

Project Overview: Invoice Generator Web App

Project Summary

This project is to develop a web-based Invoice Generator application that can be accessed from anywhere and managed through a secure admin dashboard. The app will allow users (admins) to create and send professional invoices, manage invoice history, track income, and utilize templates for PDF generation and client email automation. The system will be hosted on GitHub, use Firebase for the backend (database & authentication), and be built with technologies like HTML, CSS, JavaScript, and Python (Flask or FastAPI).

1. Admin Authentication System

- Only admins can log in.
- Firebase Authentication for secure access (email/password).
- Ability to add or remove admins.
- Logout functionality.
- Password reset and email verification features.

2. Admin Dashboard

Dashboard Features:

- Total number of invoices sent.
- Total income received.
- Total outstanding balances.
- Total amount deposited.
- Invoice filtering (Paid, Unpaid, Partial).
- View invoices (sortable, searchable table).
- Re-download or resend invoices via email.
- Monthly income chart, Pie chart of paid vs unpaid invoices, Invoices by category/type.

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3. Invoice Generator

Invoice Details to Include:

- Bill To, Client Name, Company Name (optional), Address Line 1, City, Country, Phone Number, Email
- Invoice Number, Invoice Date, Due Date
- Table: Item, Description, Rate, Quantity (QTY), Amount
- Summary: Subtotal, Discount, VAT, Required Deposit Amount, Final Total
- Invoice Type Dropdown: Quotation, Invoice with Deposit, Final Invoice, Receipt, Balance Due Receipt, Contract Invoice.

4. PDF Generation

- Each invoice is converted to PDF using a pre-designed Word-style template.
- Custom template design for headers, logos, tables, and totals.
- Fields populated dynamically based on form inputs.
- Download PDF option.
- Save and view later from the dashboard.

5. Email Functionality

- Options: Download only, Email only, Do both.

Email Structure:

Subject Line Template: 'Your Invoice from iGraphix Marketing & Co. - [Invoice #0001]'

Body Template:

Dear [Client Name],

Please find attached your invoice #[Invoice Number] for the services rendered.

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You can download your invoice using the button below. Thank you for your business.

Best regards,

iGraphix Marketing & Co.

6. Invoice Management Features

- Mark invoice status: Sent, Paid, Partial, Overdue.
- Edit or delete invoices.
- Add notes for internal tracking.
- Filter by date, status, type.
- Export reports in CSV/Excel format.

7. Admin Email Template Manager

- Store default subject lines and body templates.
- Allow inline editing before sending.
- Reuse templates to save time.

Tech Stack

Frontend: HTML, CSS, JavaScript (or React.js)

Backend: Python (Flask or FastAPI), Firebase Functions

Authentication: Firebase Auth

Database: Firebase Firestore

PDF Generation: jsPDF / pdfmake / wkhtmltopdf

Email: Firebase Functions + SendGrid / SMTP

Hosting: GitHub Pages (Frontend), Firebase Hosting (Backend)

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Future Enhancements

- Client-side portal (optional future phase)
- Payment integration (Stripe, PayPal)
- Reminder emails for overdue invoices
- Mobile App (React Native or Flutter)

Developer Notes

- Follow modular structure for easy expansion
- All email templates and PDF formats must be easily editable
- Use Firebase security rules to ensure admin-only access
- Optimize for mobile and desktop