INVOICING ROI SIMULATOR

Problem statement :

Create a lightweight ROI calculator that helps users visualize cost savings and payback when switching from manual to automated invoicing. The calculator should take basic business metrics as input and produce clear, favorable results that demonstrate automation’s advantage.

Purpose

This project is a small web app that helps users see how much money they can save by moving from manual to automated invoicing.  
It calculates **monthly savings**, **ROI**, and **payback period** using simple formulas.

## Approach & Architecture

The app has two main parts:

**Frontend (UI):**  
A single page form where the user enters details like invoice volume, wage, and error rate.  
Results appear instantly.

**Backend (API):**

A Node.js + Express server that:

Calculates ROI and savings

Saves and loads scenarios

Generates a simple PDF/HTML report

Technologies used :

| **Layer** | **Technology** | **Purpose** |
| --- | --- | --- |
| Frontend | HTML, CSS, JavaScript | User interface |
| Backend | Node.js + Express | REST API and logic |
| Database | JSON file (local) | Store scenarios |
| PDF Tool | jsPDF or html-pdf | Generate reports |

## Key Features

ROI & savings calculator

Save / load scenarios

Email-gated report download

Always shows a **positive ROI** (favorable bias)

. Instant UI Feedback :

  While user edits inputs, show real-time recalculated results on the frontend (without always needing to call backend, or call backend on change).

Validation & Safety:

 Ensure inputs are valid (non-negative, numbers, reasonable ranges).

 Prevent malicious input (sanitize).

Simple & Self-Documented API :

  All responses in JSON, consistent structure, error handling.

Next Steps:

Build backend endpoints .

Add simple frontend form and connect to API.

Test calculations and generate report.