

# Automated Invoice Generator

Presented by

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# Project Overview

The [Automated Invoice Generator](#) is a full-stack web application designed to revolutionise invoicing for freelancers and small businesses. My core objective was to streamline the traditionally cumbersome process of creating, managing, and distributing professional invoices.

This solution addresses the repetitive and often error-prone task of manual billing. By automating the workflow from creation to payment, it ensures [accuracy, enhances professionalism, and frees up valuable time](#) for users to focus on their core business activities.

# My Robust Tech Stack

I selected a modern and efficient technology stack to ensure a seamless, scalable, and user-friendly experience for the Automated Invoice Generator.

Category	Technology
Frontend	Next.js, React, TypeScript, Tailwind CSS
Backend	Node.js, Express.js
Database	MongoDB (with Mongoose)
Services	Puppeteer (for PDF Generation), Nodemailer (for Email)

# Key Features at a Glance

The application is packed with features designed to simplify your invoicing process:

1

## Dynamic Invoice Creation

Intuitive forms for quick and detailed invoice generation.

2

## Real-time Calculations

Automatic computation of subtotals, taxes, and grand totals.

3

## Secure Database Storage

All invoices are securely saved and retrievable from MongoDB.

4

## PDF Generation & Direct Email

Instantly download professional PDFs or email them directly to clients.

5

## Responsive UI

A clean, adaptable interface with both light and dark mode support.

# UI Showcase: Adaptable Design

My application boasts a modern, clean user interface that seamlessly adjusts to your preferred theme, offering both light and dark modes for optimal viewing comfort and productivity.

Create New Invoice

Bill To

Client Name

Rohan Sharma

Email

rohan.sharma@techsolutions.com

Company

Tech Solutions Pvt.

Address

789 Tech Park  
Electronic City, Bangalore 560100

Invoice Details

Invoice Number

NV-2025-01

Issue Date

19-08-2025

Due Date

18-09-2025

Payment Terms

Net 30 Days

Invoice Status

Sent

Items

DESCRIPTION	QTY	RATE	AMOUNT	
Website Design Mockups	1	25000	₹25000.00	
Frontend Development (React)	40	1500	₹60000.00	
Backend API Development	35	1800	₹63000.00	
Deployment & Hosting Setup	1	15000	₹15000.00	

Add Item

Light Mode

Create New Invoice

Bill To

Client Name

Rohan Sharma

Email

rohan.sharma@techsolutions.com

Company

Tech Solutions Pvt.

Address

789 Tech Park  
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Deployment & Hosting Setup	1	15000	₹15000.00	

Add Item

Dark Mode

# Seamless Data Management

Invoices are securely stored within a MongoDB database, ensuring all your billing records are easily accessible and managed. Upon saving, a confirmation alerts the user, and the data is instantly reflected in the database.

Invoice Preview

GUVI HCL

Bill To:  
Rohan Sharma  
Tech Solutions Pvt.  
789 Tech Park  
Electronic City, Bangalore 560100

INVOICE

Invoice No: NV-2025-01  
Issue Date: 8/19/2025  
Due Date: 9/18/2025

DESCRIPTION	QTY	UNIT PRICE	TOTAL
Website Design Mockups	1	₹25,000.00	₹25,000.00
Frontend Development (React)	40	₹1,500.00	₹60,000.00
Backend API Development	35	₹1,800.00	₹63,000.00
Deployment & Hosting Setup	1	₹15,000.00	₹15,000.00
Subtotal:			₹1,63,000.00
Tax (10%):			₹16,300.00
Grand Total:			₹1,79,300.00

Invoice preview

invoices

localhost:27017 > invoice-app > invoices

Documents 5 Aggregations Schema Indexes 2 Validation

Type a query: { field: 'value' } or [Generate query](#)

ADD DATA

EXPORT DATA

UPDATE

DELETE

25 1 - 6 of 6

taxAmount : 600  
total : 6600  
createdAt : 2025-08-19T13:39:17.871+00:00  
updatedAt : 2025-08-19T13:39:17.871+00:00  
\_\_v : 0

\_id: ObjectId('68a482cde2fecfab5249d0dc')

invoiceNumber : "NV-2025-01"

clientName : "Rohan Sharma"

clientEmail : "rohan.sharma@techsolutions.com"

clientCompany : "Tech Solutions Pvt."

clientAddress : "789 Tech Park  
Electronic City, Bangalore 560100"

issueDate : 2025-08-19T00:00:00.000+00:00

dueDate : 2025-09-18T00:00:00.000+00:00

paymentTerms : "30"

status : "Sent"

items : Array (4)

notes : "Thank you for your partnership. We look forward to our continued colla..."

terms : "Payment due upon receipt. Late fees may apply."

taxRate : 10

subtotal : 163000

taxAmount : 16300

total : 179300

createdAt : 2025-08-19T13:57:33.257+00:00

updatedAt : 2025-08-19T13:57:33.257+00:00

\_\_v : 0

MongoDB Compass view of saved invoices

# Button Functionality

Each button on the interface is engineered to perform a specific action, seamlessly integrated with my backend services.

+ Add Item

Notes

Thank you for your business!

Terms

Payment due upon receipt. Late fees may apply.

Subtotal:

₹85000.00

Tax Rate (%):

10

Tax Amount:

₹8500.00

Total:


₹93500.00

Save Draft

Preview Invoice


Download PDF

Email Invoice



Save Draft

Securely transmits all entered form data to the backend, storing it efficiently in the MongoDB database for future retrieval.




Preview Invoice

Activates a modal overlay, providing an immediate, live visual representation of the invoice's final design before generation.



Download PDF

Initiates a backend process to render a professional, styled PDF, which is then directly downloaded to the user's local computer.



Email Invoice

Generates the invoice PDF on the server and dispatches it as a direct attachment to the specified client's email address.

# Professional PDF Generation

My application generates high-quality, print-ready PDF invoices, maintaining a professional and consistent template. This ensures your clients receive polished documents that reflect positively on your business.

Example of a downloaded PDF invoice

**GUVI HCL**

**INVOICE**

**Bill To:**  
Rohan Sharma  
Tech Solutions Pvt.  
789 Tech Park  
Electronic City, Bangalore 560100

**Invoice No:** NV-2025-01  
**Issue Date:** 19/8/2025  
**Due Date:** 18/9/2025

Description	Qty	Unit Price	Total
Website Design Mockups	1	₹25,000.00	₹25,000.00
Frontend Development (React)	40	₹1,500.00	₹60,000.00
Backend API Development	35	₹1,800.00	₹63,000.00
Deployment & Hosting Setup	1	₹15,000.00	₹15,000.00

Subtotal: ₹1,63,000.00  
Tax (10%): ₹16,300.00

**Grand Total: ₹1,79,300.00**

Thank you for your business!



# Effortless Email Delivery

Beyond generation, the application facilitates direct emailing of invoices. Once created, the PDF is automatically attached and sent to your client's email address, accompanied by an instant success notification.

192.168.137.1:3000 says  
Email sent successfully!

OK

Create New Invoice

Bill To

Client Name

Rohan Sharma

Email

swetankan23.sinha@gmail.com

Company

Tech Solutions Pvt.

Address

789 Tech Park  
Electronic City, Bangalore 560100

Invoice Number

NV-2025-01

Issue Date

19-08-2025

Due Date

18-09-2025

Payment Terms

Net 30 Days

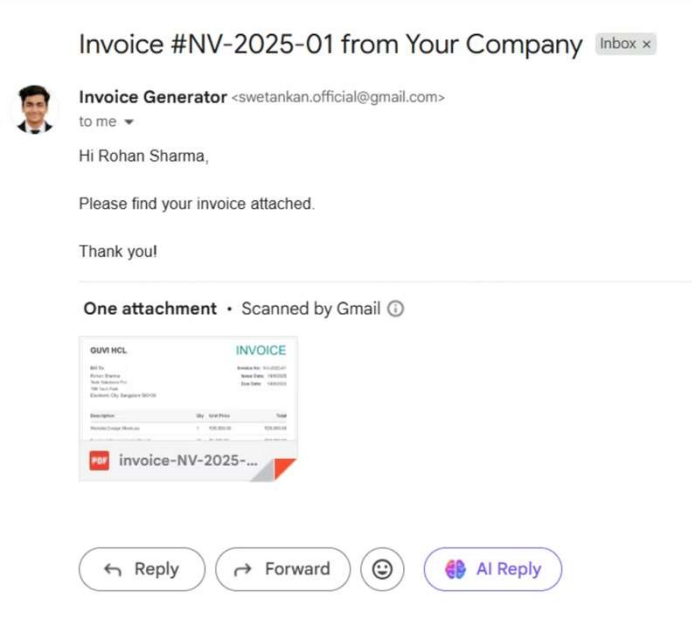
Invoice Status

Sent

Items

DESCRIPTION	QTY	RATE	AMOUNT
Website Design Mockups	1	25000	₹25000.00
Frontend Development (React)	40	1500	₹60000.00
Backend API Development	35	0	₹0.00
Item description	1	0	₹0.00

"Email sent successfully!" alert



Invoice as seen in client's inbox

# Thank You!

The Automated Invoice Generator provides a complete, end-to-end solution for a common business challenge, built on a modern and efficient full-stack architecture. I believe this project successfully demonstrates a valuable tool for freelancers and small businesses alike.

## Explore the Code:

[github.com/Swetankan/Automated-Invoice-Generator](https://github.com/Swetankan/Automated-Invoice-Generator)