹2,500

INV-2025-522
cancelled ₹500

INV-2025-111
pending ₹500

View all invoices →

Quick Actions

Add New Client

Create Project

Generate Invoice

Clients Screen

Table/list of all clients with buttons to edit/delete.

ClientSync

Clients Projects Invoices

Clients

+ Add Client

Search clients by name, email, or company...

NAME	COMPANY	EMAIL	PHONE	ACTIONS
Asha Web Studio	Asha Web Studio	contact@ashastudio.com	9876543210	View Edit Delete
arsh	srm	arsh@gmail.com	1234567890	View Edit Delete
Sairam	SRM	sairam@gmail.com	-	View Edit Delete
Surya	-	surya@gmail.com	-	View Edit Delete
Hitesh	-	hitesh@gamil.com	-	View Edit Delete
rebgrsfbd	-	fbafbrw@gmail.com	-	View Edit Delete

ClientSync

ClientsProjectsInvoices

Add New Client

Name *

Company

Email *

Phone

Address

Notes

Create Client

Cancel

Projects Screen

List of projects, with status badges.

ClientSync

ClientsProjectsInvoices

Projects

+ Add Project

Search projects...

All Status

TITLE	CLIENTS	STATUS	AMOUNT	START DATE	ACTIONS
E-commerce Website Redesign	Asha Web Studio arsh	Completed	₹5,000	11/15/2025	<div><div></div><div></div></div> <div>11/15/2025</div> <div><div></div><div></div></div>
SRM WORK	Surya Sairam	In Progress	₹1,000	11/29/2025	<div><div></div><div></div></div> <div>11/29/2025</div> <div><div></div><div></div></div>
SRM Work	No clients	In Progress	₹1,000	11/29/2025	<div><div></div><div></div></div> <div>11/29/2025</div> <div><div></div><div></div></div>
vagawgw	Hitesh	Completed	₹5,000	12/3/2025	<div><div></div><div></div></div> <div>12/3/2025</div> <div><div></div><div></div></div>
gawgawr	rebgrstbd	In Progress	₹15,000	12/3/2025	<div><div></div><div></div></div> <div>12/3/2025</div> <div><div></div><div></div></div>

ClientSync

Clients

Projects

Invoices

Add New Project

Clients * (Select one or more)

☐ Asha Web Studio
☐ arsh
☐ Sairam

☐ Surya
☐ Hitesh
☐ rebgrsfbd

Title *

Description

Status *

Not Started

Amount *

Start Date *

mm/dd/yyyy

End Date *

mm/dd/yyyy

Create Project

Cancel

Invoices Screen

Invoice list with color-coded statuses.

ClientSync

Clients

Projects

Invoices

Invoices

+ Add Invoice

Search invoices...

All Status

INVOICE #	PROJECT	CLIENT	AMOUNT	DATE	DUE DATE	STATUS	ACTIONS	EXPORT
INV-2025-001	E-commerce Website Redesign	Asha Web Studio	₹2,500	11/20/2025	12/20/2025	Paid		PDF
INV-2025-522	SRM WORK	Sairam	₹500	11/29/2025	12/31/2025	Cancelled		PDF
INV-2025-111	SRM WORK	Sairam	₹500	11/29/2025	11/29/2025	Pending		PDF
INV-2025-113	SRM WORK	Surya	₹500	11/29/2025	12/31/2025	Paid		PDF
INV-2025-360	SRM WORK	Surya	₹750	12/3/2025	12/3/2025	Paid		PDF
INV-2025-127	vagawgw	Hitesh	₹5,000	12/3/2025	12/3/2025	Paid		PDF

ClientSync

ClientsProjectsInvoices

Add New Invoice

Invoice Number *

INV-2025-031

Project * (Select project first)

Select a project

Client * (From selected project)

Select a project first

Amount *

Date *

mm/dd/yyyy

Due Date *

mm/dd/yyyy

Status *

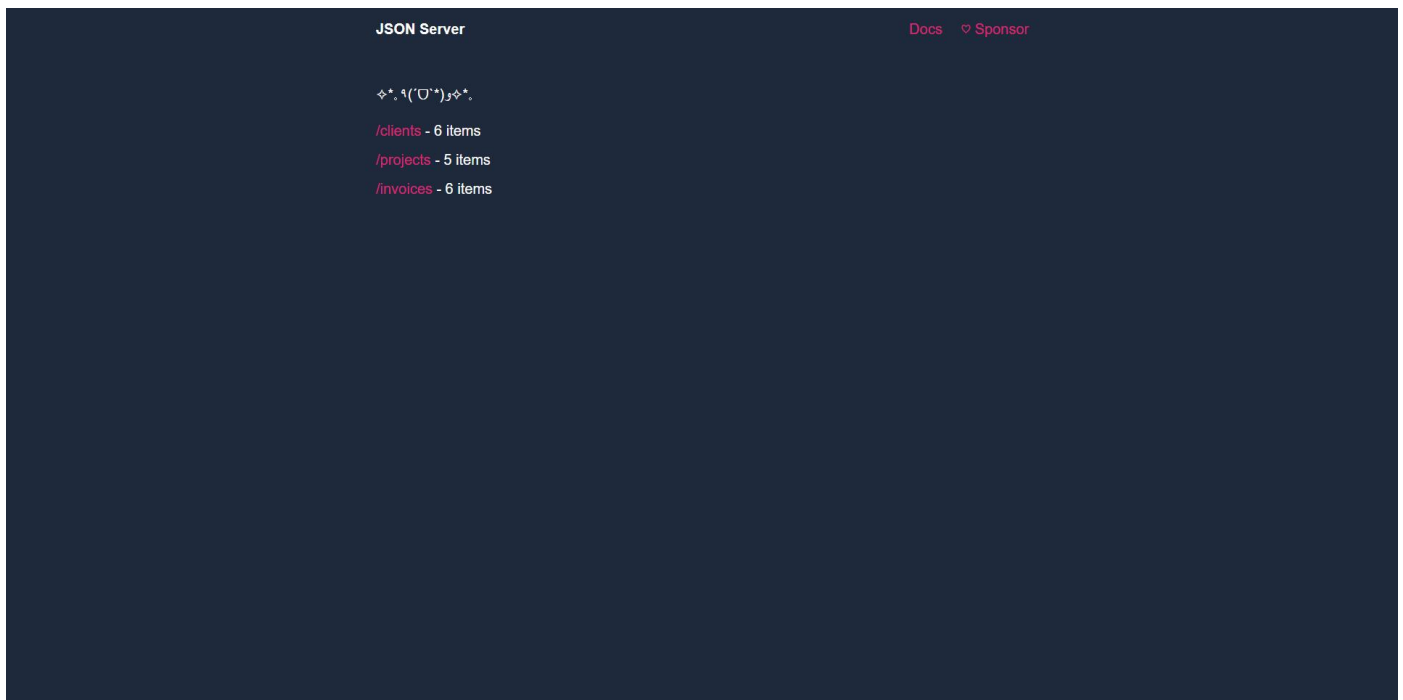
Pending

Description

Create Invoice

Cancel

Backend work: (JSON Server)



TESTING

Functional Testing

- Verified CRUD operations work correctly
- Dashboard auto-updates after changes

Unit Testing

- API endpoints tested manually using browser tools
- All pages load without errors

UI Testing

- Checked responsiveness on laptop and mobile
- Verified color theme and spacing

Performance Testing

- Vite build loads fast
- API responses from JSON Server are quick

Advantages of the System

- Simple and fast CRM solution for freelancers
- Fully responsive interface
- Real-time updates via React state
- Clean and modern UI
- Lightweight backend using JSON Server

Limitations of the System

- No user authentication
- No cloud database
- Invoices cannot be exported as PDF
- Multi-user login not supported

FUTURE ENHANCEMENTS

- Add user login/signup
- Cloud backend using Firebase or MongoDB
- Invoice PDF generation
- Payment gateway integration
- Dark mode
- Analytics graphs using ChartJS
- Email reminders for overdue invoices

CONCLUSION

The ClientSync project has been successfully developed as a comprehensive CRM system tailored for freelancers and small businesses. It integrates modern frontend technologies like React and Tailwind CSS with a lightweight backend powered by JSON Server, offering a smooth and efficient workflow. The system simplifies the management of clients, projects, and invoices by providing a centralized digital platform that is easy to use and visually appealing.

Throughout this project, I gained practical knowledge of component-based architecture, React hooks, routing, state management, and API integration. Implementing CRUD operations, responsive design, and real-time dashboard updates strengthened my understanding of full-stack web development.

ClientSync proves that even without a heavy backend, powerful applications can be built using the right combination of tools and architecture. With further enhancements like authentication, cloud storage, or PDF generation, this CRM system has the potential to evolve into a fully scalable professional product.

PROJECT DEMO LINK

https://drive.google.com/drive/folders/1Vhl3_igd_ZbRtvqZcDSEph9l0OFCtxis?usp=sharing

THANK YOU