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Invoice Reminder and Follow-up Automation with Zapier Integration

Description:

Your task is to develop a system that allows users to log in using Google OAuth, view the details of due invoices in a SaaS platform, and automate the process of sending past-due invoice reminders and follow-up sequences. The system should integrate with Zapier to trigger automation actions. This assignment assesses your ability to integrate third-party services, implement OAuth authentication, and design a microservices architecture

Requirements:

Backend Microservice (Node.js):

Implement a Node.js backend microservice that provides the following API endpoints:

- User authentication: Enable users to log in using Google OAuth.
- Invoice details: Allow users to view details of their due invoices, including the invoice amount, due date, and recipient information.
- Integration with Zapier: Create endpoints to trigger automation actions in response to pastdue invoices.
- Integrate with Zapier to automate past-due invoice reminders and follow-up sequences. Set up workflows in Zapier to send email reminders and follow-up notifications based on past-due invoice data.

Frontend (React):

Develop a React frontend that includes the following features:

- Google OAuth integration: Implement a user interface for users to log in using their Google accounts.
- Invoice details: Display a list of due invoices with relevant details.
- Trigger automation: Provide a button or option for users to manually trigger the automation process using Zapier.

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 - Invoice Display
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Project Overview

The Invoice Reminder System allows users to log in using Google OAuth, view due invoices, and automate sending past-due invoice reminders and follow-up sequences through Zapier.

Technologies Used

Backend: Node.js, Express, Passport.js, MongoDB

Frontend: React, Axios

Authentication: Google OAuth 2.0

Automation: Zapier

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Backend Setup Instructions

- 1. Prerequisites:
 - Node.js
 - MongoDB

Installation:

To implement the required backend microservice using Node.js, we need to set up a project that handles user authentication via Google OAuth, manages invoice details, and integrates with Zapier for automation. Below is a step-by-step guide to achieve this:

1. Project Setup Initialize the Project: Code:

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mkdir invoice-microservice
cd invoice-microservice
npm init -y
```

Install Required Packages:

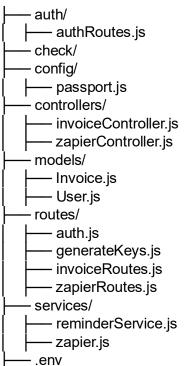
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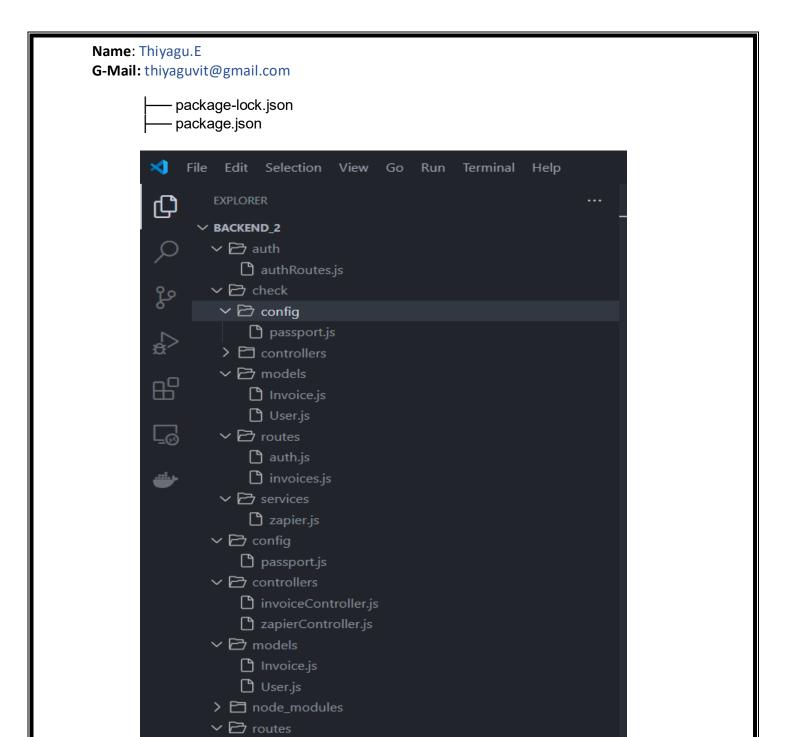
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Auth => authRoutes.js

config =>passport.js

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         ∨ 🗁 auth
                                                   const passport = require('passport');
const { Strategy: GoogleStrategy } = require('passport-google-oauth20');
                                                    const User = require('../models/User'); // Assume you have a User model
                                                   passport.use(new GoogleStrategy({
    clientID: process.env.GOOGLE_CLIENT_ID,
    clientSecret: process.env.GOOGLE_CLIENT_SECRET,
    callbackURL: '/auth/google/callback',
               passport.js
           > 🛅 controllers

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if (!user) {
    user = new User({
        googleId: profile.id,
_
                                                                  name: profile.displayName,
picture: profile.photos[0].value

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                                                          } catch (err) {
  return done(err, false);
               generateKeys.js
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                                                       done(null, user);
} catch (err) {
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Controllers => invoiceController.js:

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                             controllers > 🖺 invoiceController.js > ...
                                    const Invoice = require('../models/Invoice');

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                                     const getInvoices = async (req, res) => {
           🖺 User.js
const getDueInvoices = async (req, res) => {
           invoices.js

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                                    module.exports = { getInvoices, getDueInvoices };
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                               exports.sendReminder = async (req, res) => {
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                                                                                                                                                                                console.log('Reminders sent successfully'); // Log success

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                                                                                                                                                                                res.status(200).json({ message: 'Reminders sent' });
                                                                                                                                                                        } catch (error) {
  console.error('Error sending reminders:', error); // Log error
                                              zapierController.js

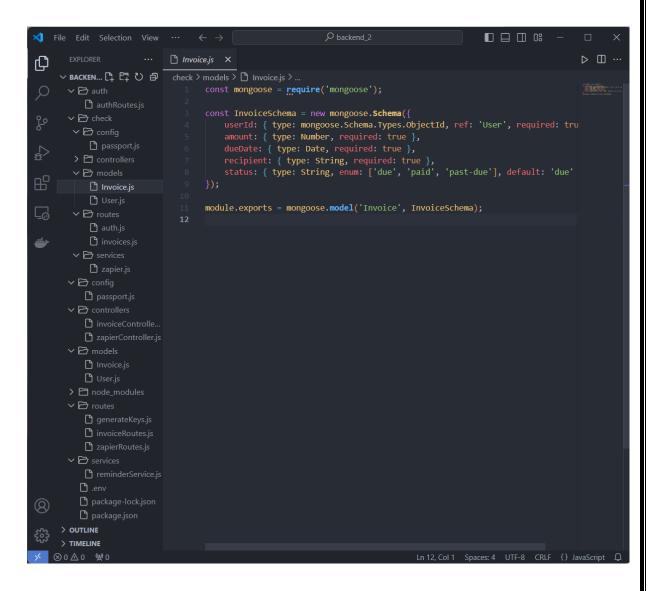
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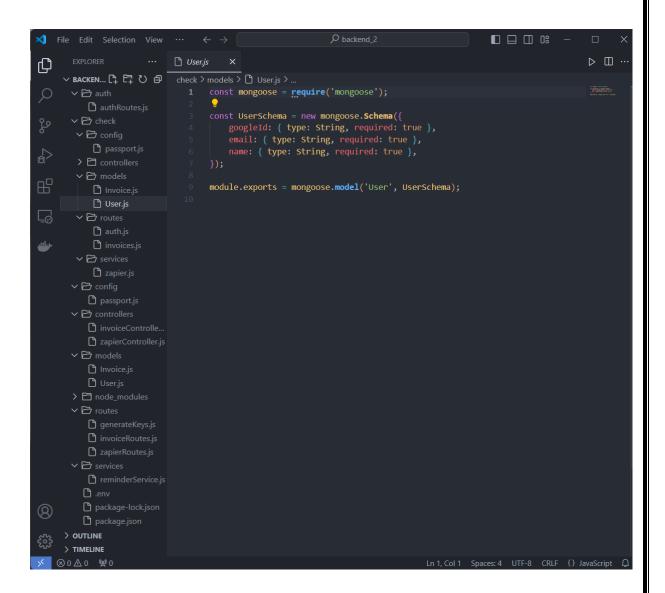
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Models => Invoice.js:



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User.js:



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Routes => auth.js

```
D backend_2
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     check > routes > 🖺 auth.js > ...
                                     ♣nst { OAuth2Client } = require('google-auth-library');
                                    const axios = require('axios'); // Import Axios
const User = require('../models/User'); // Ensure you have a User model
      const router = express.Router();
        > 🗀 controllers
                                    const client = new OAuth2Client(process.env.GOOGLE_CLIENT_ID);

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           🖺 Invoice.js
                                    router.post('/google', async (req, res) => {
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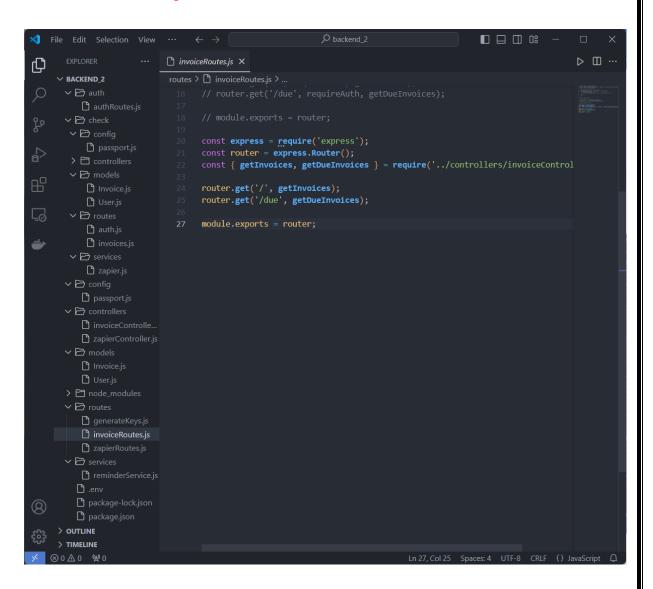
                                             const payload = ticket.getPayload();

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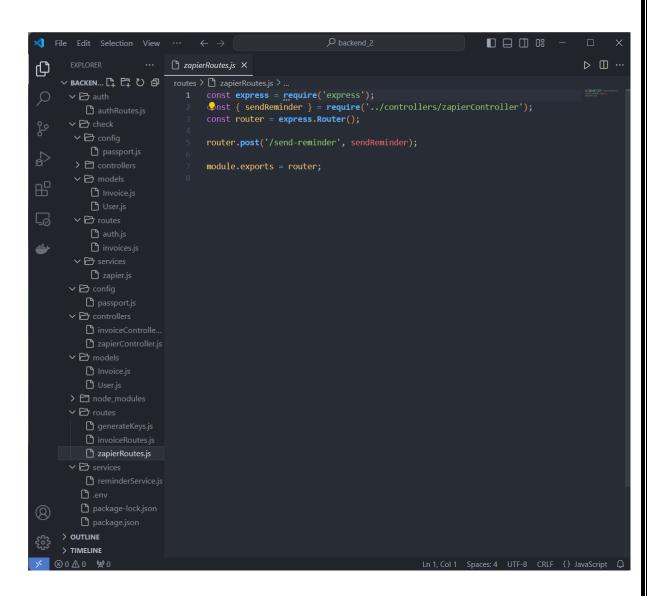
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invoiceRoutes.js



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zapierRoutes.js:



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Services reminderService.js:

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                                 services > 🖰 reminderService.js > ...
                                        const cron = require('node-cron');
const axios = require('axios');
       authRoutes.js

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    models

                                                invoiceId: invoice._id,
amount: invoice.amount,

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                                             console.log('Daily reminders sent');

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                                             console.error('Error sending reminders:', error);
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zapier.js

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                                    const axios = require('axios');
      exports.triggerPastDueReminder = async (invoice) => {
                                            await axios.post(process.env.ZAPIER_WEBHOOK_URL, {
           User.js
                                            console.log('Zapier webhook triggered for invoice:', invoice._id);
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           invoices.js
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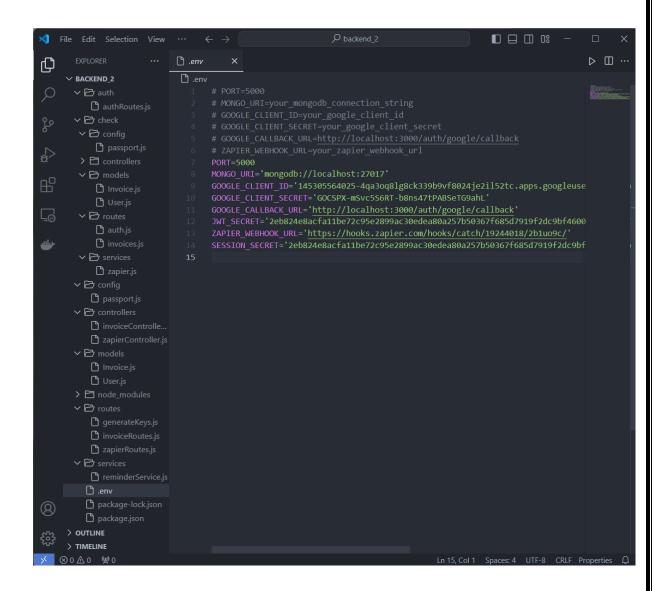
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.env:

Environment Variables:



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API Endpoints

1. User Authentication:

o Endpoint: /auth/google

Method: GET

 Description: Redirects the user to Google for authentication.

2. Invoice Details:

Endpoint: /api/invoices

Method: GET

 Description: Retrieves the list of due invoices for the authenticated user.

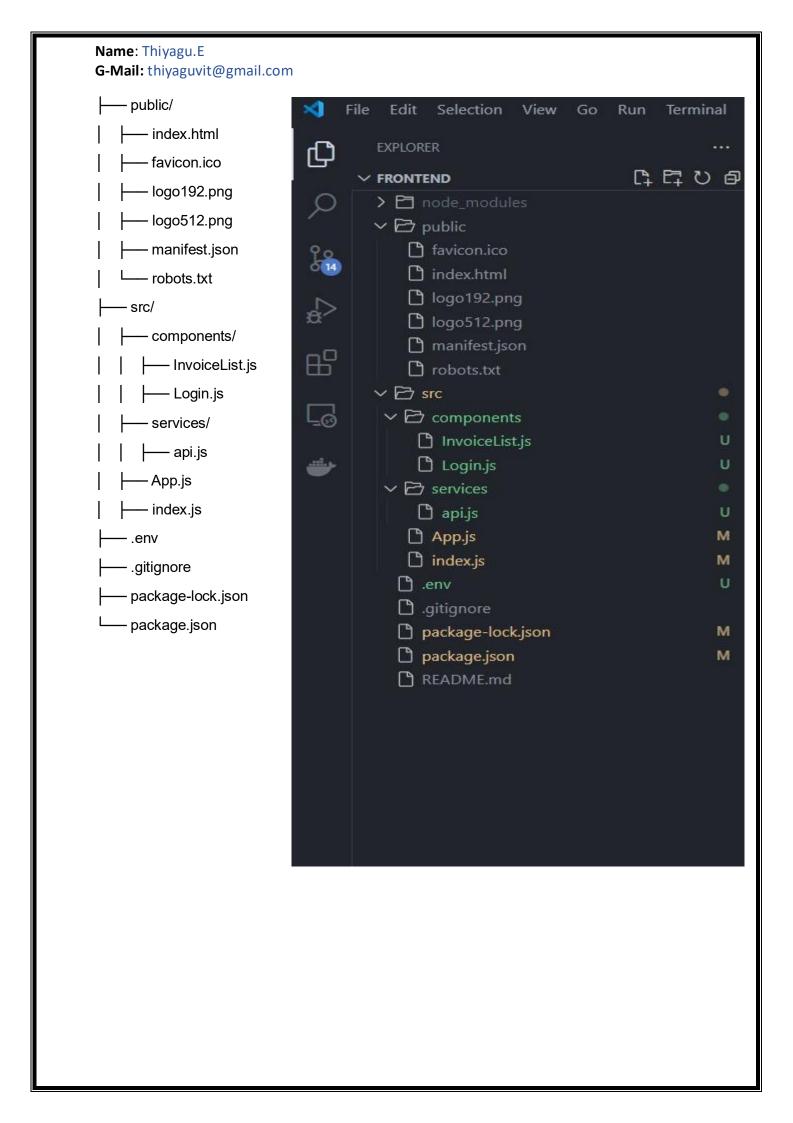
3. Trigger Zapier Automation:

Endpoint: /api/trigger-automation

Method: POST

 Description: Triggers the Zapier workflow for pastdue invoices.

Frontend Project Structure



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Frontend/public/index.html:

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Src/components/InvoiceList.js

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Login.js

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services/api.js:

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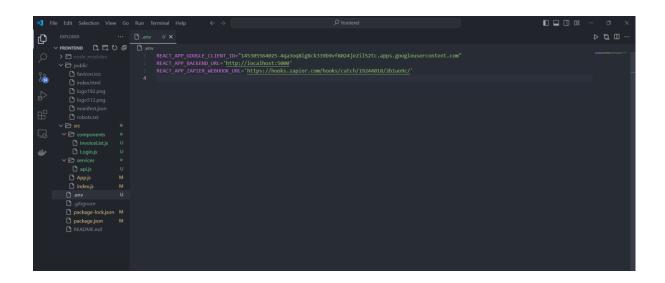
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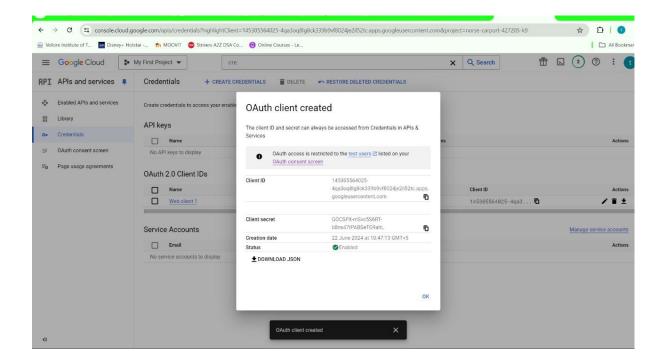
App.js

index.js:

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Env:





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Step-by-Step Guide to Set Up Zapier Integration

Step 1: Set Up Your Zapier Account

1. Sign Up/Login to Zapier:

- Go to <u>zapier.com</u> and sign up for a Zapier account if you haven't already.
- Log in to your Zapier account.

Step 2: Create a New Zap

1. Create a New Zap:

 Click on the 'Make a Zap!' button in your Zapier dashboard to start creating a new automation.

Step 3: Set Trigger Event (Trigger)

1. Choose Trigger App:

- Search and select "FreshBooks" as your trigger app.
- Select the trigger event based on when you want the zap to initiate. For past-due invoices, you might choose "New Invoice" or "Invoice Updated".
- Authenticate your FreshBooks account with Zapier.

2. Set Trigger Conditions (if applicable):

 Depending on your selection, set up filters to trigger the zap only for invoices that are past their due date. You can filter based on invoice status or due date fields provided by FreshBooks.

Step 4: Set Action Event (Action)

1. Choose Action App:

- Search and select "Gmail" as your action app (or your preferred email service provider).
- Select the action event, such as "Send Email".
- Authenticate your Gmail account with Zapier.

2. Customize Email Template:

 Set up the email template that will be sent as a reminder. You can use data from FreshBooks (like customer name, invoice number, amount due, etc.) using Zapier's placeholders.

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Example email template:

csharp

Subject: Reminder: Payment Due for Invoice {{invoice_number}}

Hi {{client_name}},

This is a friendly reminder that invoice {{invoice_number}} for {{amount_due}} is now past due. Please make the payment at your earliest convenience.

Thank you,

[Your Name]

[Your Company Name]

Step 5: Test Your Zap

1. Test Your Zap:

- Once you've set up your trigger and action, run a test to ensure that Zapier correctly integrates FreshBooks with Gmail and processes the data as expected.
- Zapier will use sample data from FreshBooks to simulate the trigger and send a test email through Gmail.

Step 6: Turn On Your Zap

1. Turn On Your Zap:

 After successful testing, turn on your zap to start automating past-due invoice reminders based on your specified conditions in FreshBooks.

Step 7: Monitor and Adjust

1. Monitor Zap Performance:

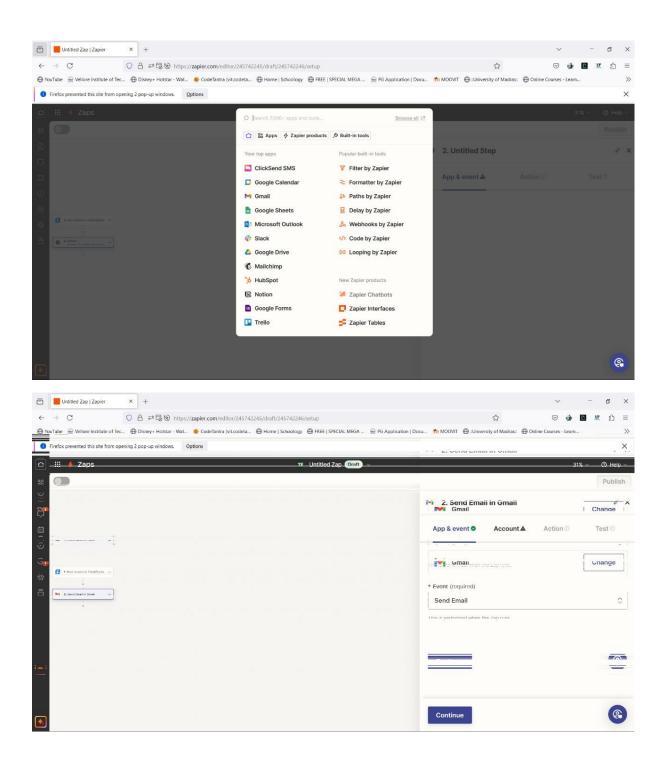
- Keep an eye on your Zapier dashboard to monitor how your zaps are performing.
- Adjust your zap settings or email template as needed based on feedback or changes in your workflow.

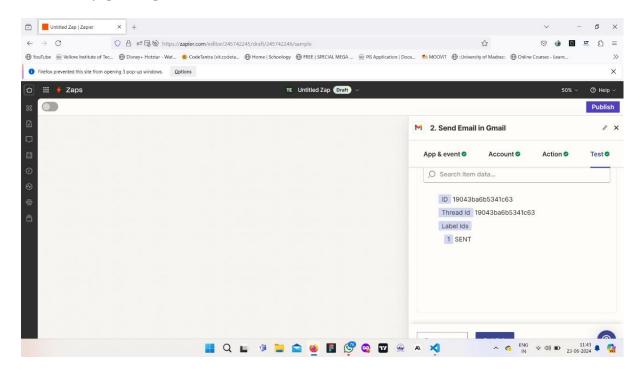
Additional Tips:

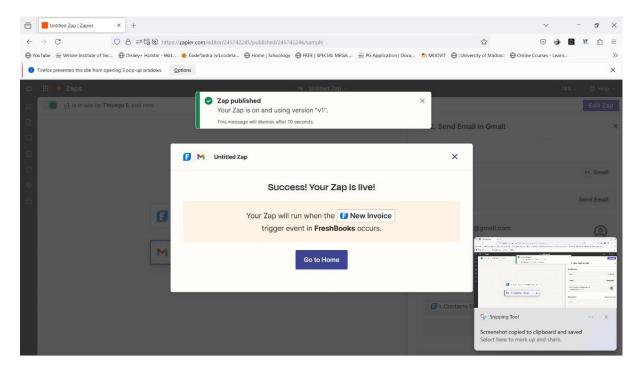
- Advanced Options: Explore Zapier's advanced features like delays or filters to send reminders at specific times or based on custom criteria.
- Multi-Step Zaps: Consider creating multi-step zaps to send escalating reminders or notifications for severely overdue invoices.

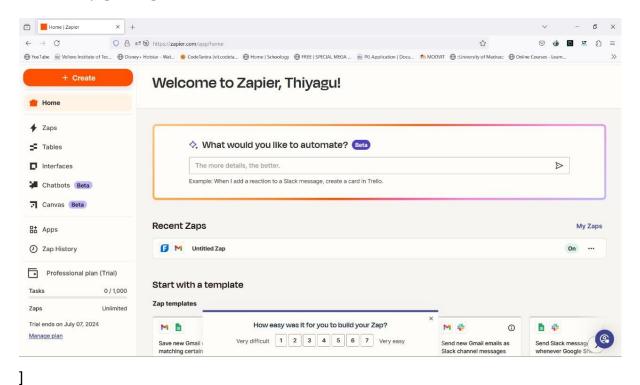
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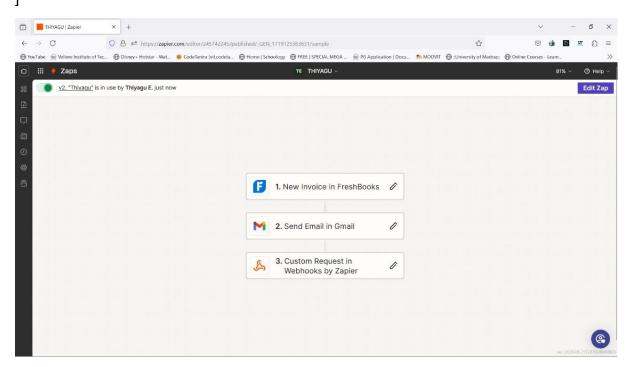
By following these steps, you can effectively automate past-due invoice reminders and follow-up sequences using Zapier, integrating FreshBooks for invoice data and Gmail for sending automated emails to clients. Adjust the settings and email content as necessary to fit your specific business needs and branding guidelines.

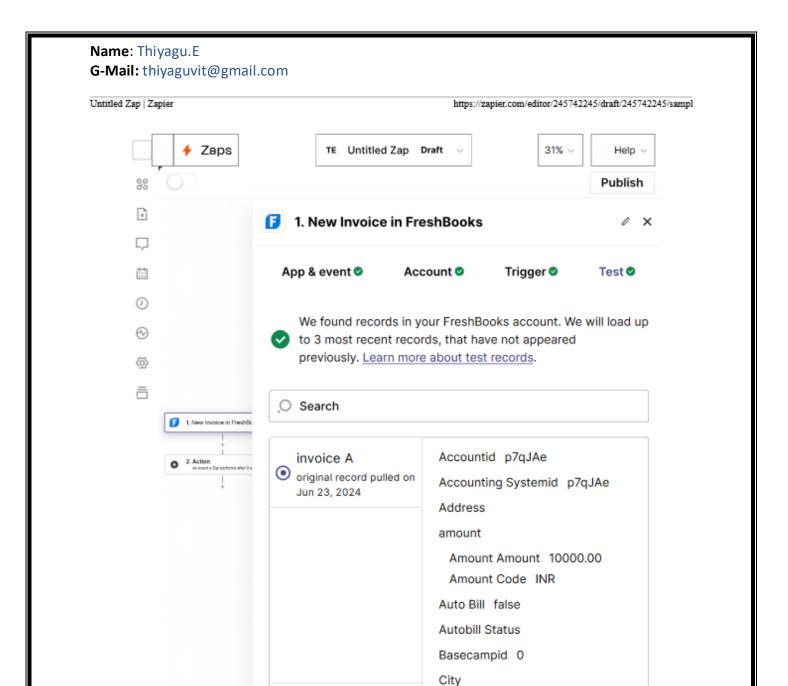












Code

Contacts

Find new records

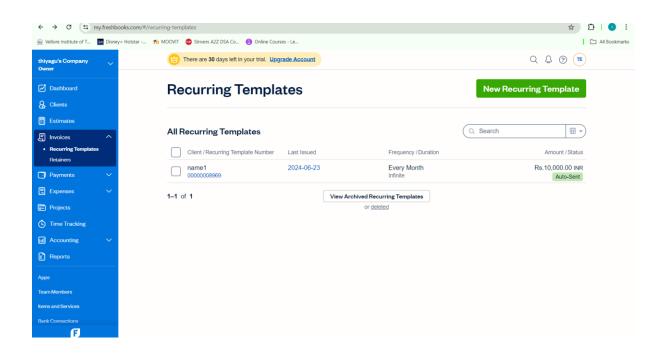
Continue with selected record

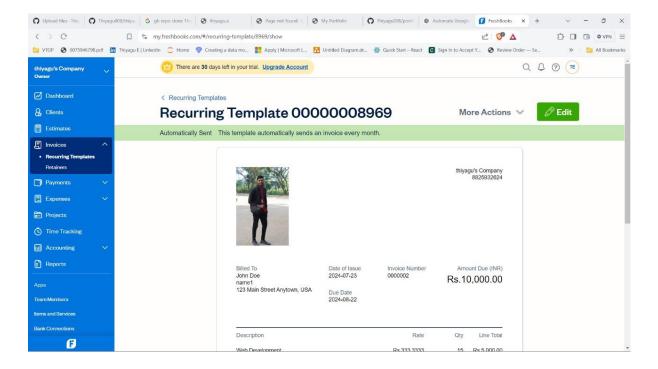
Name: Thiyagu.E **G-Mail:** thiyaguvit@gmail.com Zaps TE Untitled Zap Draft 31% ~ Help ~ 00 Publish Ŧ M 2. Send Email in Gmail × \Box App & event 🔮 Account 2 Action 🔮 Test ▲ 曲 0 O Field search Refresh ⊕1 То ⟨∞⟩ 1. Contacts Email: thiyagusunbeam@gmail.com × Enter text or insert data... × 2. Send Email in Gmail Enter text or insert data... Who will this email be sent to? Multiple email addresses can be... more Сс thiyaguvit@gmil.com × Enter text or insert data... Who should be cc'd on this email? Multiple email addresses can be... more Всс

Enter text or insert data... Who should be bcc'd on this email? Multiple email addresses can be... more From thiyaguvit@gmail.com Continue

G-Mail: thiyaguvit@gmail.com

Sample invoice template: freshbook.com:





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Project Output:



