Lesson 01 Demo 04

Creating a Food Ordering Application Using Generative AI Tools

Objective: To create a food ordering application using generative AI tools for enhanced functionality and user experience

Tools required: ChatGPT 4 and Uizard

Prerequisites: None

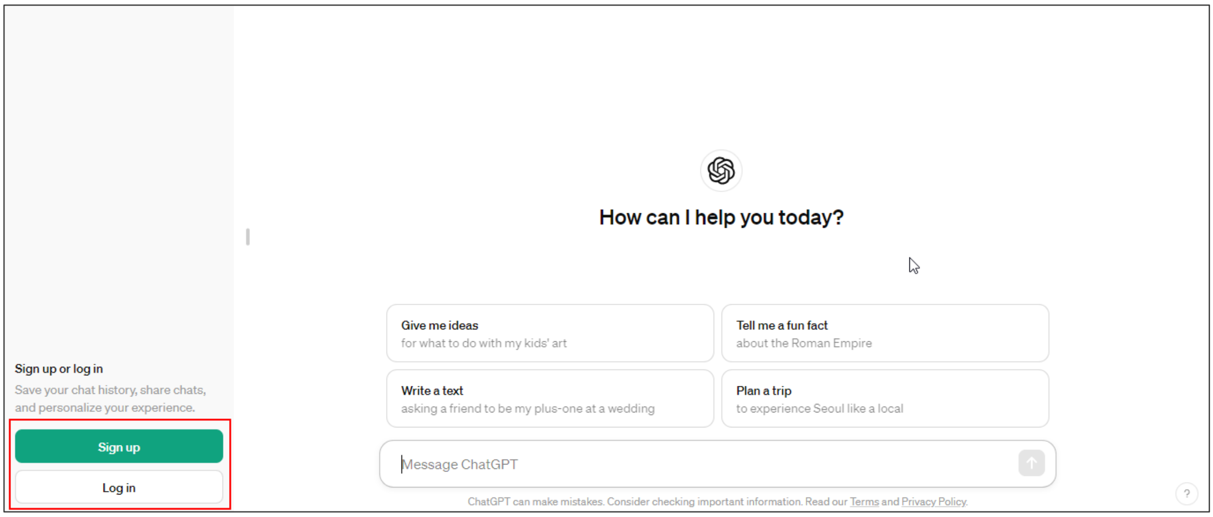
Steps to be followed:

1. Generate the architecture and UI Design using Full Stack Developer GPT and Uizard
2. Generate the application source code using Full Stack Developer GPT
3. Generate test cases and documentation via Full Stack Developer GPT

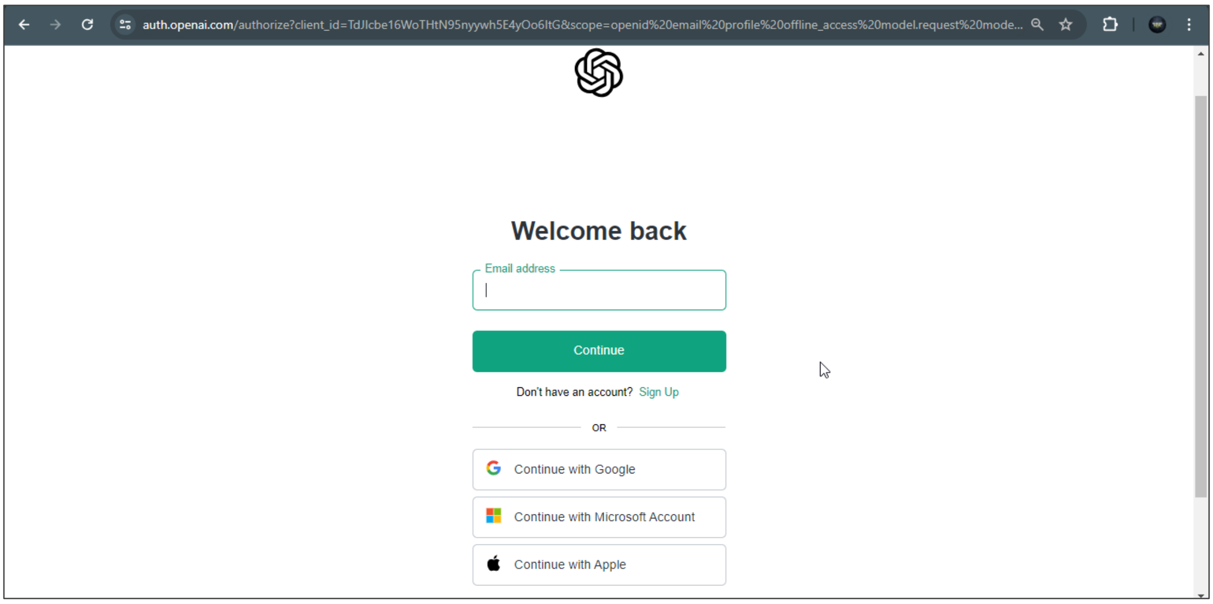
Note: Please be advised that the generative AI tools used in this demo may produce varied outputs even when presented with similar prompts.

Step 1: Generate the architecture and UI Design using Full Stack Developer GPT and Uizard

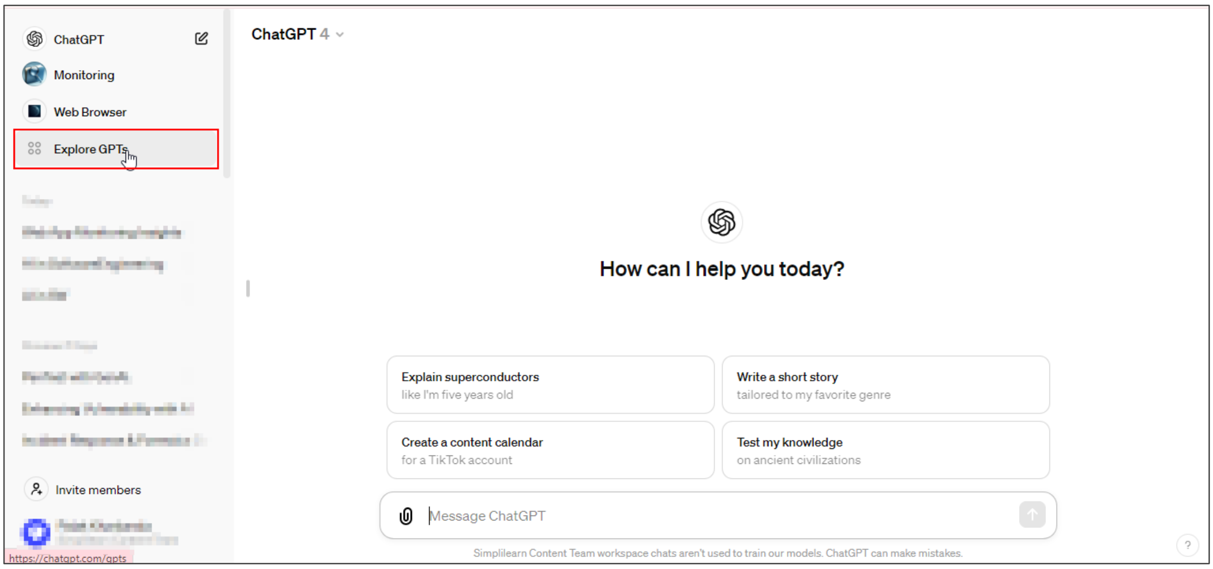
1.1 Go to **https://chat.openai.com** and log in to your account


How can I help you today?
Give me ideas
for what to do with my kids' art
Tell me a fun fact
about the Roman Empire
Write a text
asking a friend to be my plus-one at a wedding
Plan a trip
to experience Seoul like a local
Message ChatGPT
ChatGPT can make mistakes. Consider checking important information. Read our Terms and Privacy Policy.
Sign up or log in
Save your chat history, share chats, and personalize your experience.
Sign up
Log in

Note: Sign up if you do not have an account.

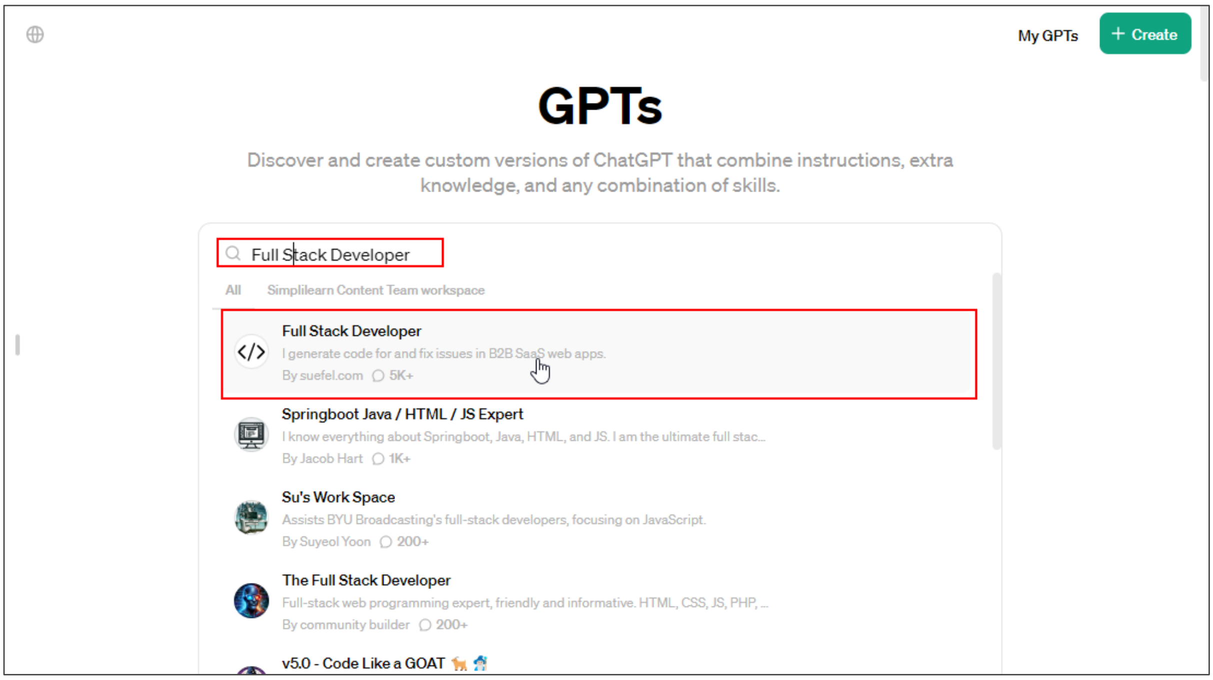

auth.openai.com/authorize?client_id=TdJIcbe16WoTHtN95nyywh5E4yOo6ltG&scope=openid%20email%20profile%20offline_access%20model.request%20mode...
Welcome back
Email address
Continue
Don't have an account? Sign Up
OR
Continue with Google
Continue with Microsoft Account
Continue with Apple

1.2 Click on **Explore GPTs,** as shown in the screenshot below:



Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.

1.3 Search for and click on **Full Stack Developer**, as shown in the screenshot below:



GPTs

Discover and create custom versions of ChatGPT that combine instructions, extra knowledge, and any combination of skills.

Full Stack Developer

All Simplilearn Content Team workspace

Full Stack Developer
I generate code for and fix issues in B2B SaaS web apps.
By suefel.com 5K+

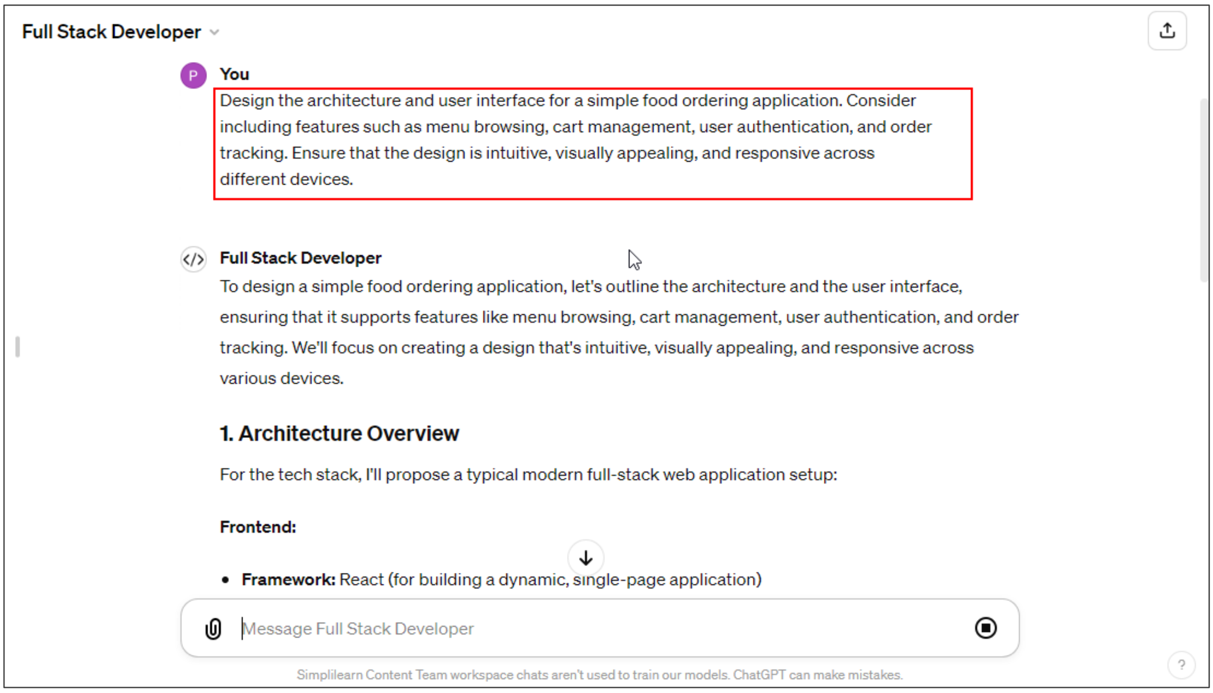
Springboot Java / HTML / JS Expert
I know everything about Springboot, Java, HTML, and JS. I am the ultimate full stac...
By Jacob Hart 1K+

Su's Work Space
Assists BYU Broadcasting's full-stack developers, focusing on JavaScript.
By Suyeol Yoon 200+

The Full Stack Developer
Full-stack web programming expert, friendly and informative. HTML, CSS, JS, PHP, ...
By community builder 200+

v5.0 - Code Like a GOAT 🐐 🧙

1.4 Use the following prompt to specify the details of the food ordering application, as shown in the screenshot below:
Design the architecture and user interface for a simple food ordering application. Consider including features such as menu browsing, cart management, user authentication, and order tracking. Ensure that the design is intuitive, visually appealing, and responsive across different devices.



Full Stack Developer

You
Design the architecture and user interface for a simple food ordering application. Consider including features such as menu browsing, cart management, user authentication, and order tracking. Ensure that the design is intuitive, visually appealing, and responsive across different devices.

Full Stack Developer
To design a simple food ordering application, let's outline the architecture and the user interface, ensuring that it supports features like menu browsing, cart management, user authentication, and order tracking. We'll focus on creating a design that's intuitive, visually appealing, and responsive across various devices.

1. Architecture Overview

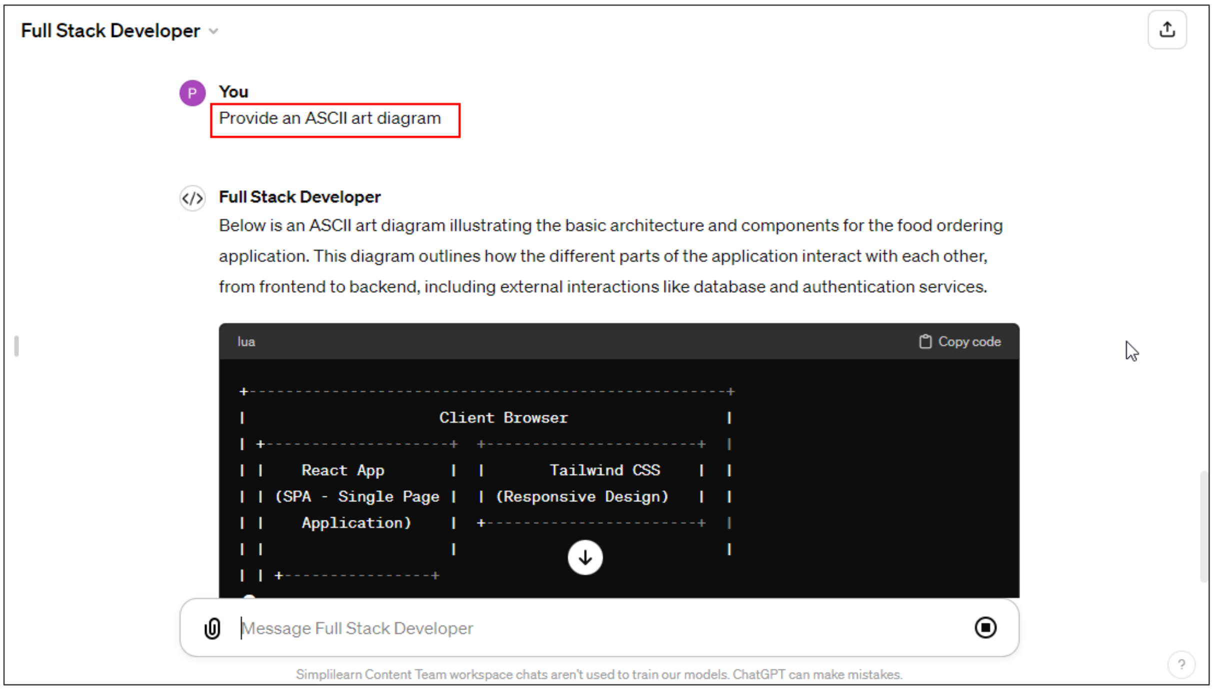
For the tech stack, I'll propose a typical modern full-stack web application setup:

Frontend:

- **Framework:** React (for building a dynamic, single-page application)

Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.

1.5 Use the following prompt to generate ASCII art diagram, as shown in the screenshot below:
Provide an ASCII art diagram



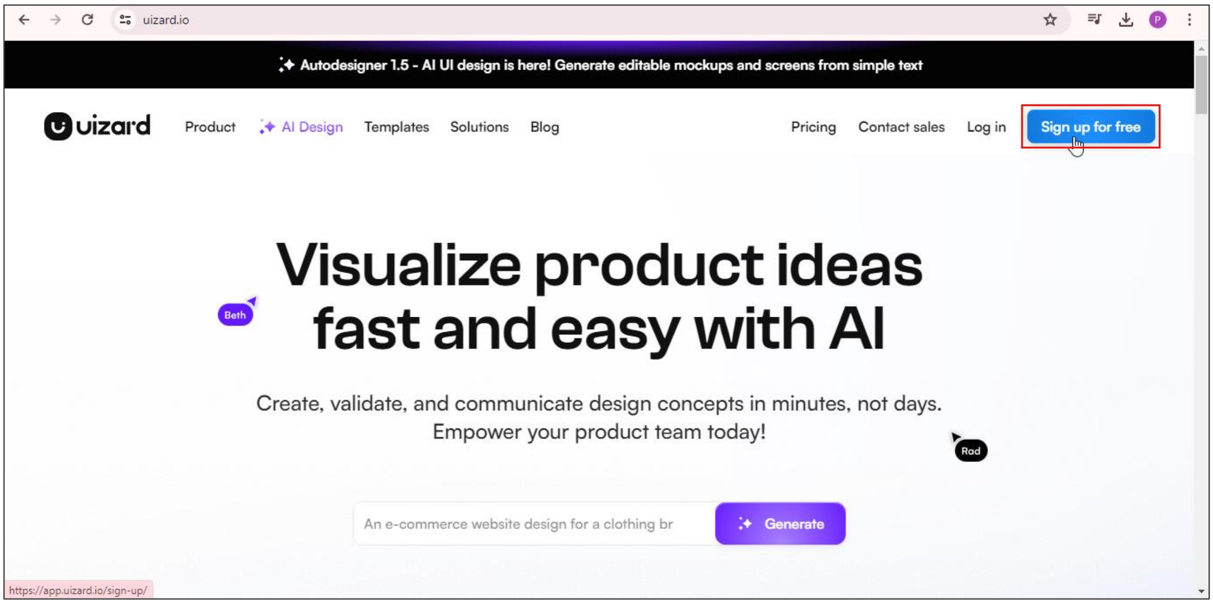
You
Provide an ASCII art diagram

Full Stack Developer
Below is an ASCII art diagram illustrating the basic architecture and components for the food ordering application. This diagram outlines how the different parts of the application interact with each other, from frontend to backend, including external interactions like database and authentication services.

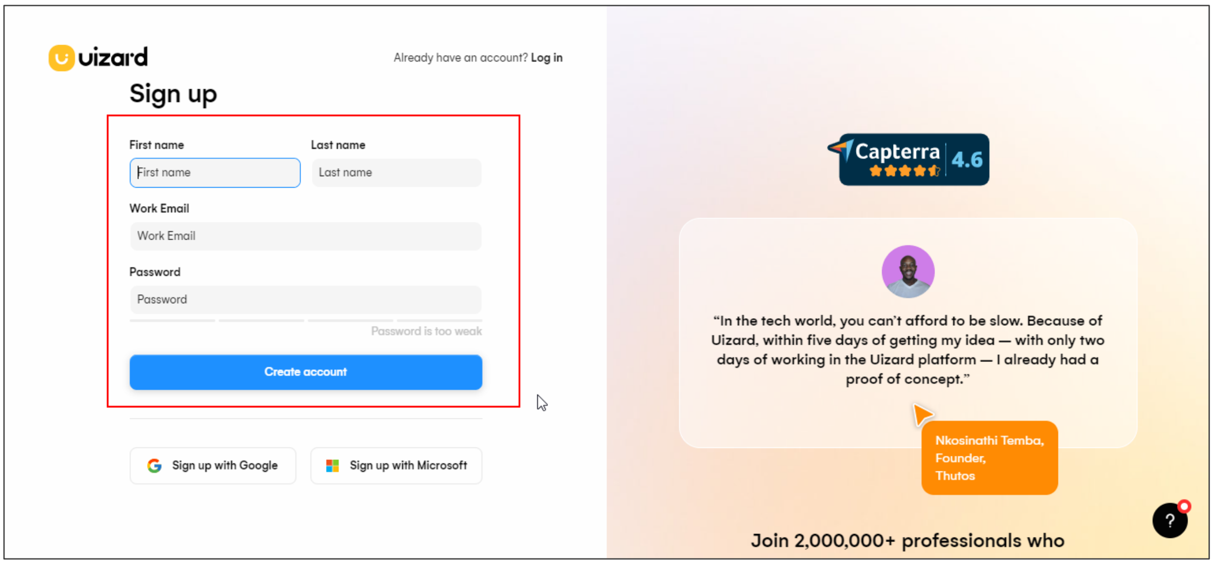
```lua
+----------------------------------------------------+
|                    Client Browser                  |
| +--------------------+  +-----------------------+  |
| |    React App       |  |       Tailwind CSS    |  |
| | (SPA - Single Page |  | (Responsive Design)   |  |
| |    Application)    |  +-----------------------+  |
| |                    |                             |
| | +----------------+
```

Message Full Stack Developer
Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.
?

1.6 Navigate to **https://uizard.io/** and click on **Sign up for free,** as shown in the screenshot below:


uizard.io
Autodesigner 1.5 - AI UI design is here! Generate editable mockups and screens from simple text
uizard
Product
AI Design
Templates
Solutions
Blog
Pricing
Contact sales
Log in
Sign up for free
Visualize product ideas fast and easy with AI
Beth
Create, validate, and communicate design concepts in minutes, not days. Empower your product team today!
Rad
An e-commerce website design for a clothing br
Generate
https://app.uizard.io/sign-up/

1.7 Enter the required information and click on **Create account**



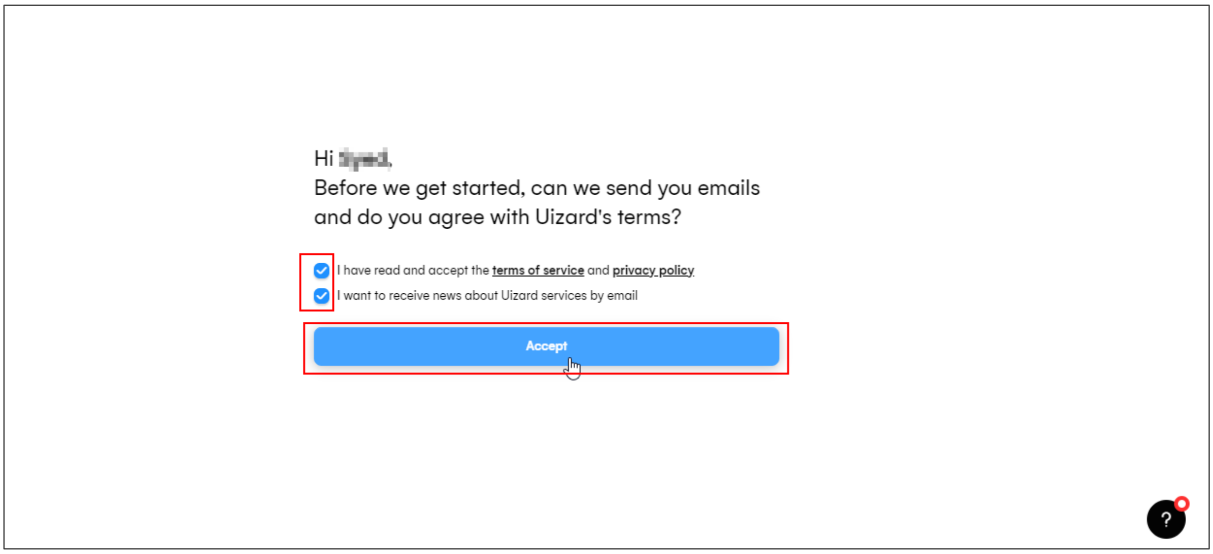
Sign up

"In the tech world, you can't afford to be slow. Because of Uizard, within five days of getting my idea — with only two days of working in the Uizard platform — I already had a proof of concept."

Nkosinathi Temba,
Founder,
Thutos

Join 2,000,000+ professionals who

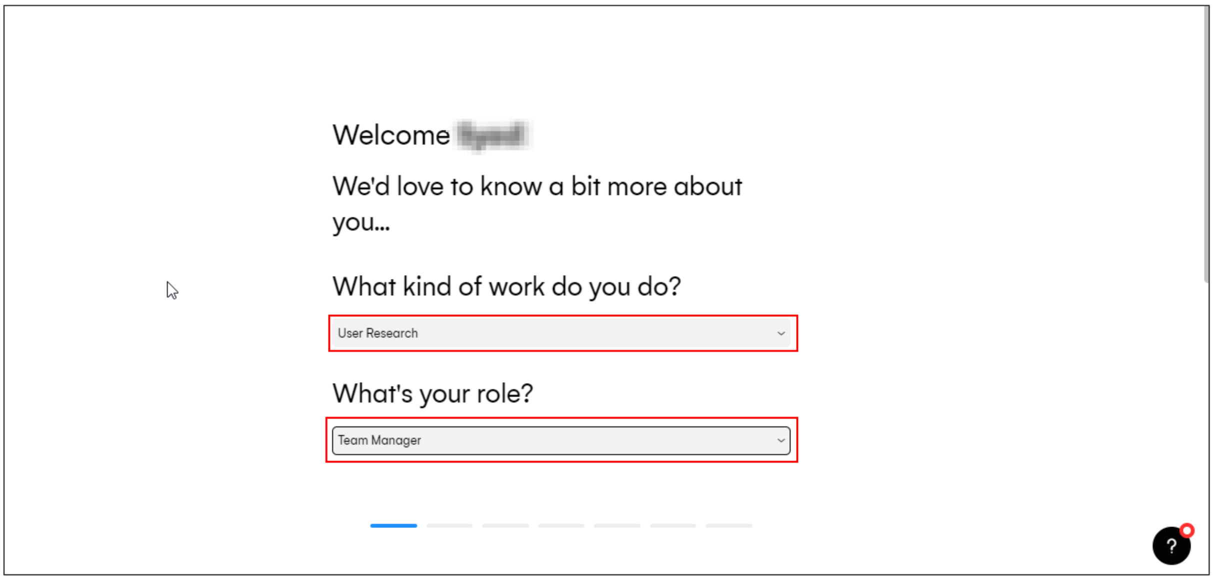
1.8 Click on the checkboxes and then click on the **Accept** button



Hi [redacted],
Before we get started, can we send you emails and do you agree with Uizard's terms?

☑ I have read and accept the terms of service and privacy policy
☑ I want to receive news about Uizard services by email

1.9 Select the desired options per the requirement, as shown in the screenshots below:



Welcome [redacted]

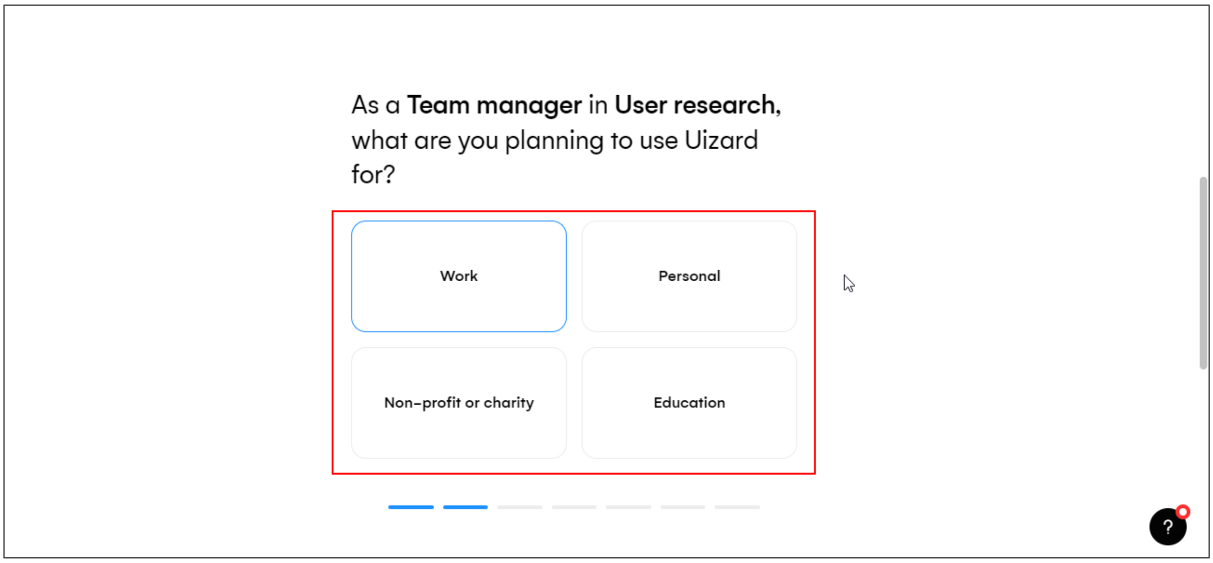
We'd love to know a bit more about you...

What kind of work do you do?

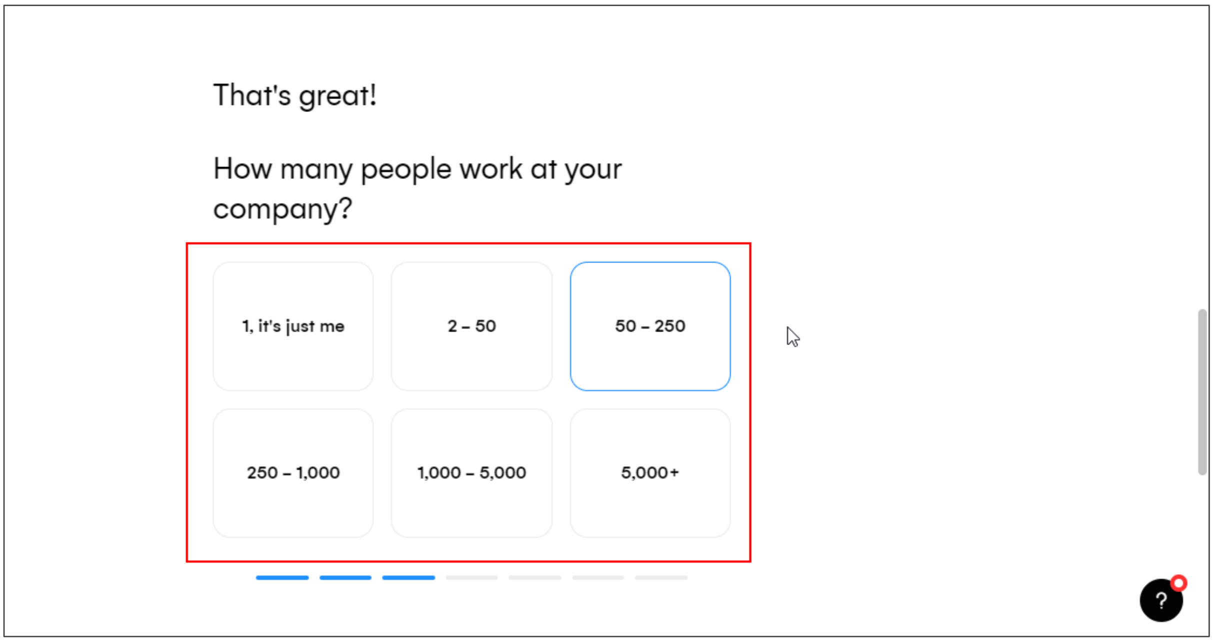
User Research

What's your role?

Team Manager

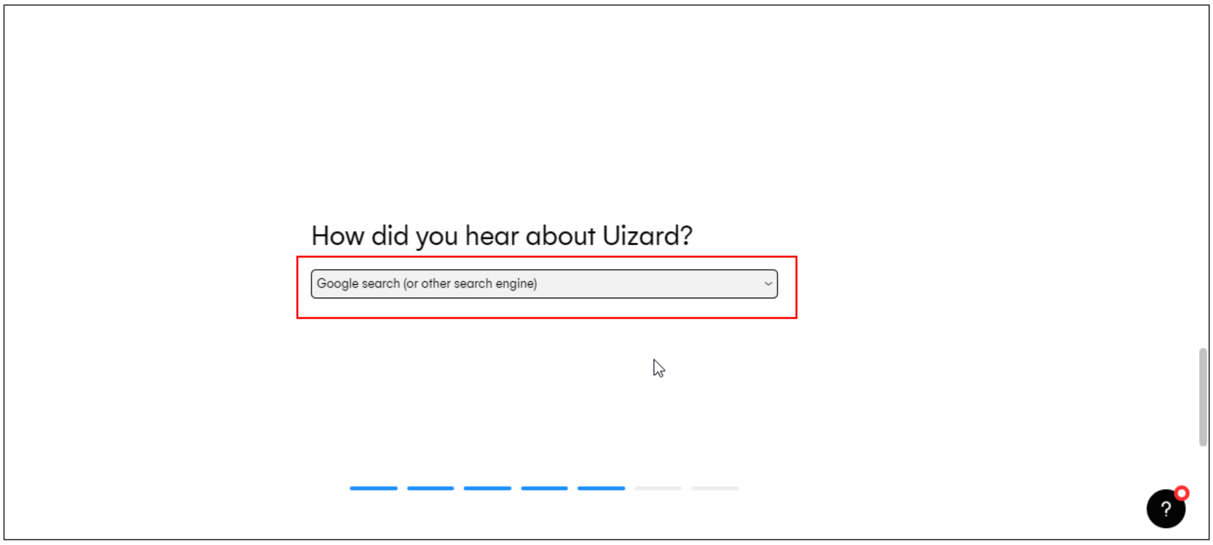


As a **Team manager** in **User research,** what are you planning to use Uizard for?



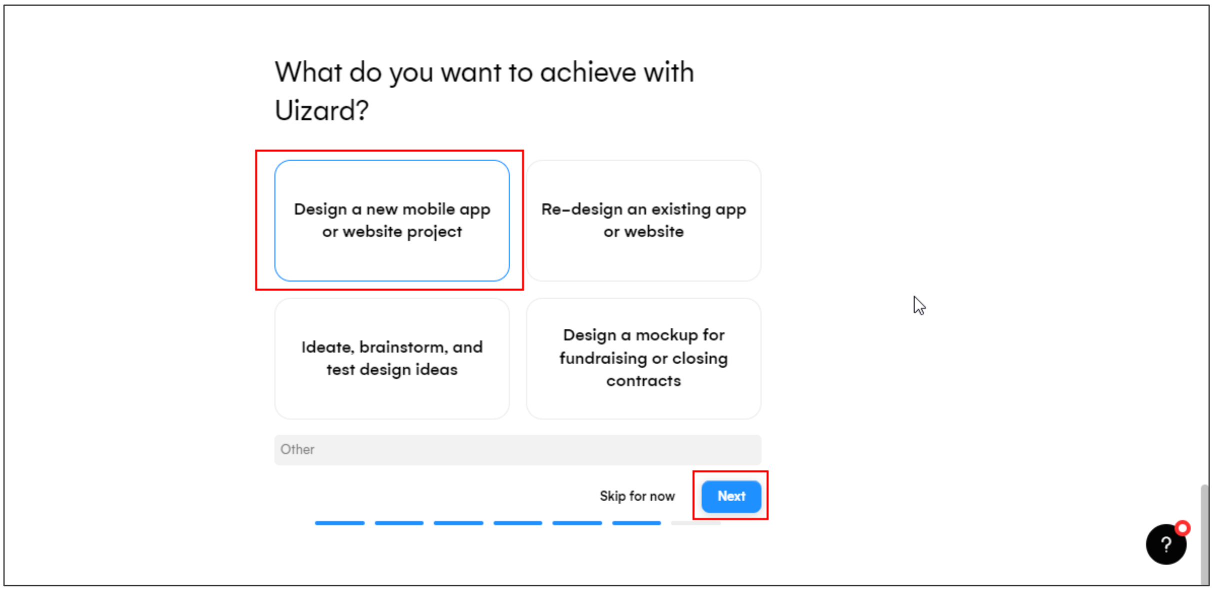
That's great!

How many people work at your company?



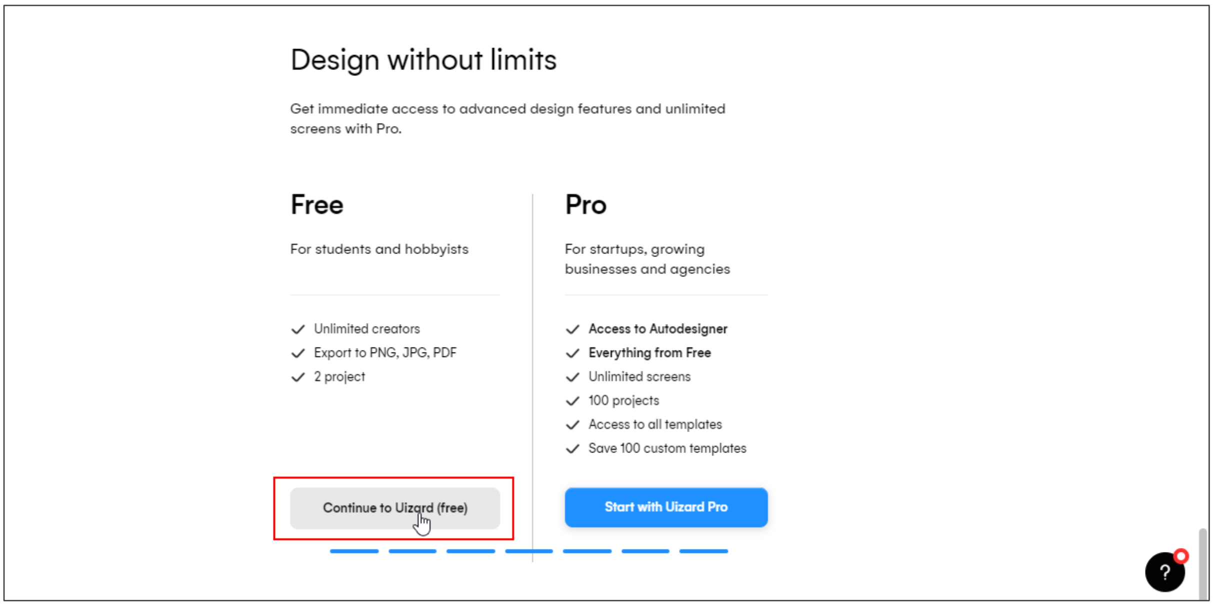
How did you hear about Uizard?

Google search (or other search engine)



What do you want to achieve with Uizard?

Design a new mobile app or website project
Re-design an existing app or website
Ideate, brainstorm, and test design ideas
Design a mockup for fundraising or closing contracts
Other
Skip for now
Next
?



Design without limits

Get immediate access to advanced design features and unlimited screens with Pro.

Free

For students and hobbyists

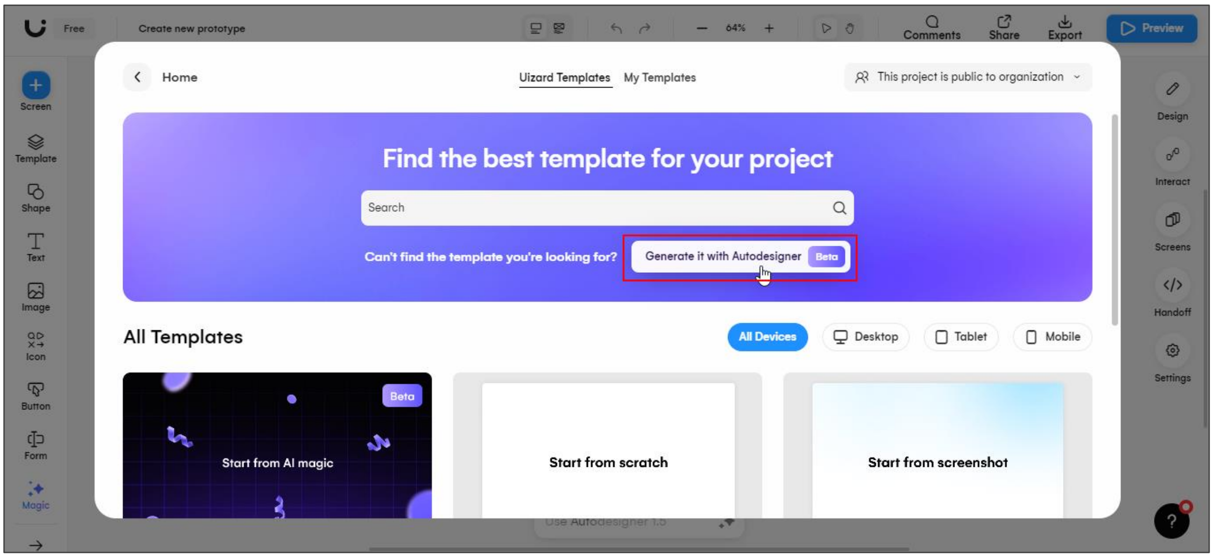
- ✓ Unlimited creators
- ✓ Export to PNG, JPG, PDF
- ✓ 2 project

Pro

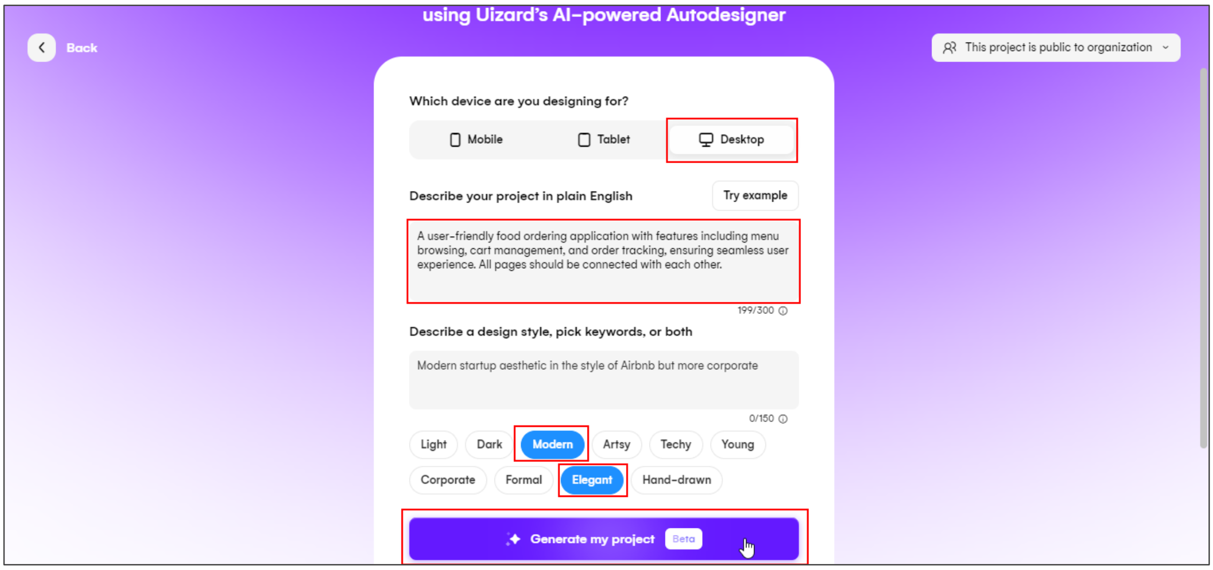
For startups, growing businesses and agencies

- ✓ Access to Autodesigner
- ✓ Everything from Free
- ✓ Unlimited screens
- ✓ 100 projects
- ✓ Access to all templates
- ✓ Save 100 custom templates

1.10 Click on **Generate it with Autodesigner,** as shown in the screenshot below:



1.11 Select **Desktop** as the device and choose the specified options for designing the web application. In this case, select **Modern** and **Elegant**. Then, provide the following prompt and click on **Generate my project:**
A user-friendly food ordering application with features including menu browsing, cart management, and order tracking, ensuring seamless user experience. All pages should be connected with each other.



using Uizard's AI-powered Autodesigner

Which device are you designing for?

Mobile Tablet Desktop

Describe your project in plain English

A user-friendly food ordering application with features including menu browsing, cart management, and order tracking, ensuring seamless user experience. All pages should be connected with each other.

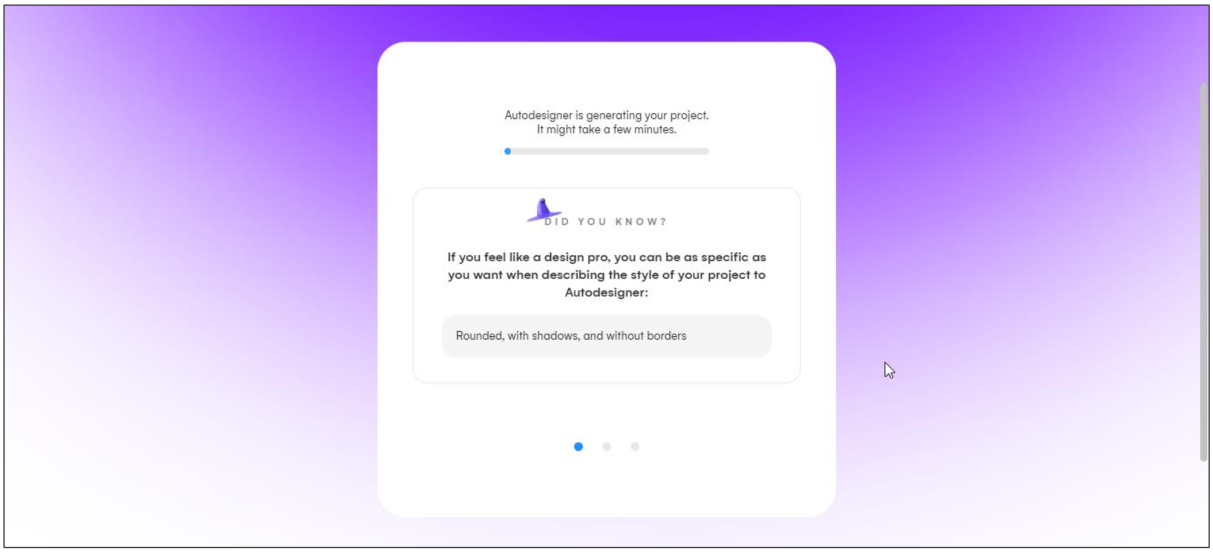
199/300

Describe a design style, pick keywords, or both

Modern startup aesthetic in the style of Airbnb but more corporate

0/150

The screen below shows the progress of generating the web application:



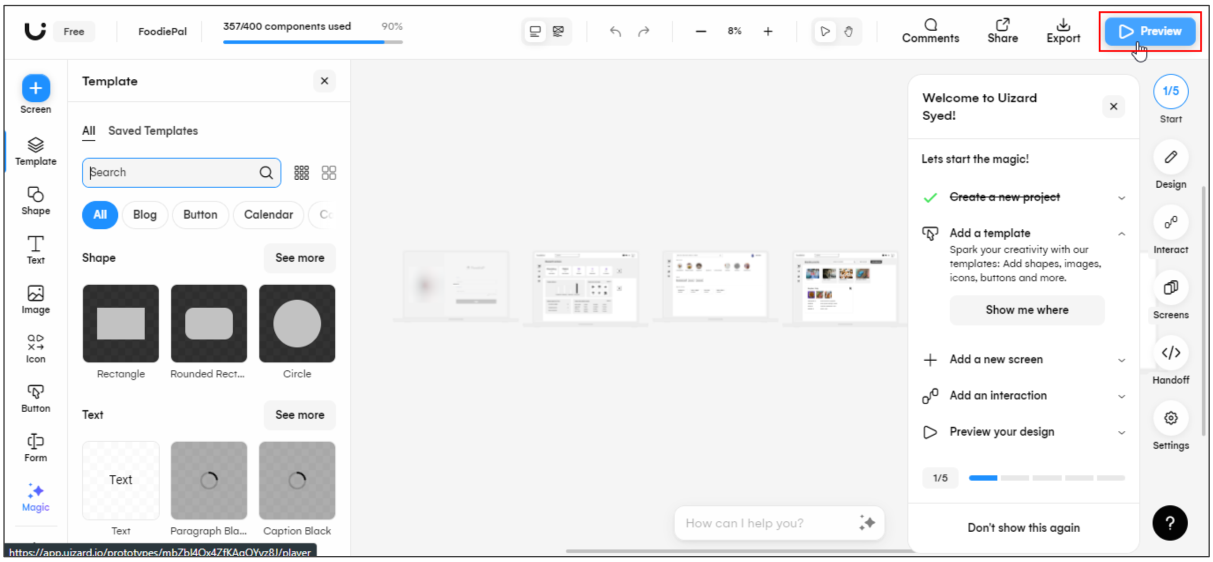
Autodesigner is generating your project.
It might take a few minutes.

DID YOU KNOW?

If you feel like a design pro, you can be as specific as you want when describing the style of your project to Autodesigner:

Rounded, with shadows, and without borders

1.12 Click on the **Preview** button, as shown in the screenshot below:



Welcome to Uizard Syed!

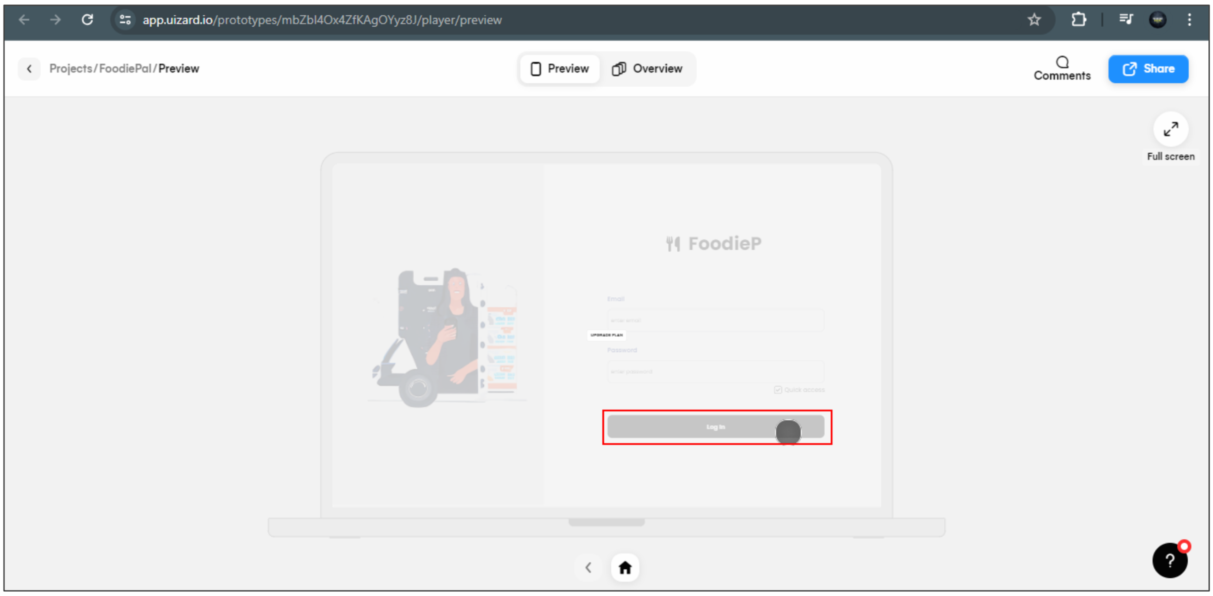
Lets start the magic!

~~Create a new project~~

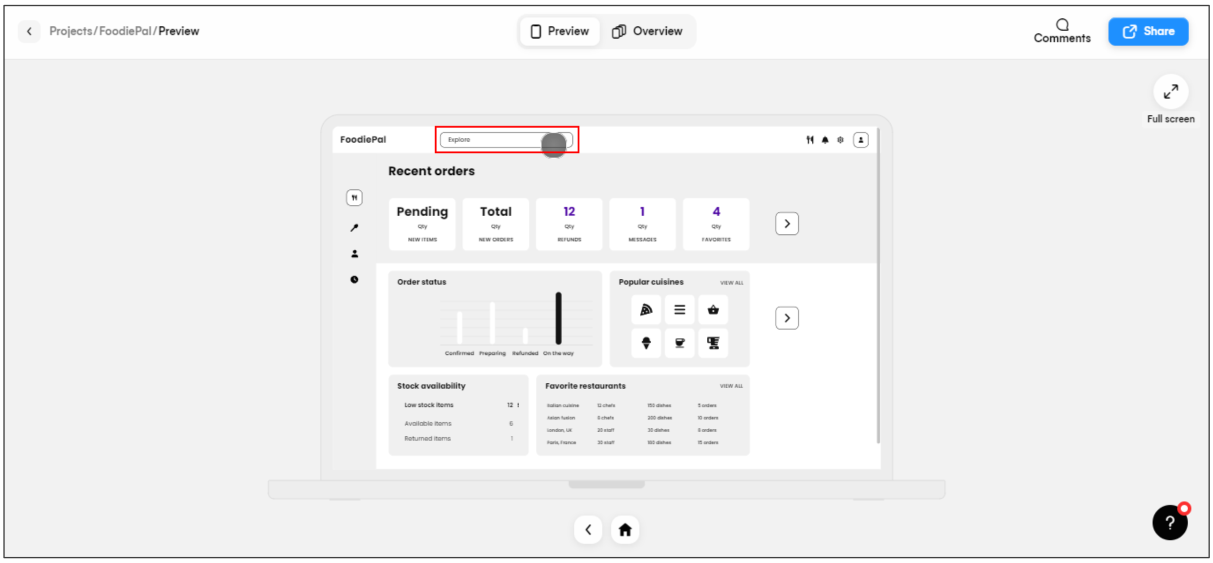
Add a template

Spark your creativity with our templates: Add shapes, images, icons, buttons and more.

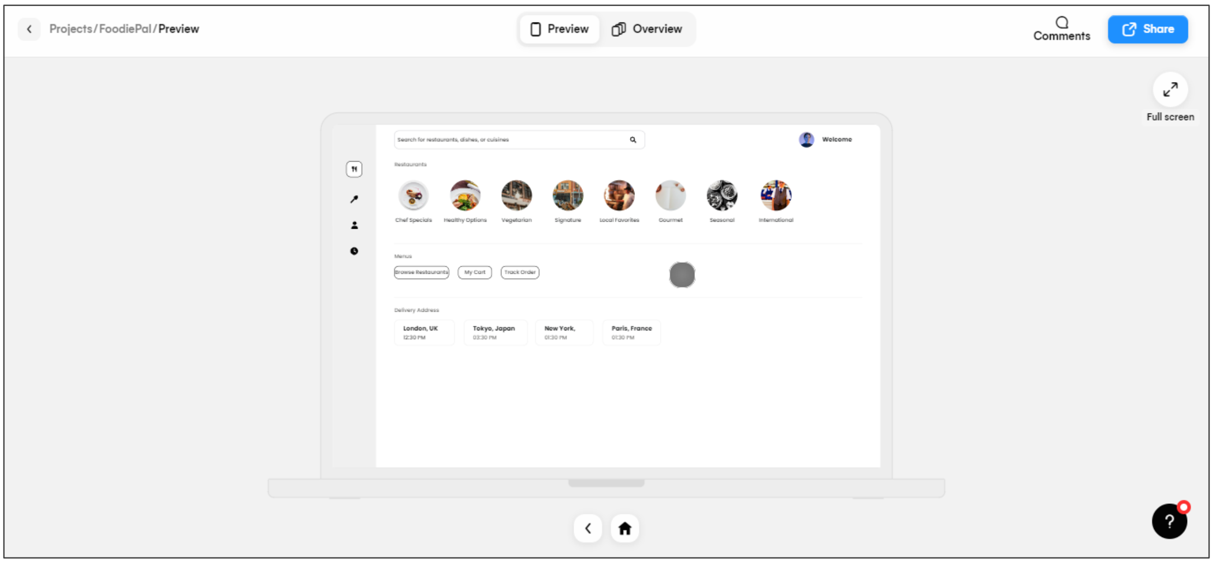
1.13 Click on **Log in,** as shown in the screenshot below:


app.uizard.io/prototypes/mbZbl4Ox4ZfKAgOYz8J/player/preview
Projects / FoodiePal / Preview
Preview
Overview
Comments
Share
Full screen
FoodieP
Email
Password
Log in

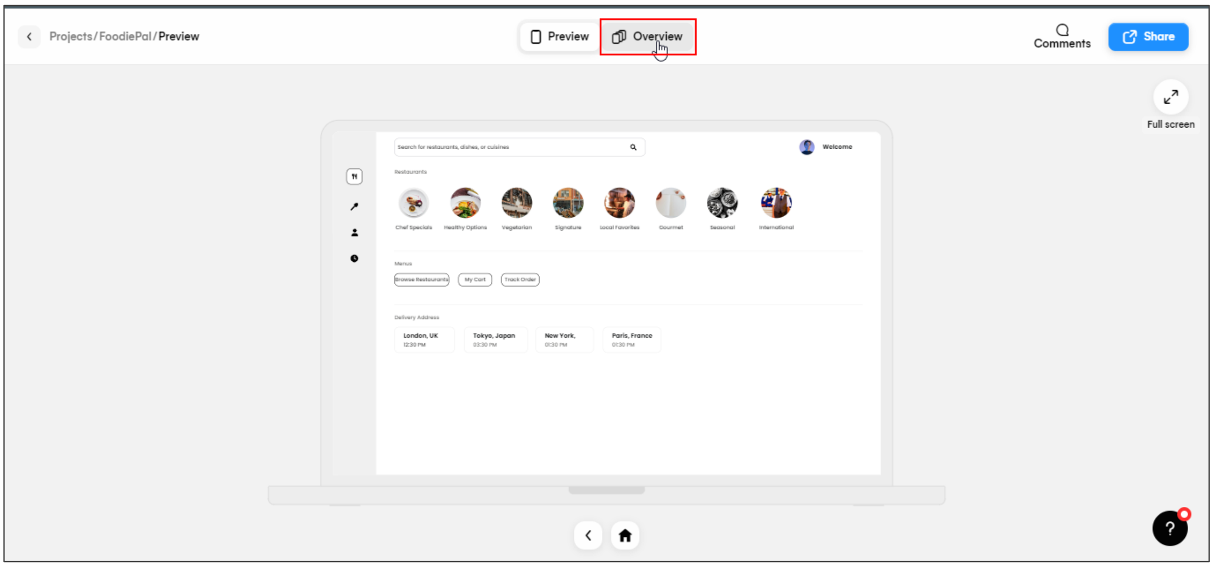
1.14 Click on **Explore** to view the next page

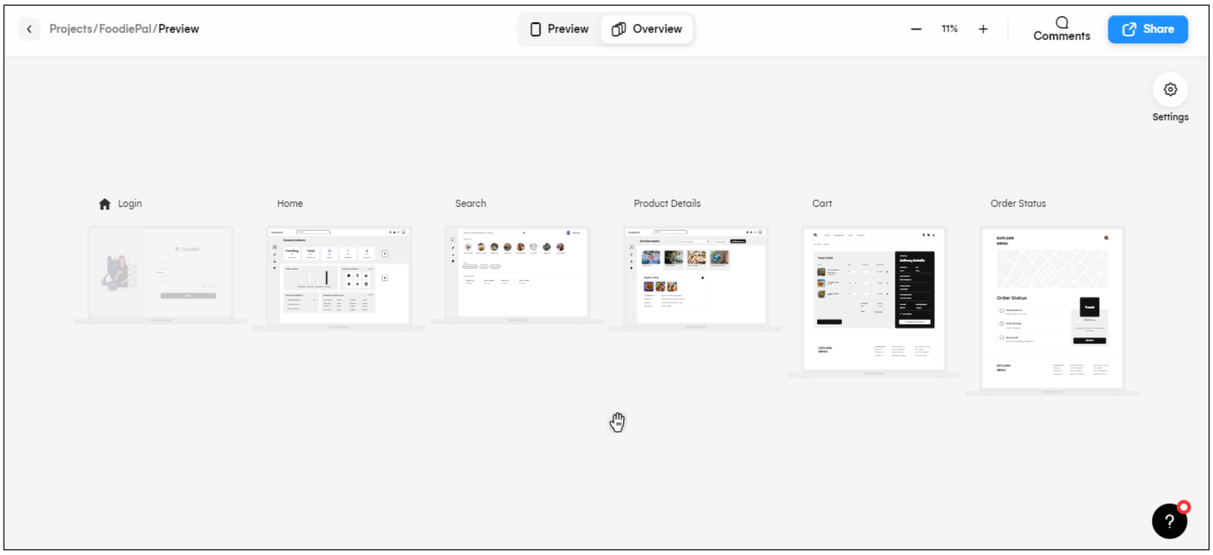


You will see the following page:

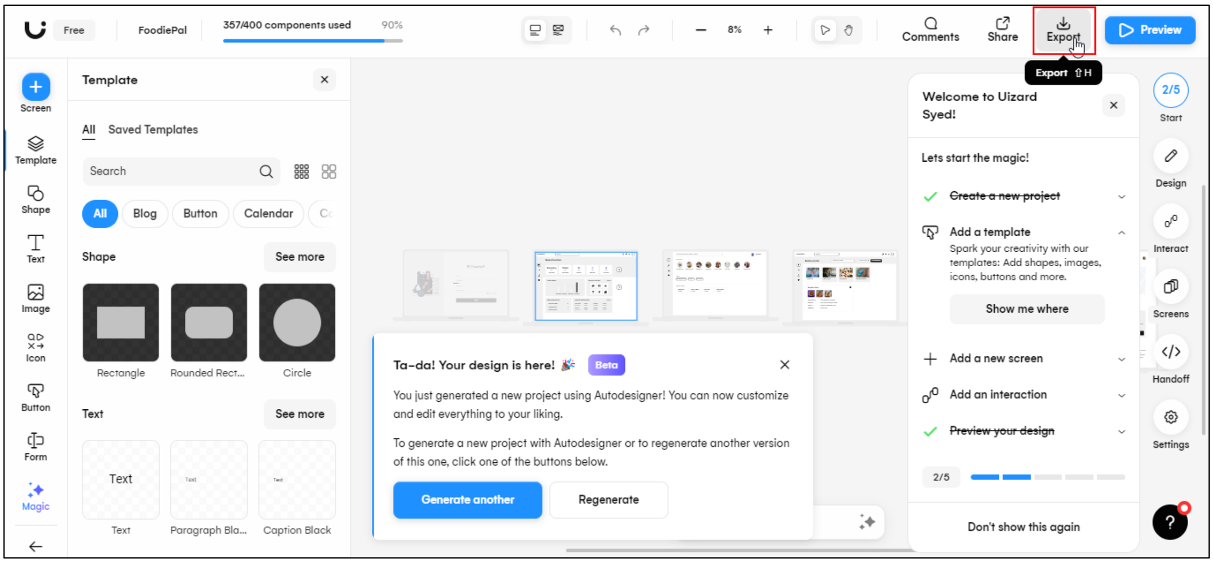


1.15 Click on **Overview** at the top of the page, as shown in the screenshot below:





1.16 Navigate to the Uizard dashboard, select the generated pages, and click on **Export** at the top right; then click on **Export** to export the project as a zip file, as shown in the screenshots below:



Ta-da! Your design is here! Beta

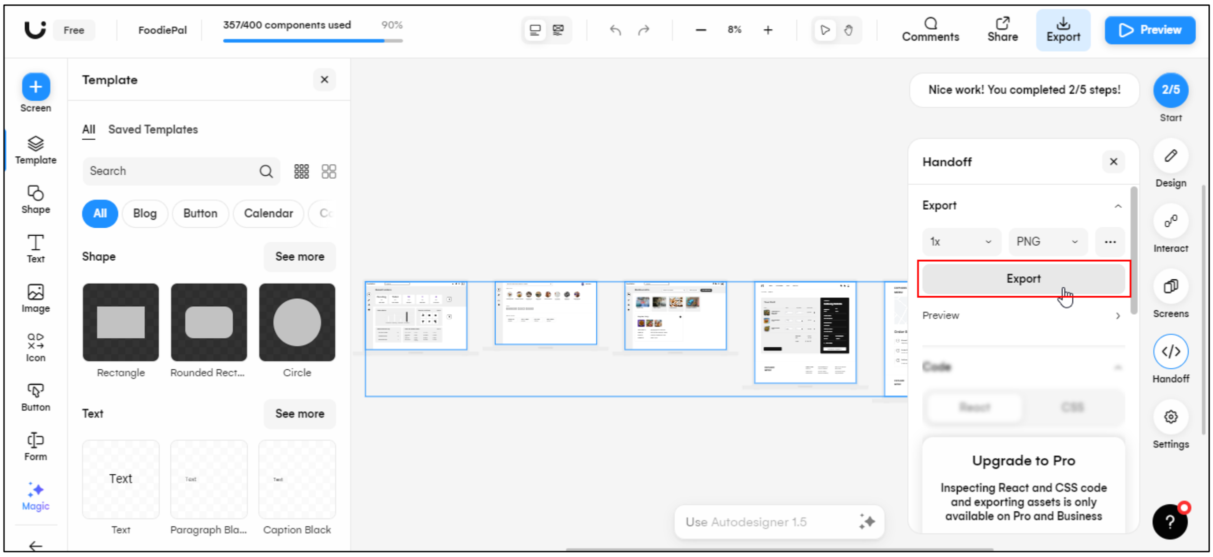
You just generated a new project using Autodesigner! You can now customize and edit everything to your liking.

To generate a new project with Autodesigner or to regenerate another version of this one, click one of the buttons below.

Welcome to Uizard Syed!

Lets start the magic!

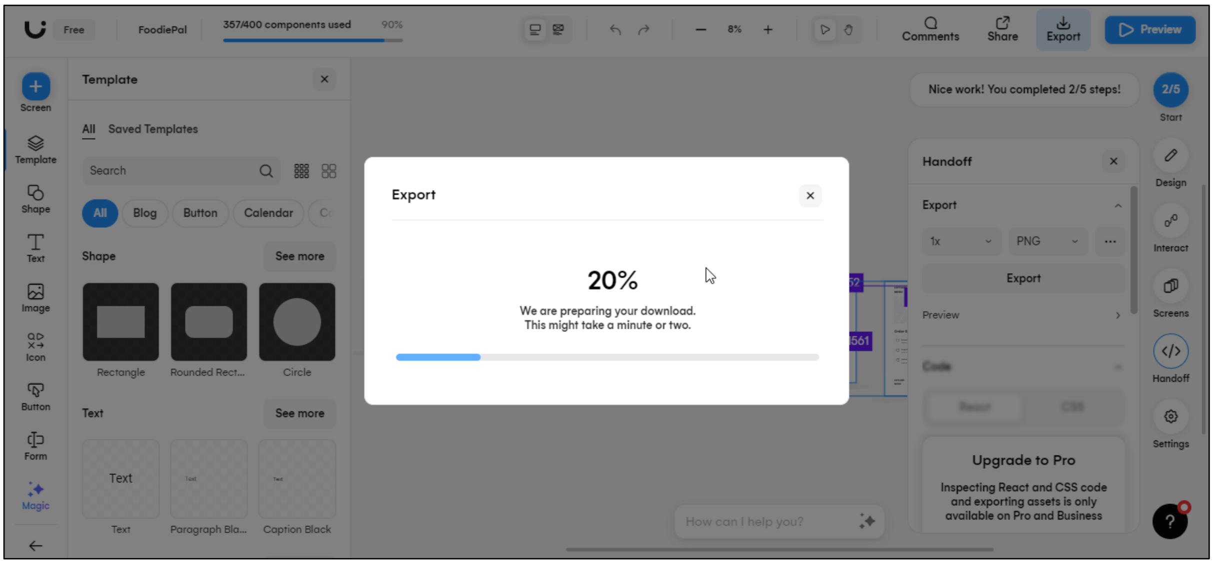
- ~~Create a new project~~
- Add a template
  Spark your creativity with our templates: Add shapes, images, icons, buttons and more.
- Add a new screen
- Add an interaction
- ~~Preview your design~~



Nice work! You completed 2/5 steps!

Upgrade to Pro

Inspecting React and CSS code and exporting assets is only available on Pro and Business



Nice work! You completed 2/5 steps!

Export

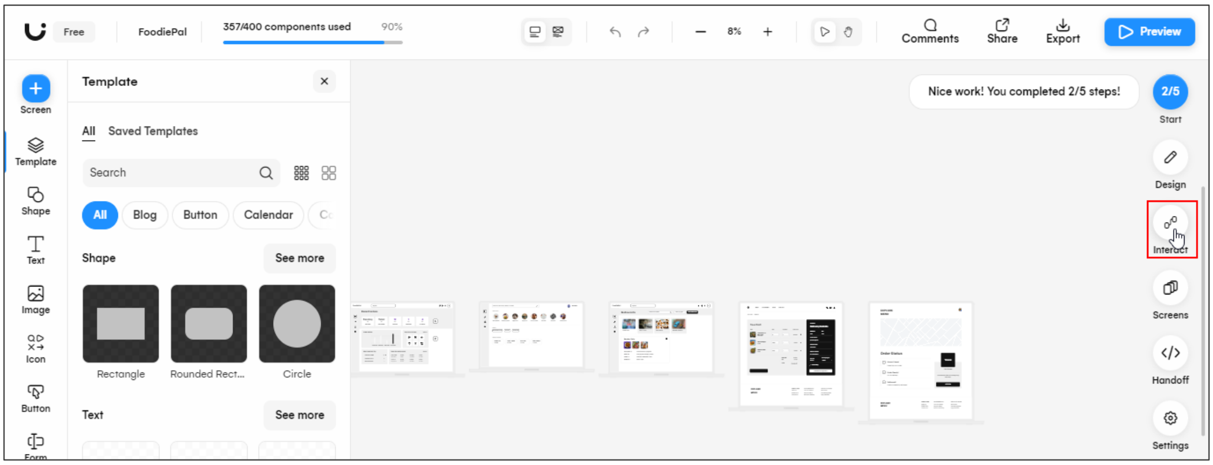
20%

We are preparing your download.
This might take a minute or two.

Upgrade to Pro

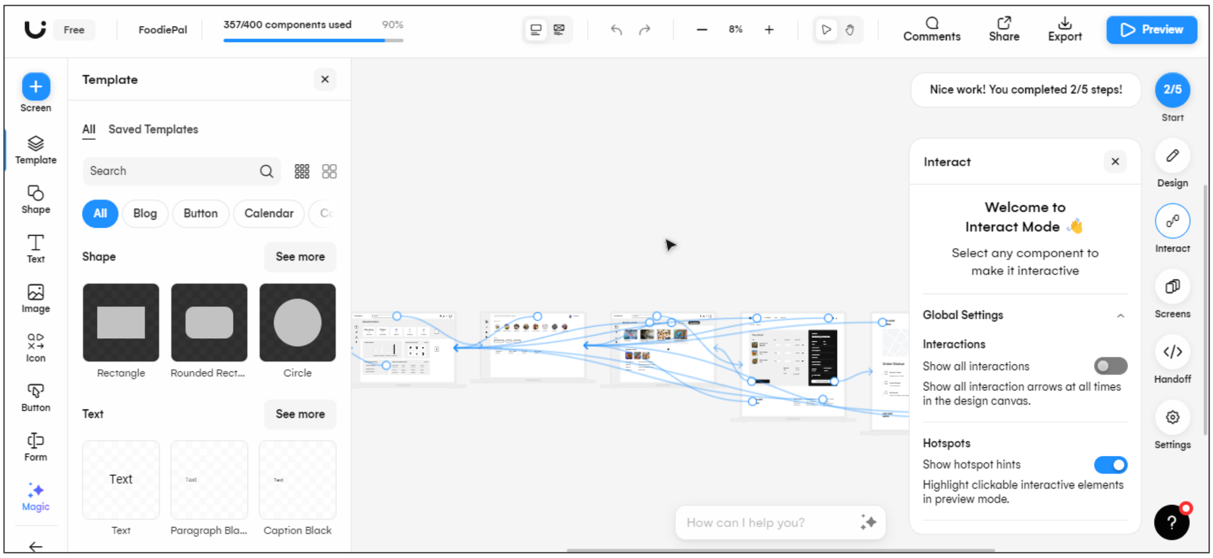
Inspecting React and CSS code and exporting assets is only available on Pro and Business

1.17 Click on **Interact** on the right pane, as shown in the screenshot below:



Nice work! You completed 2/5 steps!

You will see the following interface:



Nice work! You completed 2/5 steps!

Interact

Welcome to Interact Mode 👋

Select any component to make it interactive

Global Settings

Interactions

Show all interactions

Show all interaction arrows at all times in the design canvas.

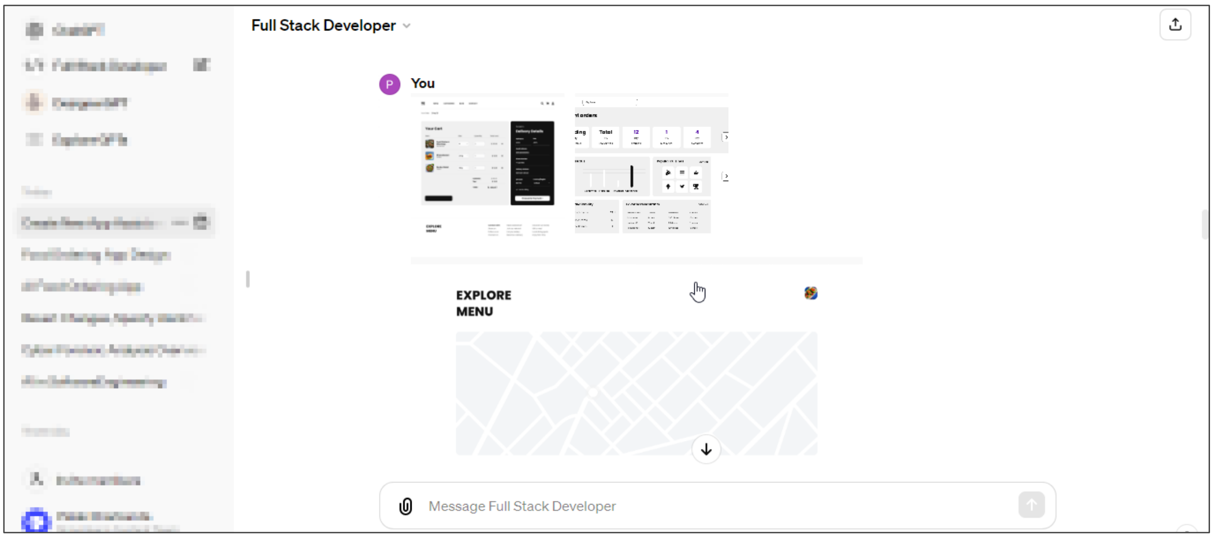
Hotspots

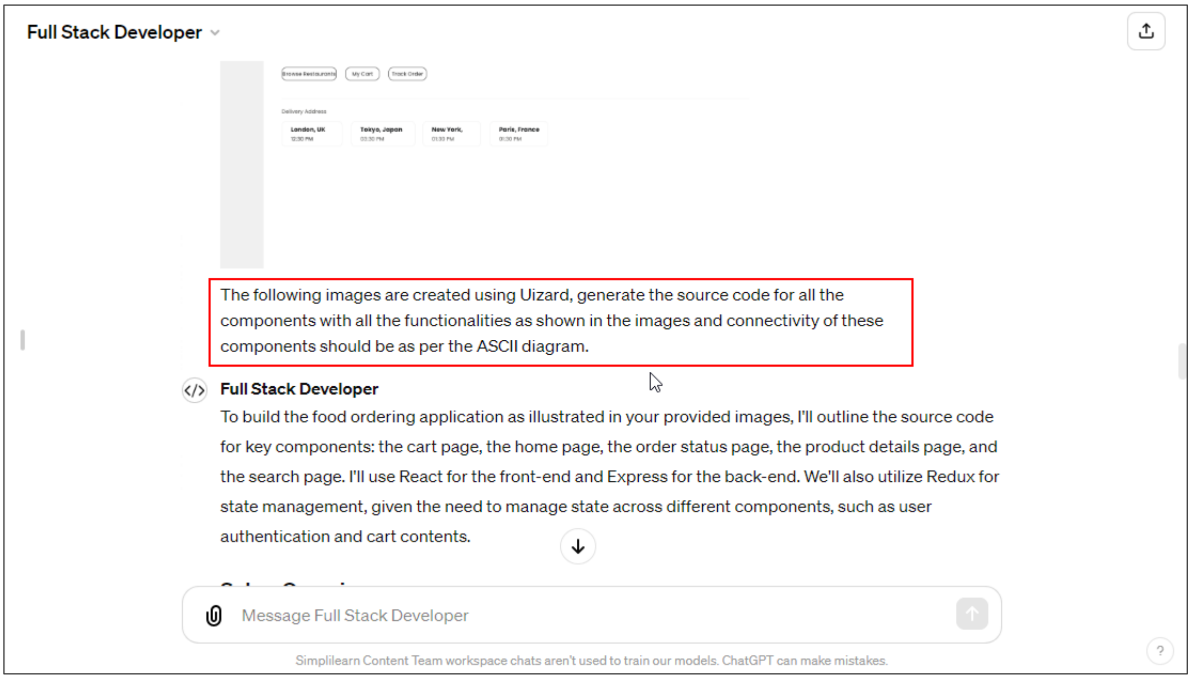
Show hotspot hints

Highlight clickable interactive elements in preview mode.

Step 2: Generate the application source code using Full Stack Developer GPT

2.1 Upload the images downloaded from **Uizard** in GPT along with the following prompt, as shown in the screenshots below:
The following images are created using Uizard, generate the source code for all the components with all the functionalities as shown in the images and connectivity of these components should be as per the ASCII diagram.



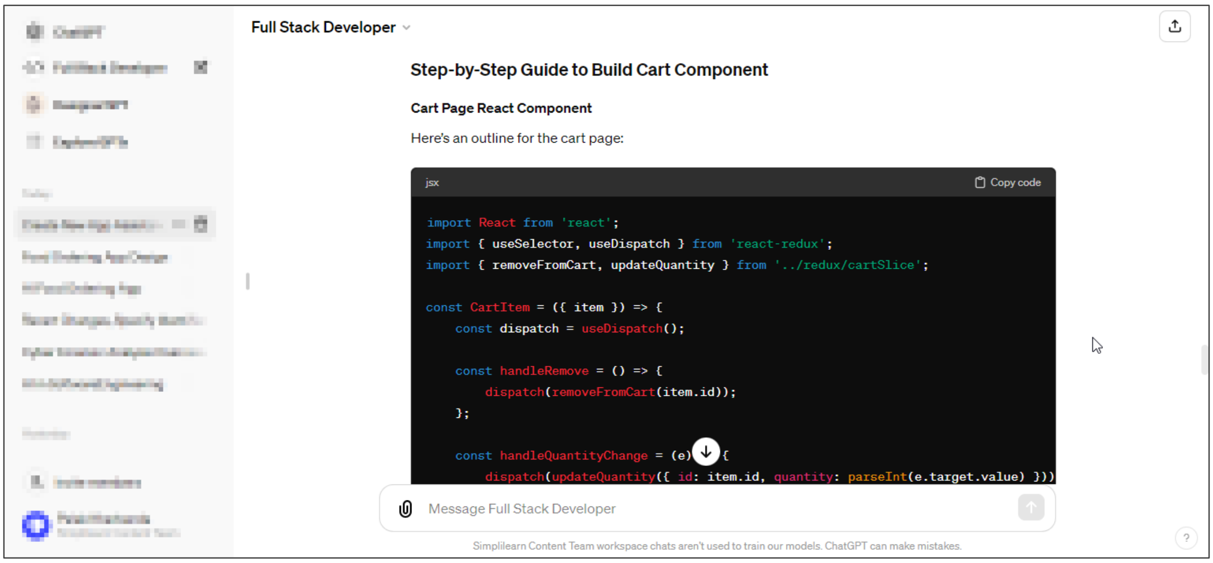


The following images are created using Uizard, generate the source code for all the components with all the functionalities as shown in the images and connectivity of these components should be as per the ASCII diagram.

Full Stack Developer

To build the food ordering application as illustrated in your provided images, I'll outline the source code for key components: the cart page, the home page, the order status page, the product details page, and the search page. I'll use React for the front-end and Express for the back-end. We'll also utilize Redux for state management, given the need to manage state across different components, such as user authentication and cart contents.

Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.



Step-by-Step Guide to Build Cart Component

Cart Page React Component

Here's an outline for the cart page:

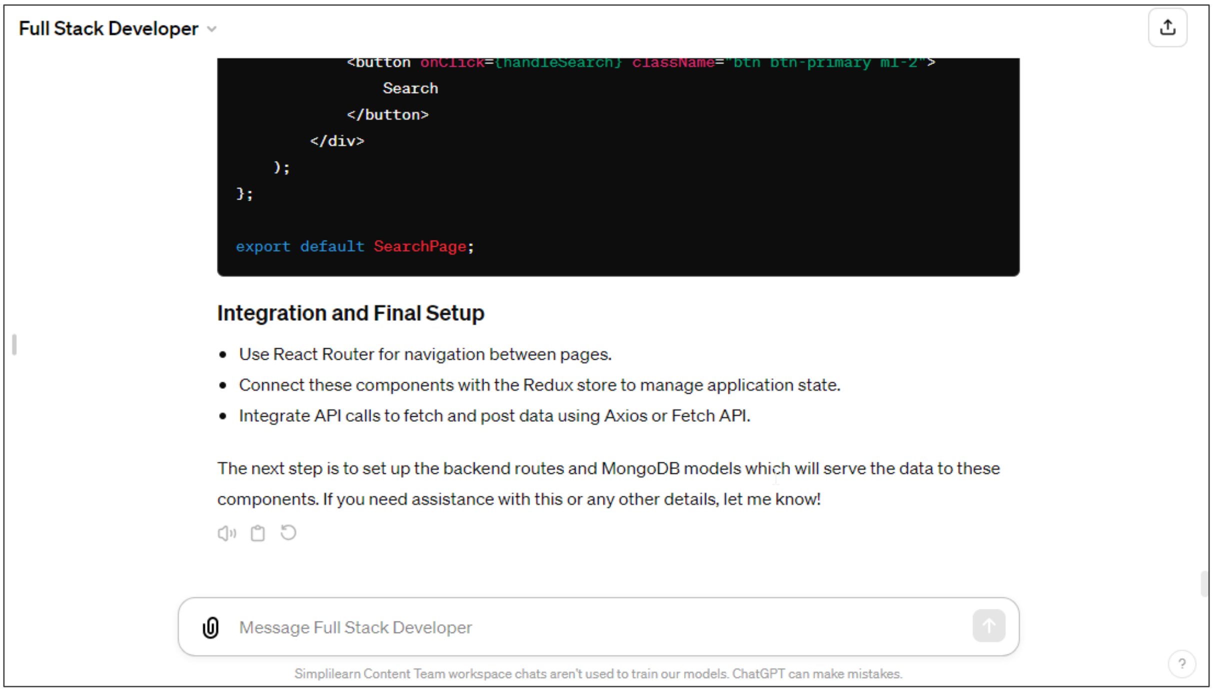
```jsx
import React from 'react';
import { useSelector, useDispatch } from 'react-redux';
import { removeFromCart, updateQuantity } from '../redux/cartSlice';

const CartItem = ({ item }) => {
    const dispatch = useDispatch();

    const handleRemove = () => {
        dispatch(removeFromCart(item.id));
    };

    const handleQuantityChange = (e)  {
        dispatch(updateQuantity({ id: item.id, quantity: parseInt(e.target.value) }))
```

Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.



```jsx
            <button onClick={handleSearch} className="btn btn-primary ml-2">
                Search
            </button>
        </div>
    );
};

export default SearchPage;
```

Integration and Final Setup

- Use React Router for navigation between pages.
- Connect these components with the Redux store to manage application state.
- Integrate API calls to fetch and post data using Axios or Fetch API.

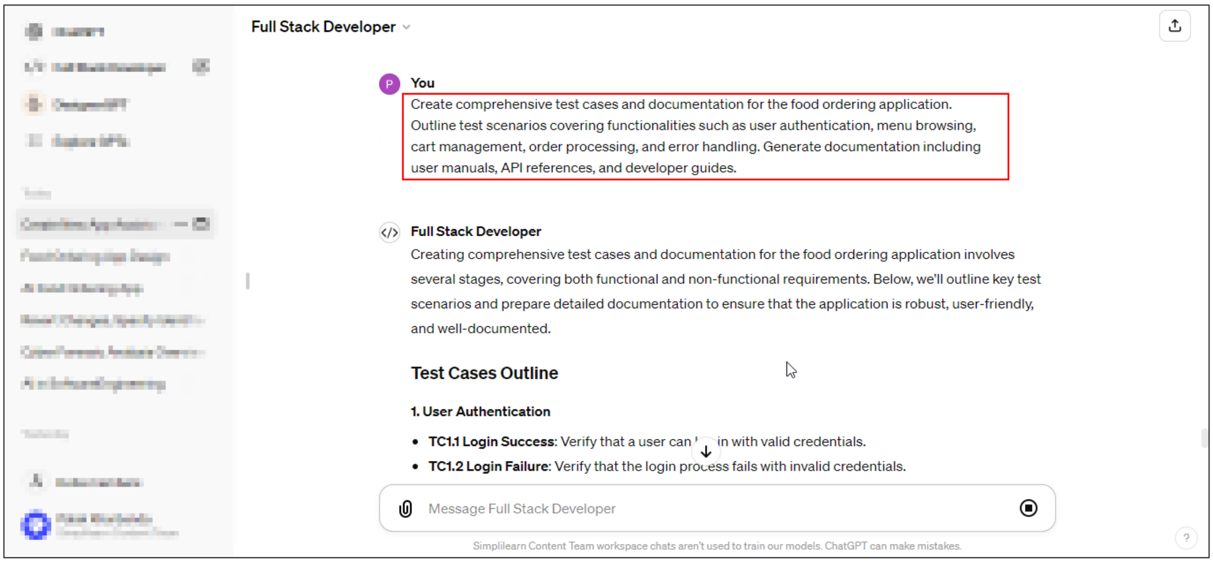
The next step is to set up the backend routes and MongoDB models which will serve the data to these components. If you need assistance with this or any other details, let me know!

Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.

Step 3: Generate test cases and documentation via Full Stack Developer GPT

3.1 Use the following prompt to generate test cases and documentation, as shown in the screenshots below:

Create comprehensive test cases and documentation for the food ordering application. Outline test scenarios covering functionalities such as user authentication, menu browsing, cart management, order processing, and error handling. Generate documentation including user manuals, API references, and developer guides.


Full Stack Developer
Message Full Stack Developer
Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.

You

Create comprehensive test cases and documentation for the food ordering application. Outline test scenarios covering functionalities such as user authentication, menu browsing, cart management, order processing, and error handling. Generate documentation including user manuals, API references, and developer guides.

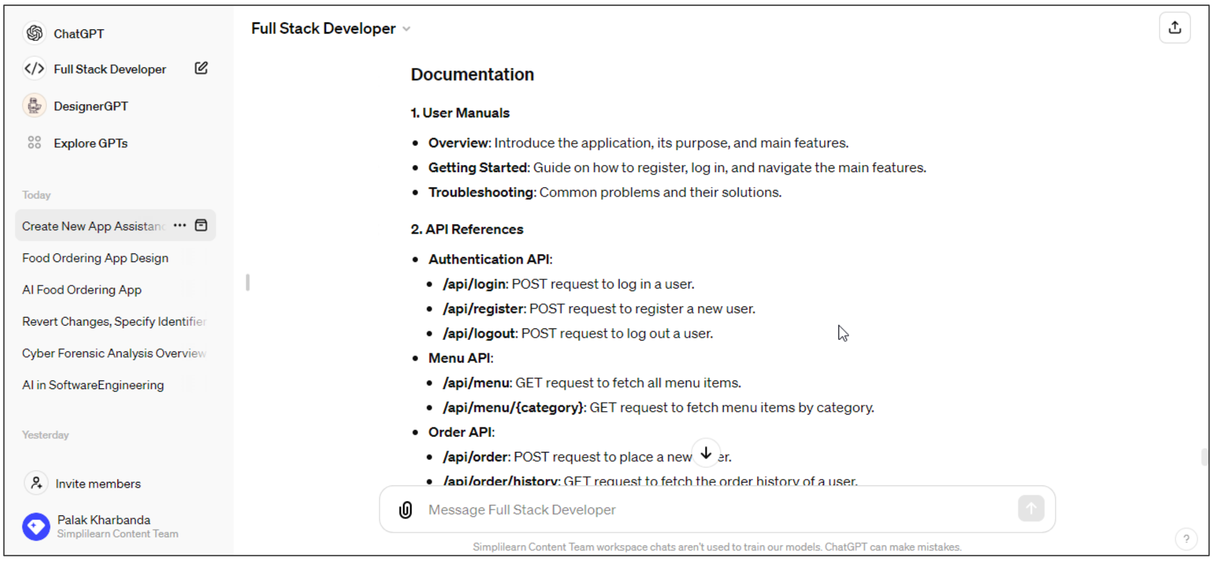
Full Stack Developer

Creating comprehensive test cases and documentation for the food ordering application involves several stages, covering both functional and non-functional requirements. Below, we'll outline key test scenarios and prepare detailed documentation to ensure that the application is robust, user-friendly, and well-documented.

Test Cases Outline

1. User Authentication

- **TC1.1 Login Success**: Verify that a user can in with valid credentials.
- **TC1.2 Login Failure**: Verify that the login process fails with invalid credentials.


ChatGPT
Full Stack Developer
DesignerGPT
Explore GPTs
Today
Create New App Assistan
Food Ordering App Design
AI Food Ordering App
Revert Changes, Specify Identifie
Cyber Forensic Analysis Overview
AI in SoftwareEngineering
Yesterday
Invite members
Palak Kharbanda
Simplilearn Content Team
Full Stack Developer
Message Full Stack Developer
Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.

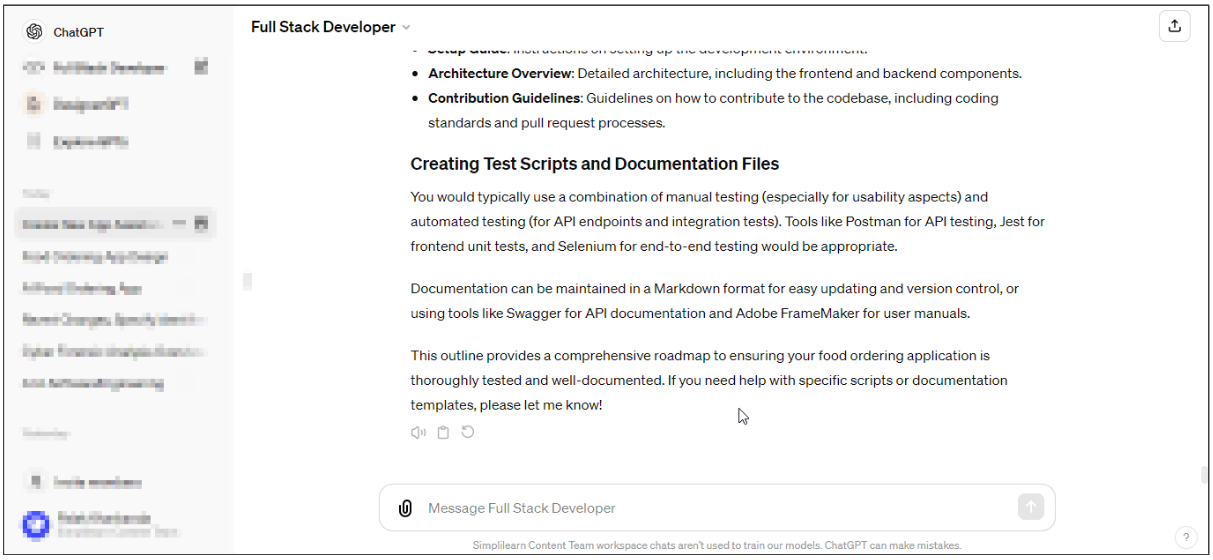
Documentation

1. User Manuals

- **Overview**: Introduce the application, its purpose, and main features.
- **Getting Started**: Guide on how to register, log in, and navigate the main features.
- **Troubleshooting**: Common problems and their solutions.

2. API References

- **Authentication API**:
  - **/api/login**: POST request to log in a user.
  - **/api/register**: POST request to register a new user.
  - **/api/logout**: POST request to log out a user.
- **Menu API**:
  - **/api/menu**: GET request to fetch all menu items.
  - **/api/menu/{category}**: GET request to fetch menu items by category.
- **Order API**:
  - **/api/order**: POST request to place a new er.
  - **/api/order/history**: GET request to fetch the order history of a user.



- **Setup Guide**: Instructions on setting up the development environment.
- **Architecture Overview**: Detailed architecture, including the frontend and backend components.
- **Contribution Guidelines**: Guidelines on how to contribute to the codebase, including coding standards and pull request processes.

Creating Test Scripts and Documentation Files

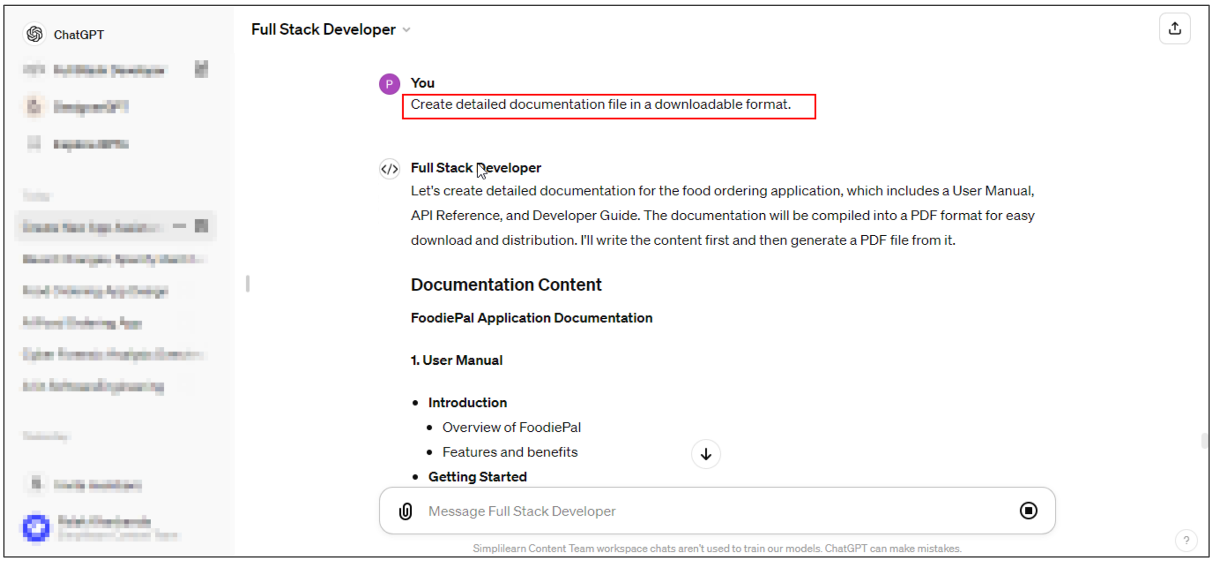
You would typically use a combination of manual testing (especially for usability aspects) and automated testing (for API endpoints and integration tests). Tools like Postman for API testing, Jest for frontend unit tests, and Selenium for end-to-end testing would be appropriate.

Documentation can be maintained in a Markdown format for easy updating and version control, or using tools like Swagger for API documentation and Adobe FrameMaker for user manuals.

This outline provides a comprehensive roadmap to ensuring your food ordering application is thoroughly tested and well-documented. If you need help with specific scripts or documentation templates, please let me know!

Message Full Stack Developer
Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.

3.2 Use the following prompt to specify the downloadable documentation file, as shown in the screenshot below:
Create detailed documentation file in a downloadable format.



You
Create detailed documentation file in a downloadable format.

Full Stack Developer
Let's create detailed documentation for the food ordering application, which includes a User Manual, API Reference, and Developer Guide. The documentation will be compiled into a PDF format for easy download and distribution. I'll write the content first and then generate a PDF file from it.

Documentation Content

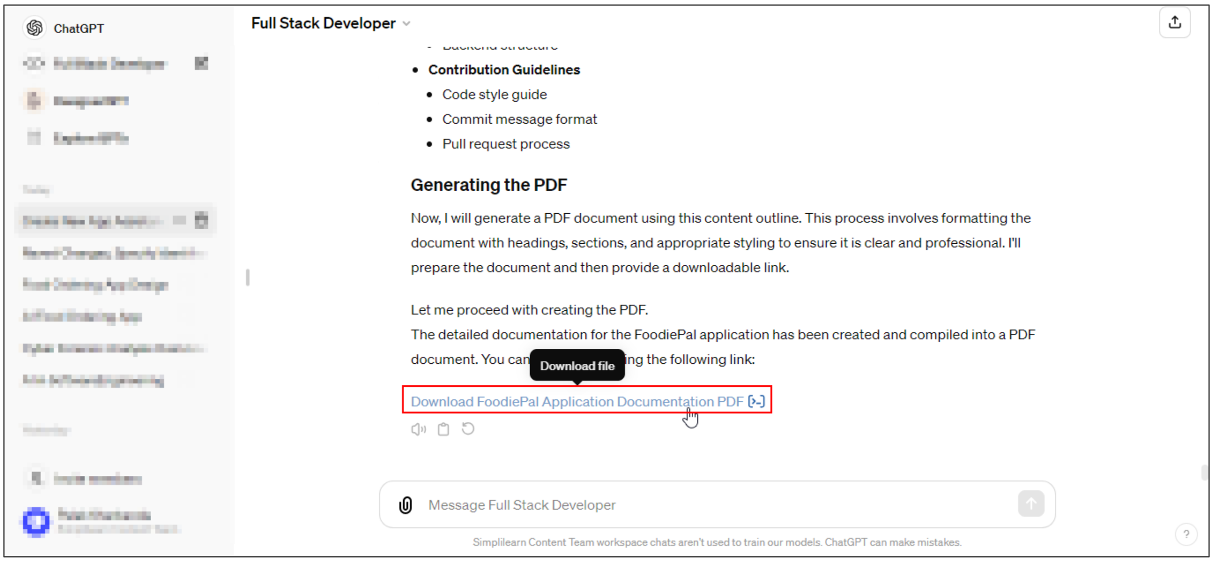
FoodiePal Application Documentation

1. User Manual

- **Introduction**
  - Overview of FoodiePal
  - Features and benefits
- **Getting Started**

Message Full Stack Developer
Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.

3.3 Scroll down and click on the **Download FoodiePal Application Documentation PDF** link, as shown in the screenshot below:



- **Contribution Guidelines**
  - Code style guide
  - Commit message format
  - Pull request process

Generating the PDF

Now, I will generate a PDF document using this content outline. This process involves formatting the document with headings, sections, and appropriate styling to ensure it is clear and professional. I'll prepare the document and then provide a downloadable link.

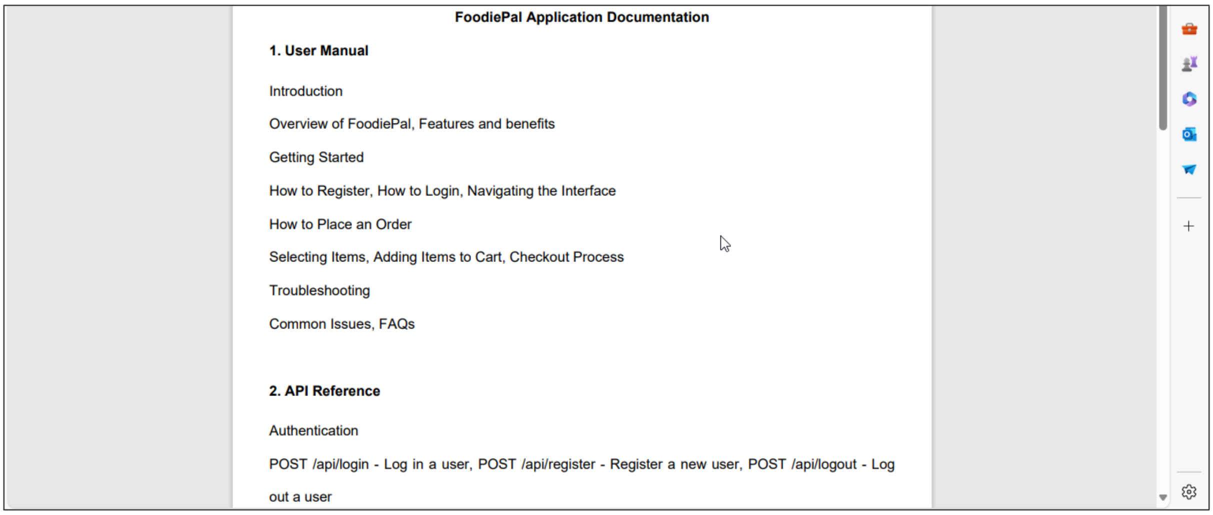
Let me proceed with creating the PDF.

The detailed documentation for the FoodiePal application has been created and compiled into a PDF document. You can ing the following link:

Download FoodiePal Application Documentation PDF

Simplilearn Content Team workspace chats aren't used to train our models. ChatGPT can make mistakes.

The documentation file looks as follows:



FoodiePal Application Documentation

1. User Manual

Introduction

Overview of FoodiePal, Features and benefits

Getting Started

How to Register, How to Login, Navigating the Interface

How to Place an Order

Selecting Items, Adding Items to Cart, Checkout Process

Troubleshooting

Common Issues, FAQs

2. API Reference

Authentication

POST /api/login - Log in a user, POST /api/register - Register a new user, POST /api/logout - Log out a user

By following these steps, you have successfully created a food ordering application using generative AI tools to streamline development and user experience.