BMC Generator

1.Abstract

This project involves the development of a web-based Business Model Canvas (BMC) Generator that leverages AI to assist users in creating structured business models. The application is built with a Flask backend integrated with Google's generative AI model and a SQLite database to store generated data. The frontend is a dynamic, interactive interface where users input business ideas and receive a detailed, categorized BMC as a response. Future enhancements include implementing an NLP model to process the generated data for more advanced BMC suggestions. The project combines AI, NLP, and full-stack web technologies to provide a user-friendly solution for business modeling.

2. Introduction

2.1 Motivation

Business model generation is a critical step for startups and entrepreneurs, but it is often time-consuming and requires strategic thinking. This project was conceived to assist users, from aspiring entrepreneurs to business managers, in easily generating structured and comprehensive Business Model Canvases (BMC) using AI-powered tools. The motivation lies in automating the brainstorming process to save time and provide high-quality outputs.

2.2 Problem Definition

Creating a detailed and accurate BMC involves considerable effort, especially when users have limited experience in business modeling. The challenge is to offer a streamlined, accessible solution that simplifies the process, while also providing valid and effective recommendations for business structures.

2.3 Project Objective

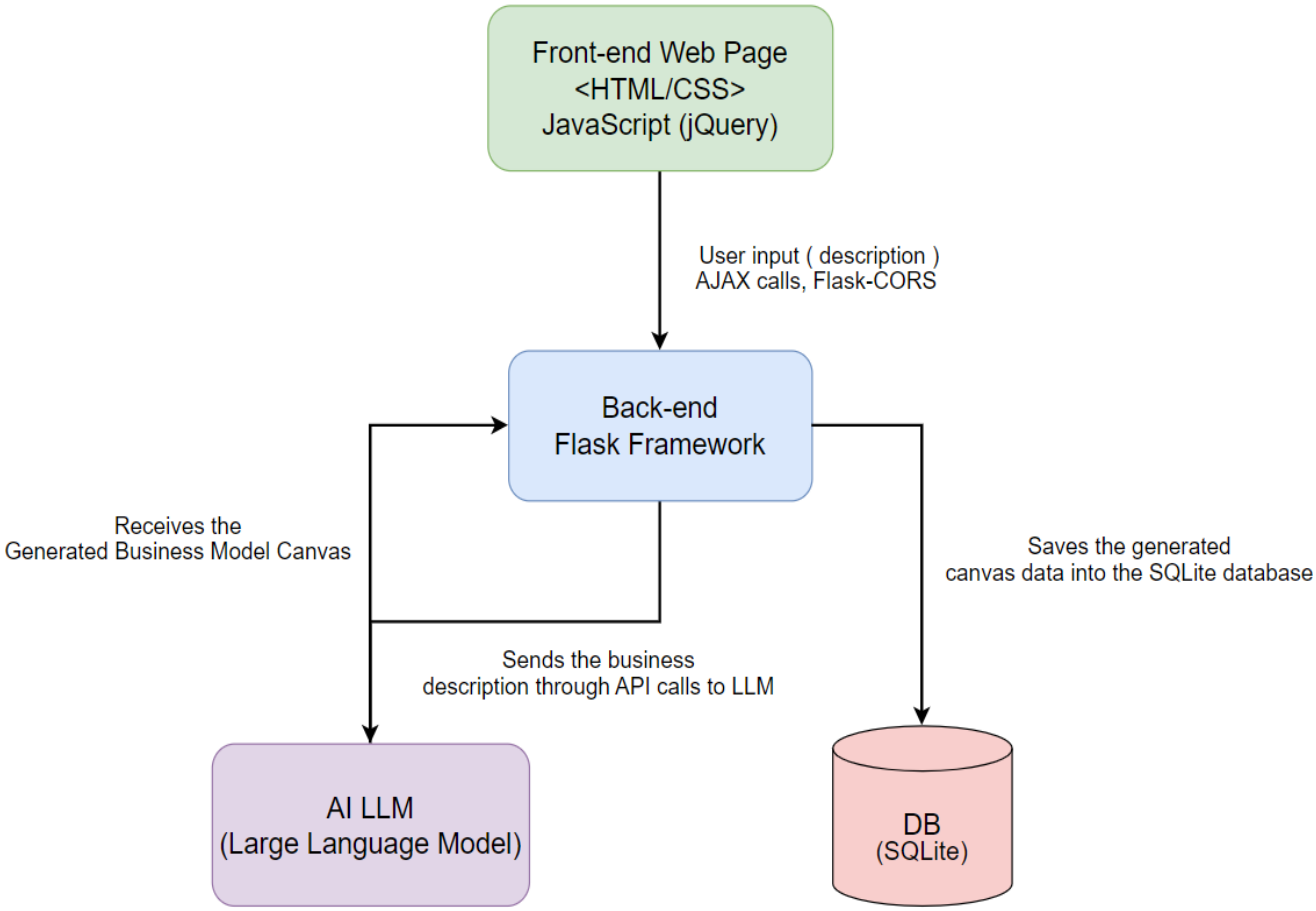
The main objective of the project is to develop a Business Model Canvas generator that uses AI to automatically generate detailed business models based on user input. In the future, an NLP model will be integrated to process existing generated data and generate enhanced business models. The goal is to provide users with a sophisticated yet easy-to-use tool for business planning.

2.4 Solution Suggestion

The solution proposed is a web-based application with a frontend where users can input their business ideas, which are then processed by an AI-powered backend. The application extracts key business components such as Key Partners, Key Activities, Value Propositions, and more. It will also save these generated business models in a database for future use, and the upcoming NLP model will allow further refinement and suggestions.

3. Project Development Methodology

The development methodology follows an iterative approach, beginning with a minimum viable product (MVP) for generating BMCs using generative AI and Flask as the backend. The database structure was defined to store and retrieve BMCs. The application architecture is designed to be modular, allowing for future enhancements such as NLP integration. Regular testing is carried out to ensure that the application functions smoothly across various stages of development.

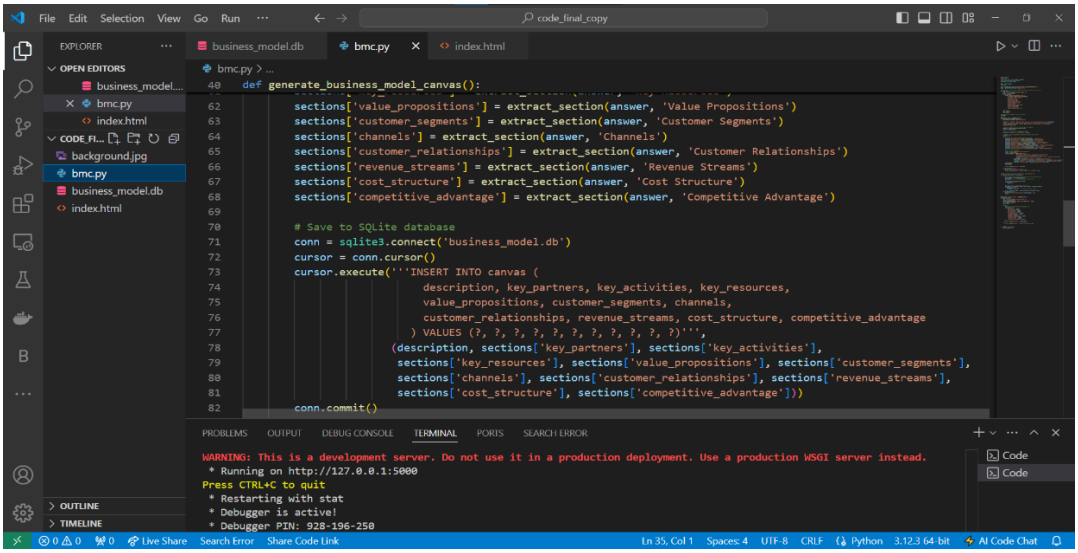


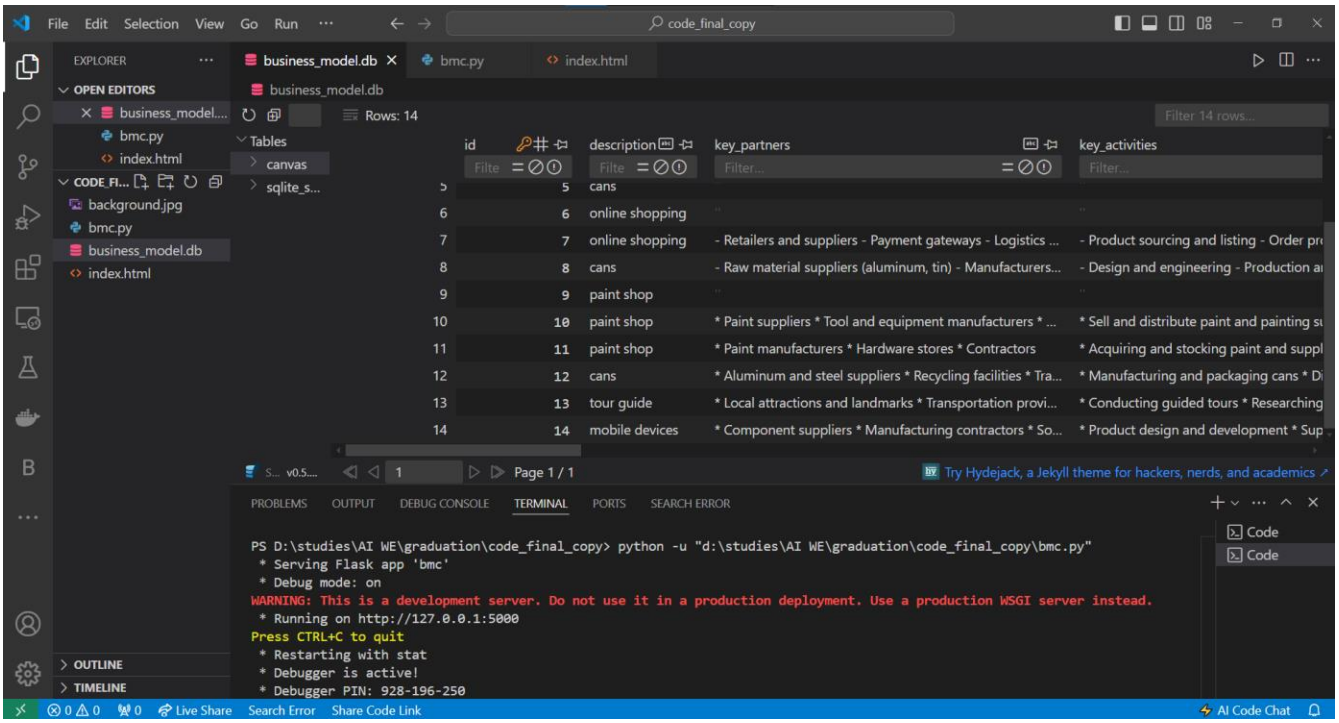
4. The Used Tools and Technologies in the Project

- **Flask**: Used as the web framework for the backend to handle requests, connect to the database, and manage AI integration.
- **Google Generative AI (Gemini-pro model)**: To generate business model suggestions based on user input.
- **SQLite**: Database used for persisting BMC data.
- **JavaScript (jQuery)**: For frontend interactions, AJAX calls, and dynamic rendering of the BMC output.
- **JSPDF**: For allowing users to download the generated BMC in PDF format.
- **HTML/CSS**: To structure and style the frontend for user interaction.
- **Flask-CORS**: To enable cross-origin requests between the frontend and backend.
- **Future NLP Integration**: An additional NLP model will be added to further enhance BMC generation and analyze existing data for improved recommendations.

5. Screenshots

5.1 implementation

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8 cans - Raw material suppliers (aluminum, tin) - Manufacturers... - Design and engineering - Production a
9 paint shop
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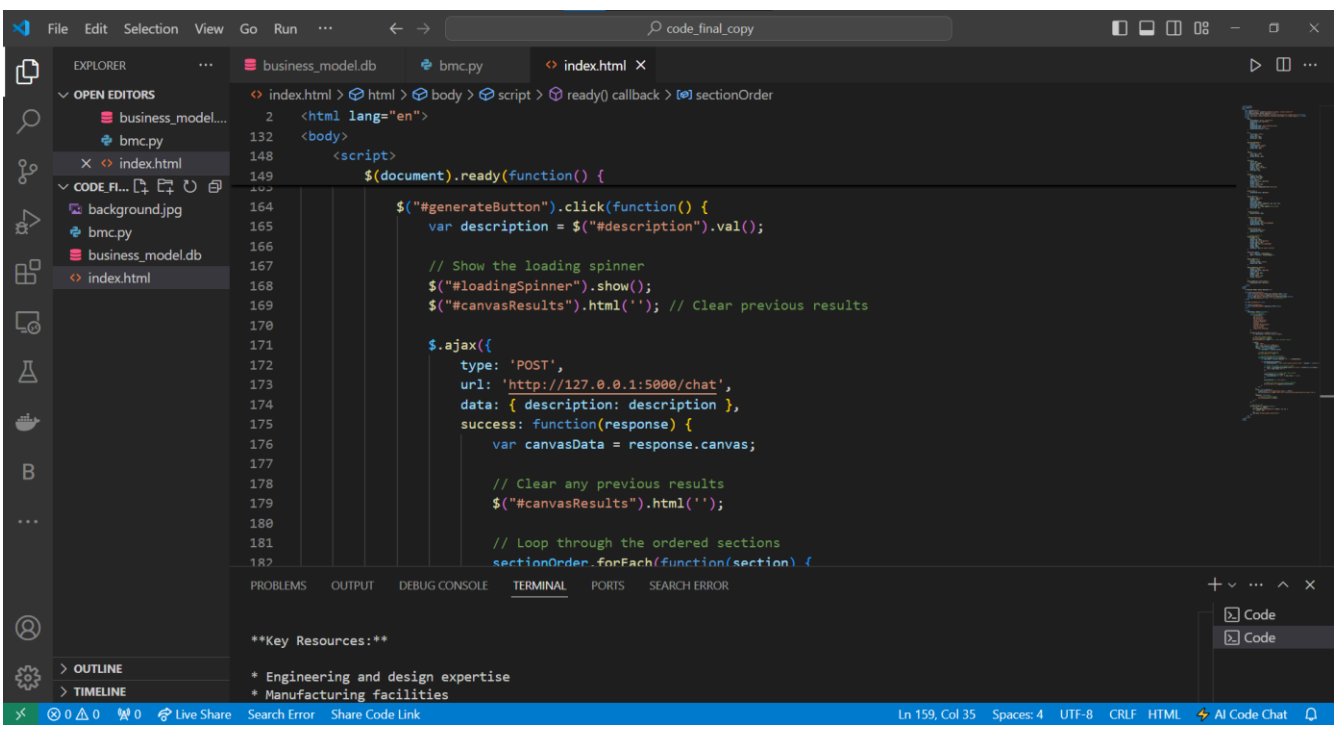
Page 1 / 1
Try Hydejack, a Jekyll theme for hackers, nerds, and academics
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR
PS D:\studies\AI WE\graduation\code_final_copy> python -u "d:\studies\AI WE\graduation\code_final_copy\bmc.py"
* Serving Flask app 'bmc'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 928-196-250
OUTLINE
TIMELINE
Live Share Search Error Share Code Link
AI Code Chat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business_model.db
bmc.py
index.html
index.html > html > body > script > ready() callback > sectionOrder
2 <html lang="en">
132 <body>
148 <script>
149 $(document).ready(function() {
164 $("#generateButton").click(function() {
165 var description = $("#description").val();
166
167 // Show the loading spinner
168 $("#loadingSpinner").show();
169 $("#canvasResults").html(''); // Clear previous results
170
171 $.ajax({
172 type: 'POST',
173 url: 'http://127.0.0.1:5000/chat',
174 data: { description: description },
175 success: function(response) {
176 var canvasData = response.canvas;
177
178 // Clear any previous results
179 $("#canvasResults").html('');
180
181 // Loop through the ordered sections
182 sectionOrder.forEach(function(section) {
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR
Key Resources:
* Engineering and design expertise
* Manufacturing facilities
OUTLINE
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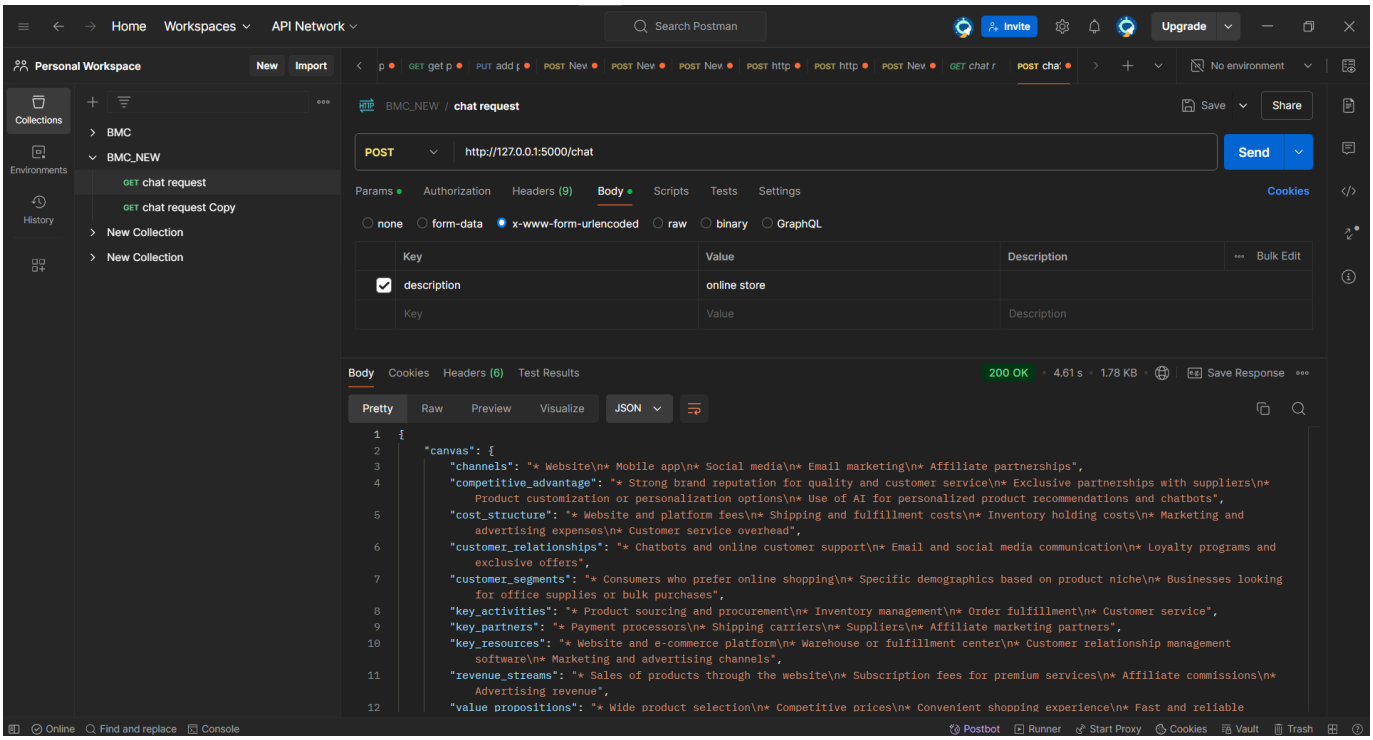
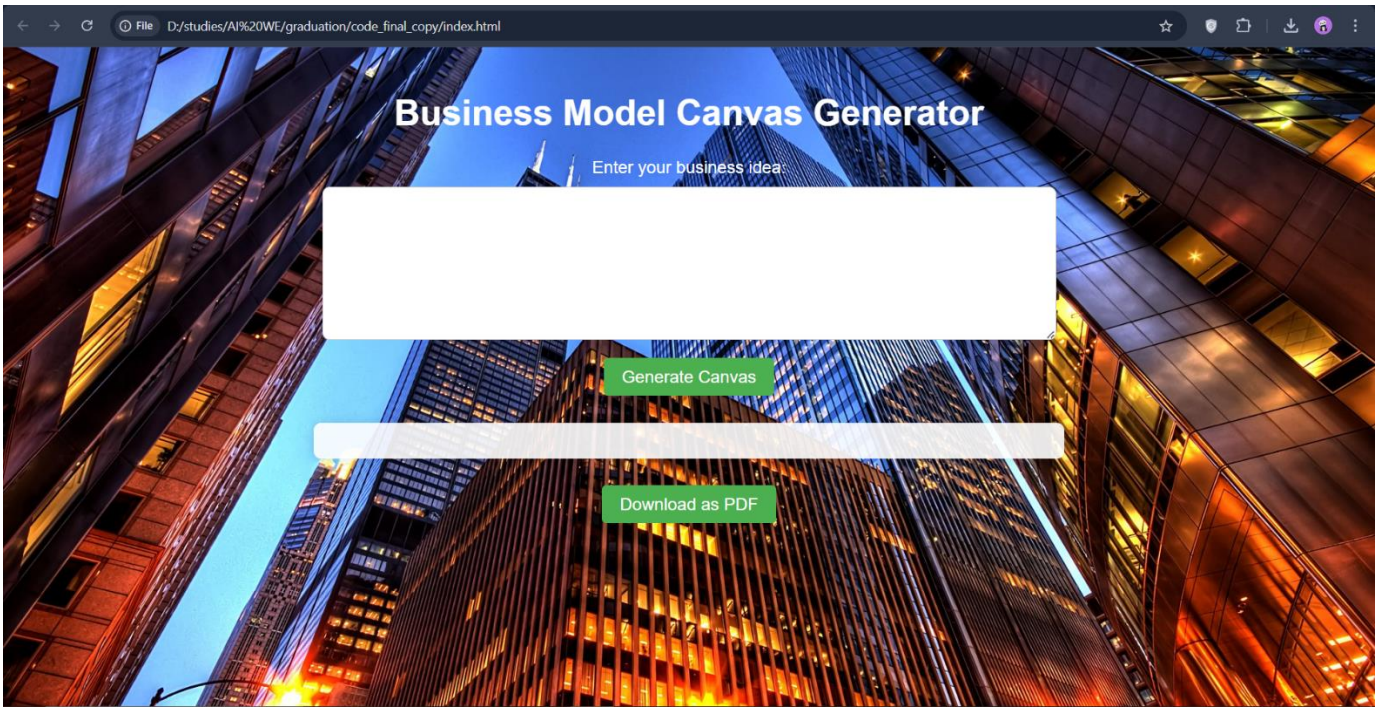
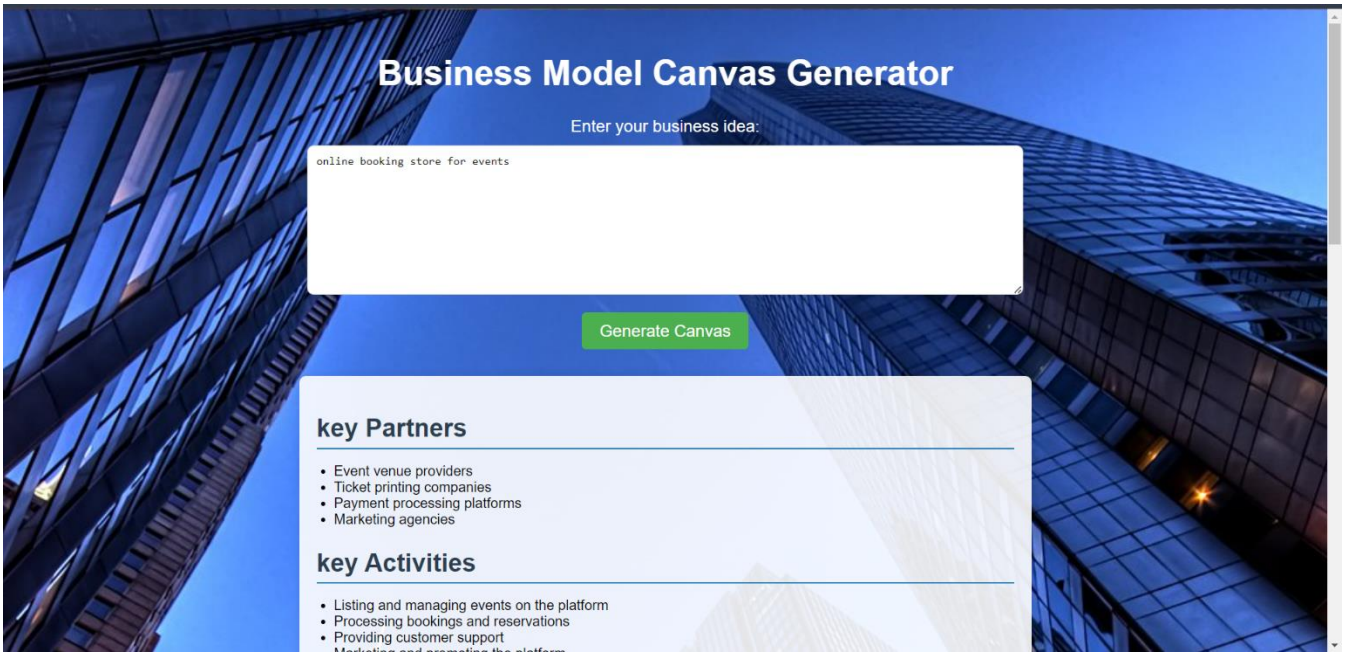
AI Code Chat

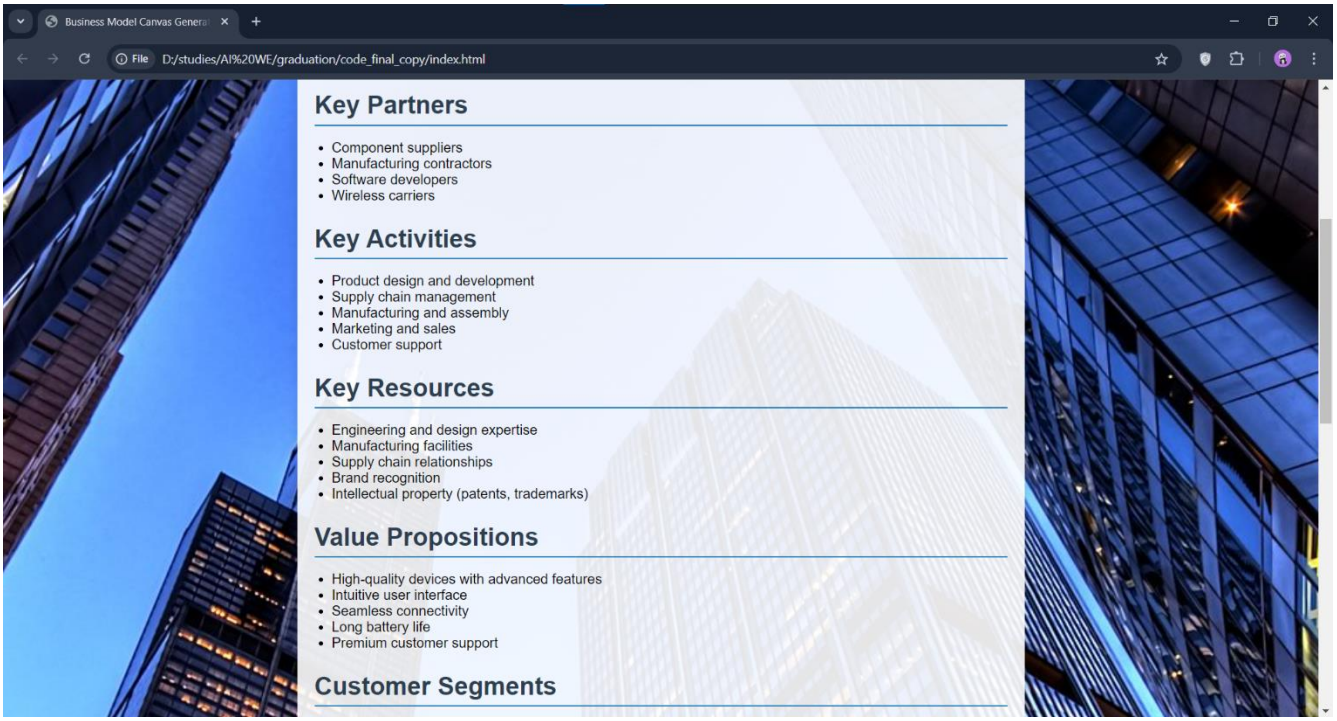
5.2 Testing



5.3 Web Page




Business Model Canvas Generator
Enter your business idea:
online booking store for events
Generate Canvas
key Partners
Event venue providers
Ticket printing companies
Payment processing platforms
Marketing agencies
key Activities
Listing and managing events on the platform
Processing bookings and reservations
Providing customer support


Business Model Canvas Generat
File
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Key Partners
Component suppliers
Manufacturing contractors
Software developers
Wireless carriers
Key Activities
Product design and development
Supply chain management
Manufacturing and assembly
Marketing and sales
Customer support
Key Resources
Engineering and design expertise
Manufacturing facilities
Supply chain relationships
Brand recognition
Intellectual property (patents, trademarks)
Value Propositions
High-quality devices with advanced features
Intuitive user interface
Seamless connectivity
Long battery life
Premium customer support
Customer Segments

6. References

1. **Flask Documentation. Flask (The Python Microframework).** https://flask.palletsprojects.com
2. **Google Generative AI. Google Cloud AI Services.** https://cloud.google.com/ai
3. **SQLite Documentation.** https://www.sqlite.org/docs.html
4. **JSPDF Library Documentation.** https://github.com/parallax/jsPDF
5. **jQuery Documentation.** https://jquery.com/
6. **Kaggle Notebook, Natural Language Processing (NLP) Projects.** https://www.kaggle.com/