Design Specification

29.09.2024

Contents

1 Introduction

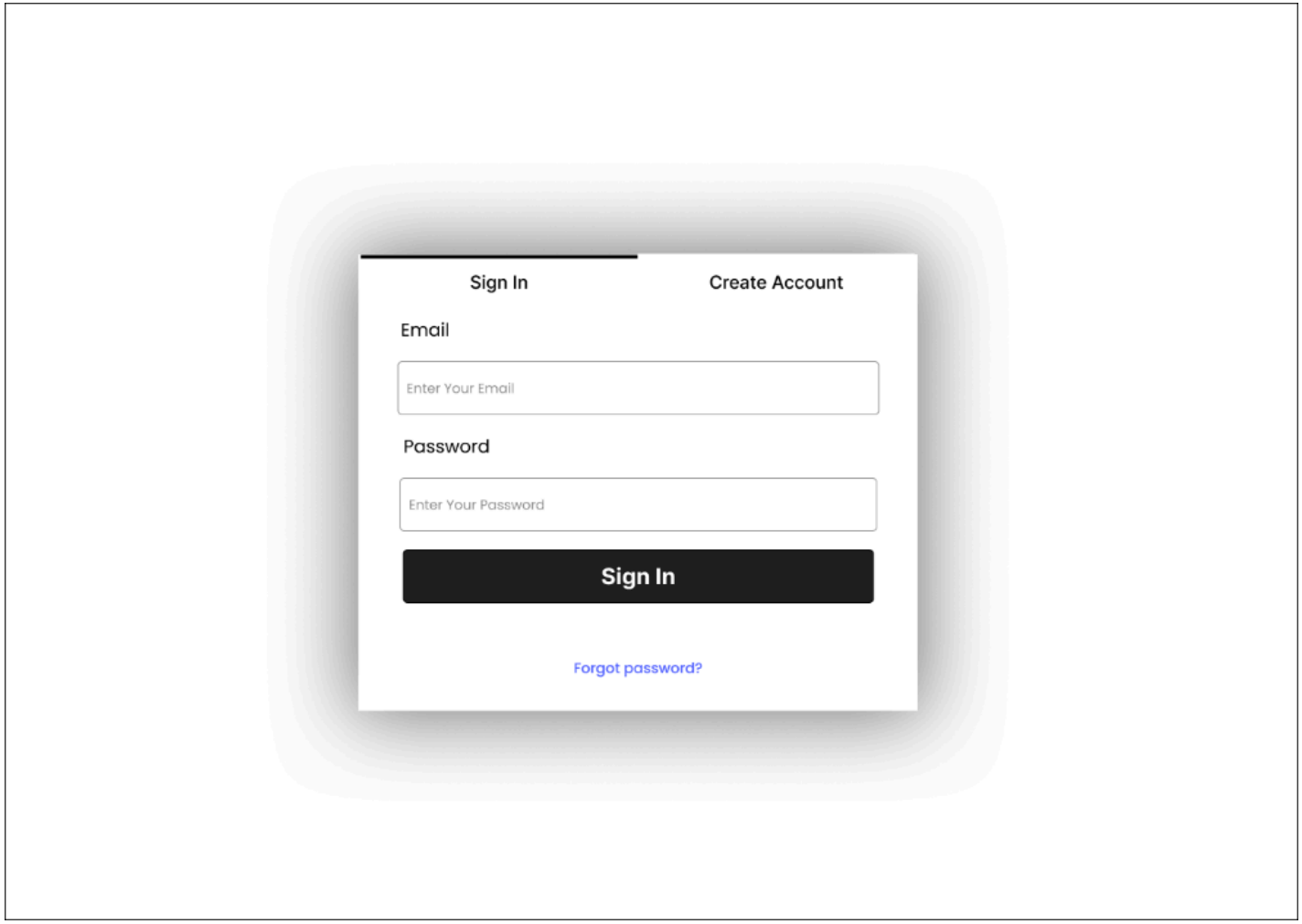
Smart Inventory is a comprehensive web-based application designed to revolutionize inventory management for businesses of all sizes, including restaurants and laboratories. This design specification outlines the visual elements and functionalities that will shape the user experience within Smart Inventory.

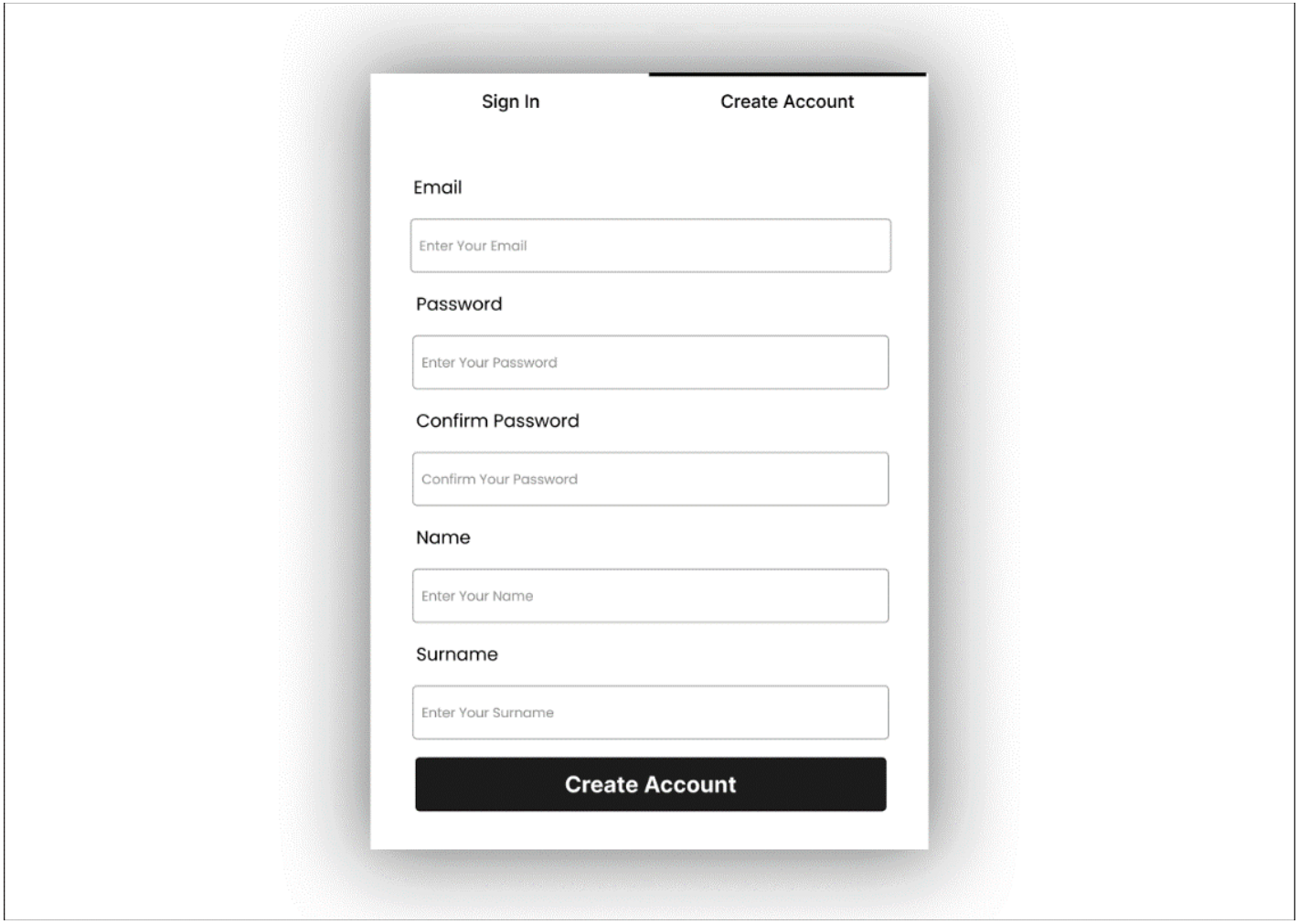
- Wireframes and detailed design mock ups will illustrate the user interface, navigation flow, and interaction patterns for each user role.
- Additionally, this document will include a section dedicated to the design of the database schema for Amazon DynamoDB, the NoSQL database service that will power Smart Inventory's data storage and retrieval capabilities.

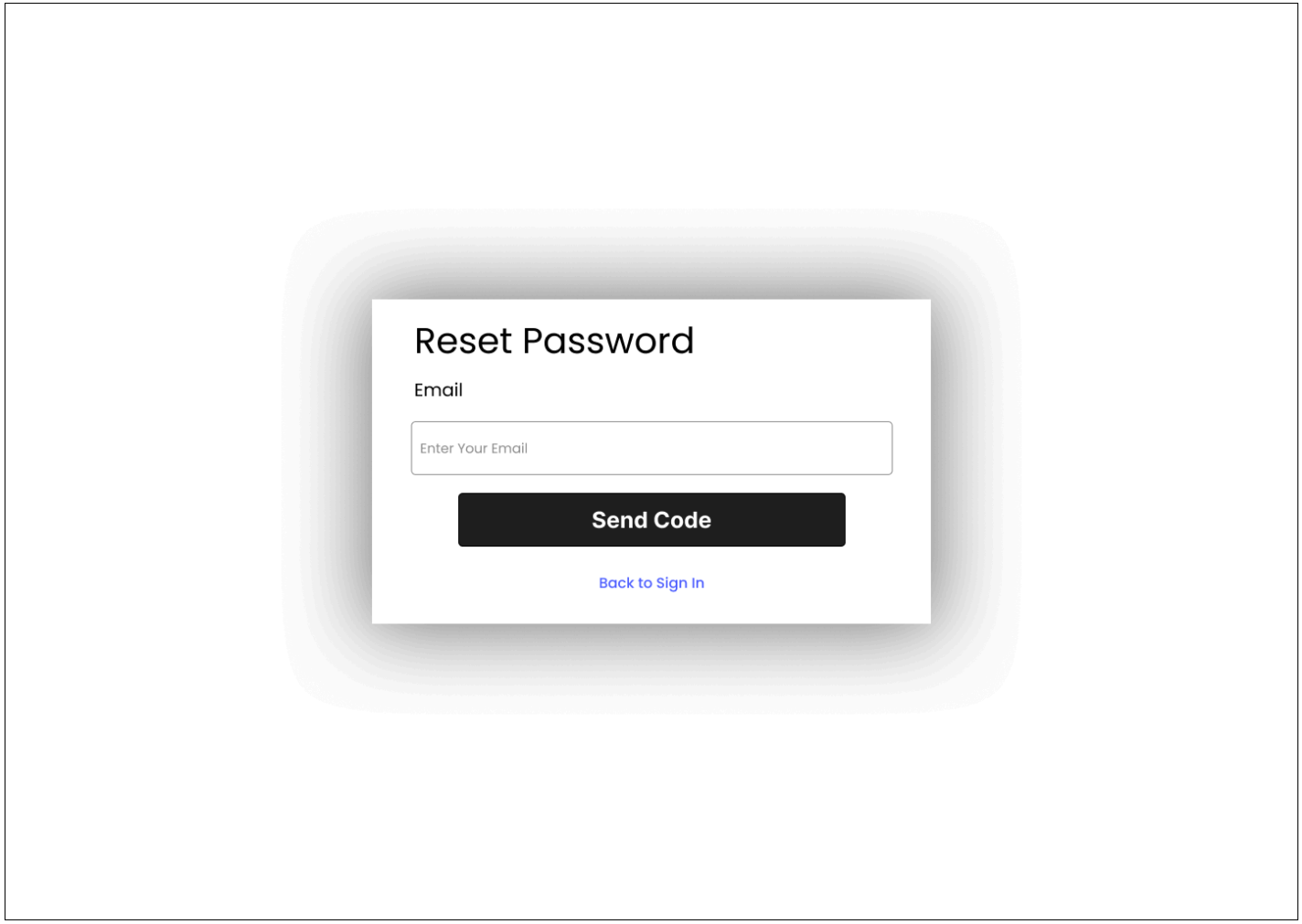
The document aims to provide a clear road-map for developers to translate the vision of Smart Inventory into a user-centric and efficient application.

2 Wireframes

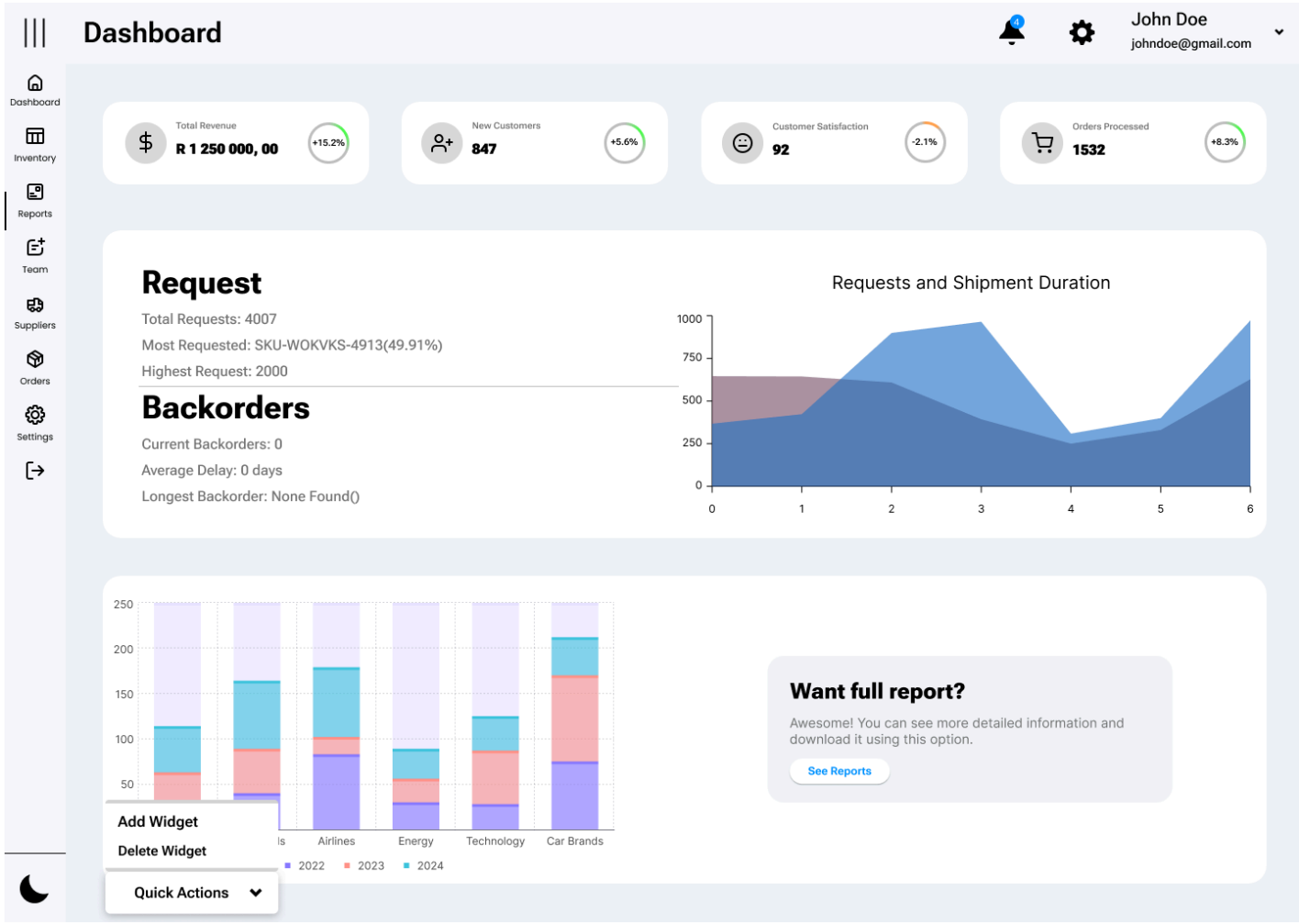
2.1 Sign In / Login

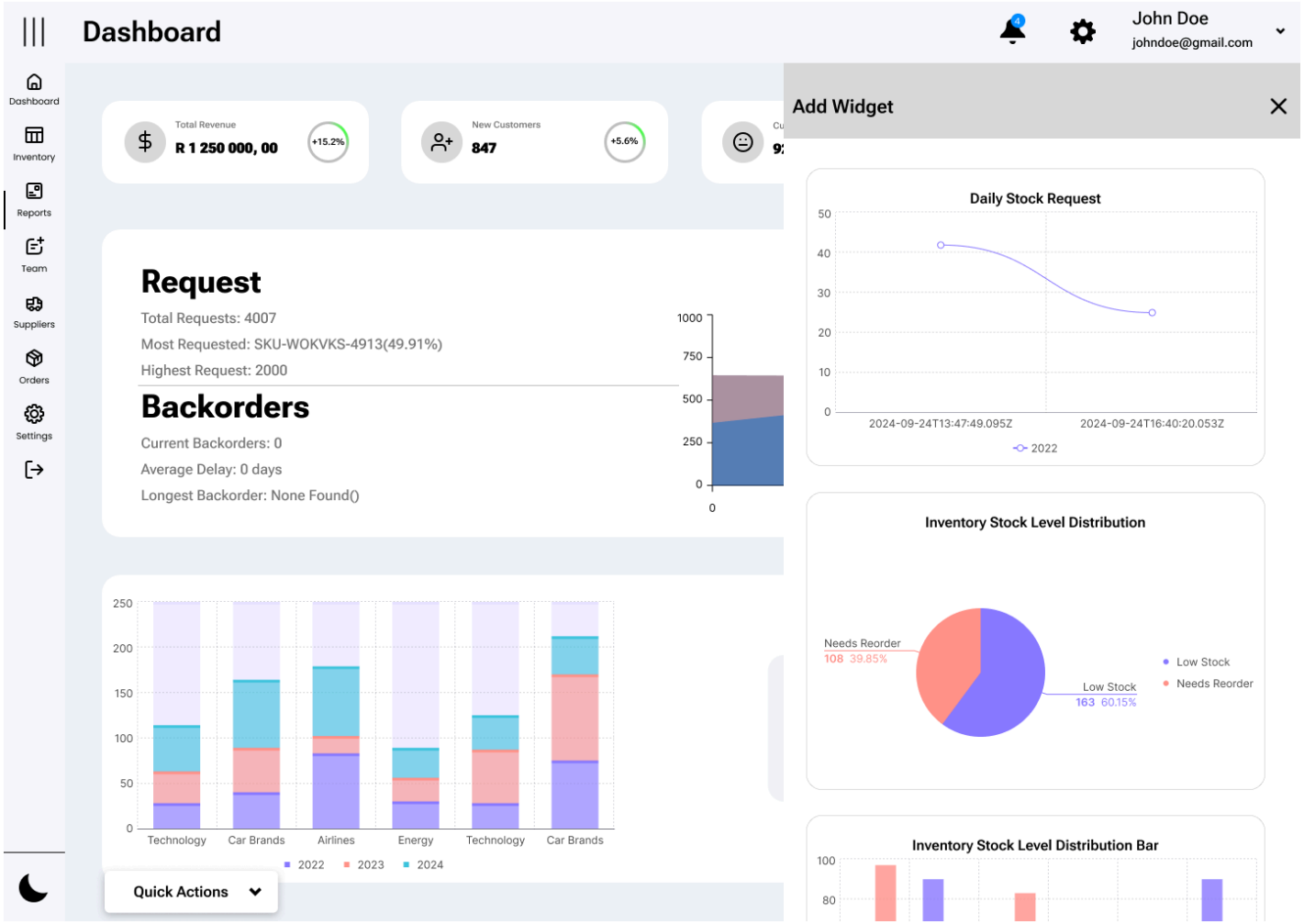



Sign In
Create Account
Email
Enter Your Email
Password
Enter Your Password
Confirm Password
Confirm Your Password
Name
Enter Your Name
Surname
Enter Your Surname
Create Account

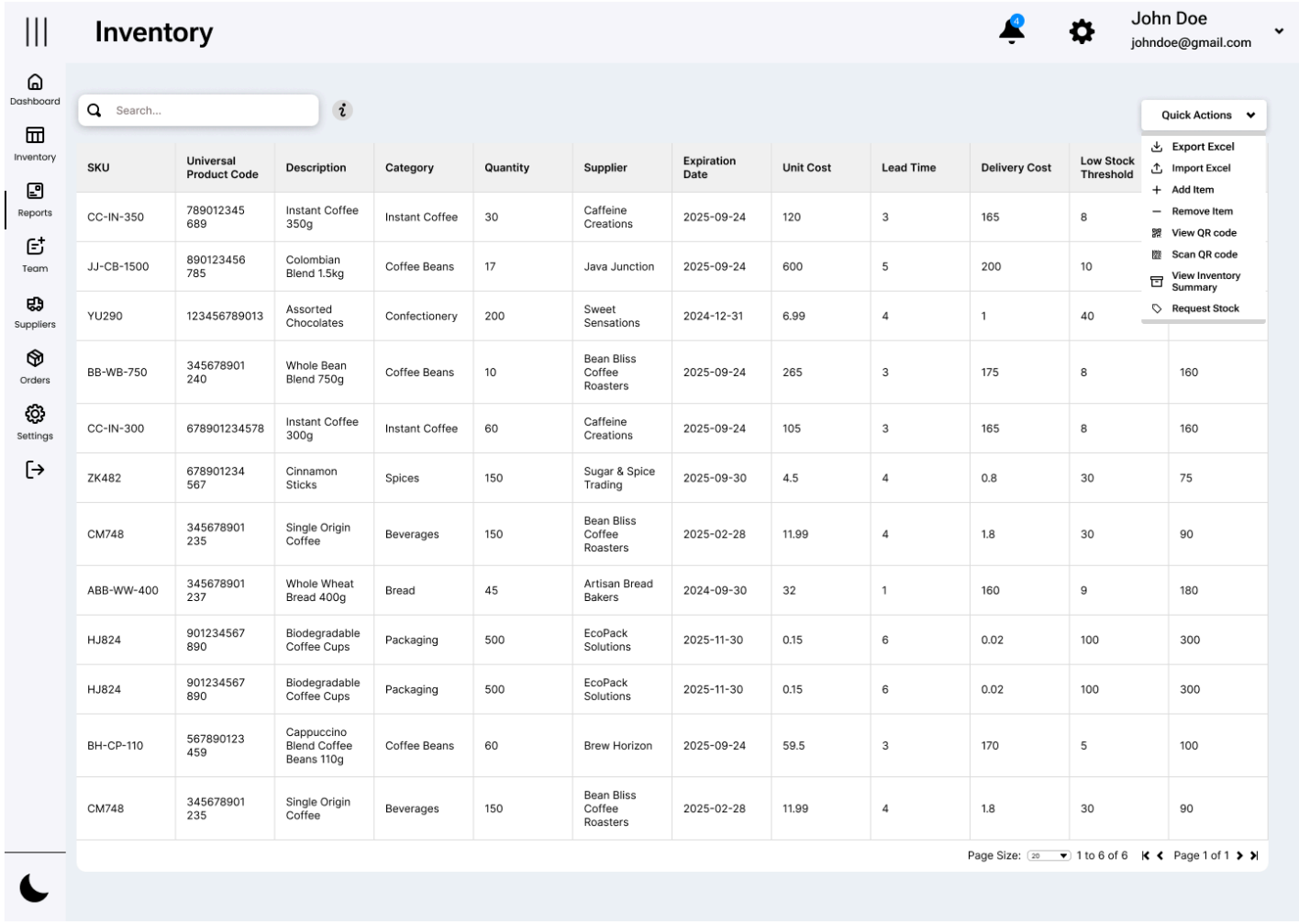

Reset Password
Email
Enter Your Email
Send Code
Back to Sign In

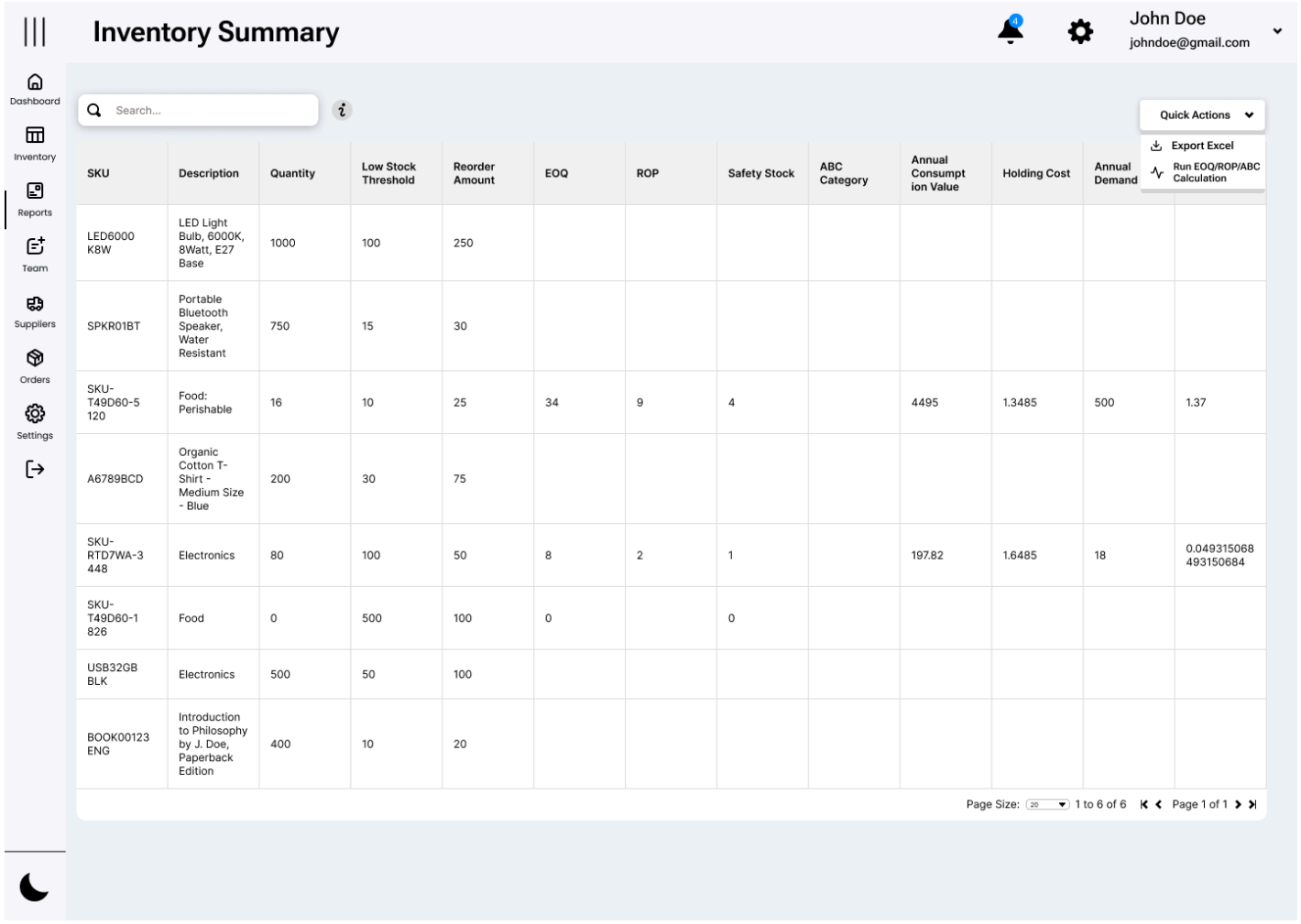
2.2 Dashboard



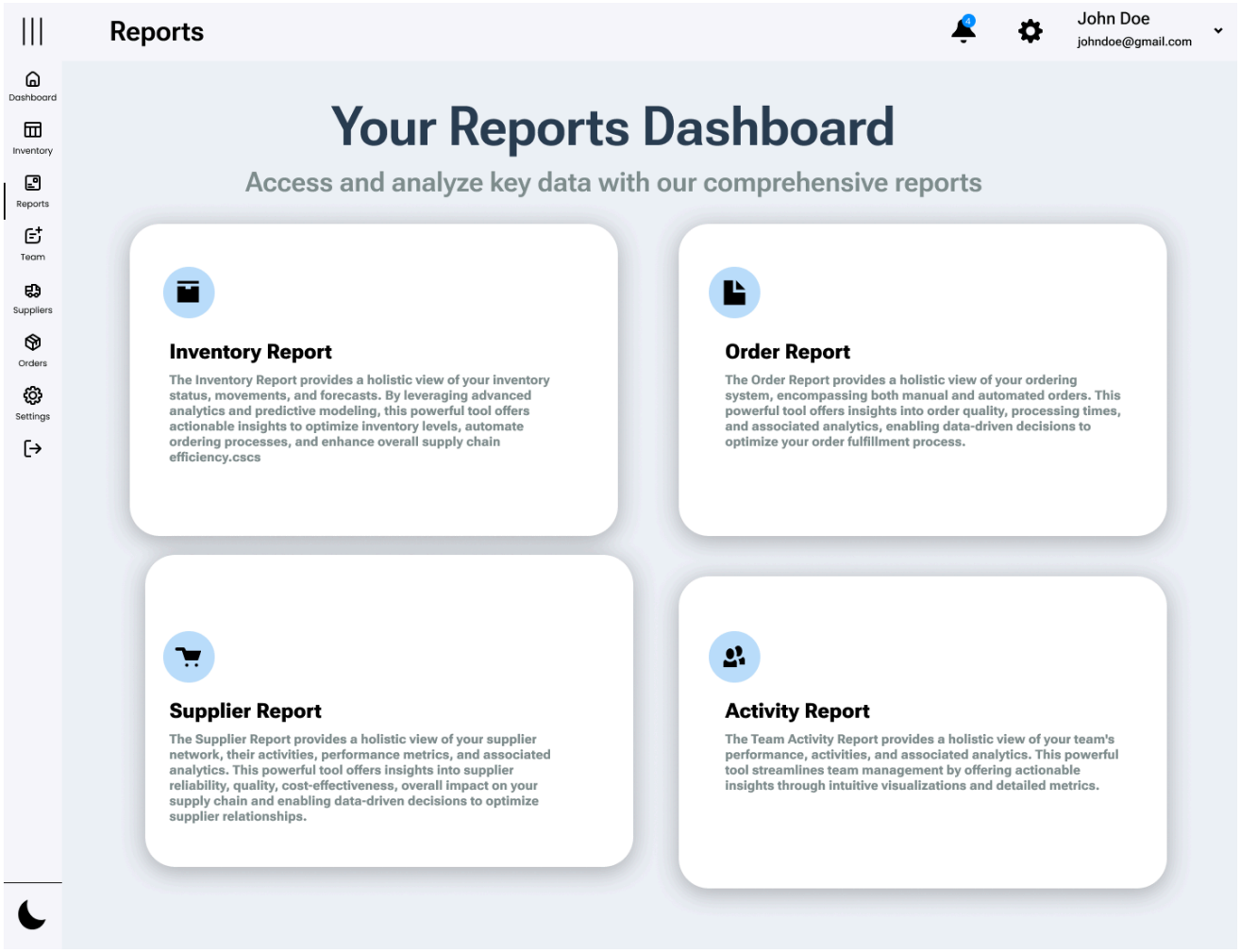

Dashboard
John Doe
johndoe@gmail.com
Dashboard
Inventory
Reports
Team
Suppliers
Orders
Settings
Total Revenue
R 1 250 000, 00
+15.2%
New Customers
847
+5.6%
Request
Total Requests: 4007
Most Requested: SKU-WOKVKS-4913(49.91%)
Highest Request: 2000
Backorders
Current Backorders: 0
Average Delay: 0 days
Longest Backorder: None Found()
1000
750
500
250
0
0
250
200
150
100
50
0
Technology
Car Brands
Airlines
Energy
Technology
Car Brands
2022
2023
2024
Quick Actions
Add Widget
Daily Stock Request
50
40
30
20
10
0
2024-09-24T13:47:49.095Z
2024-09-24T16:40:20.053Z
2022
Inventory Stock Level Distribution
Needs Reorder
108 39.85%
Low Stock
163 60.15%
Low Stock
Needs Reorder
Inventory Stock Level Distribution Bar
100
80

2.3 Inventory/Inventory Summary

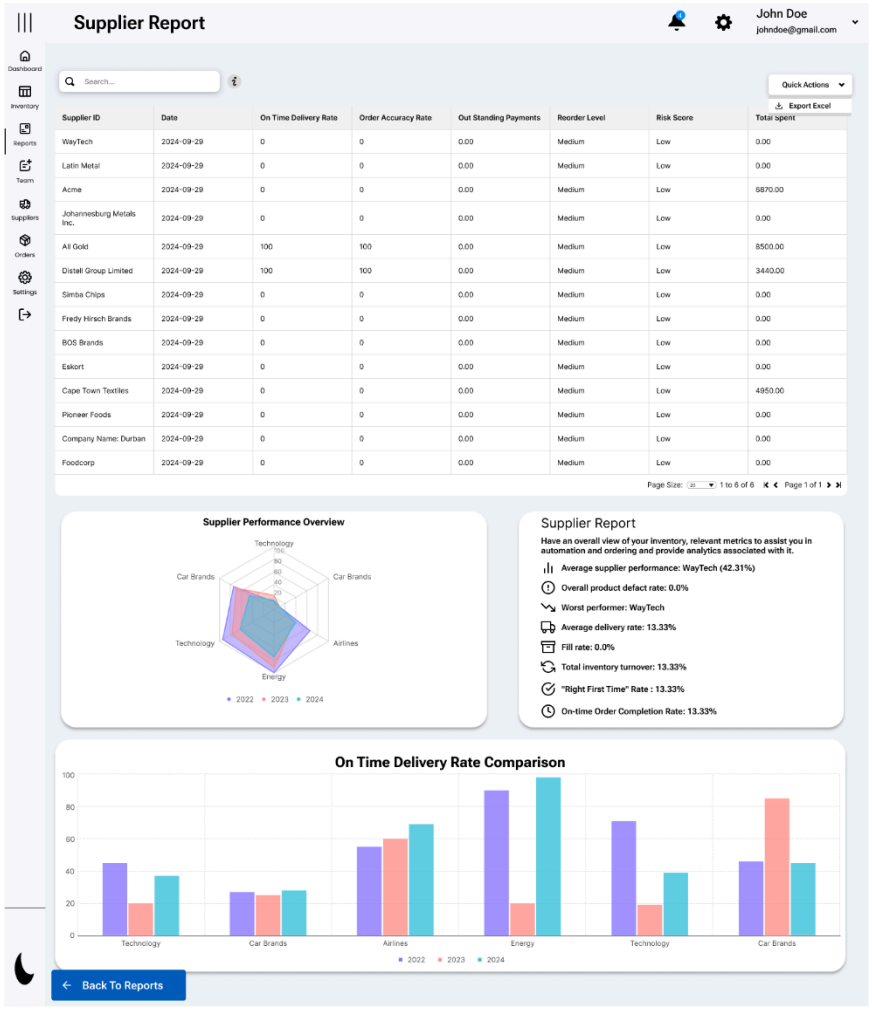



Inventory Summary
John Doe
johndoe@gmail.com
Dashboard
Inventory
Reports
Team
Suppliers
Orders
Settings
Search...
Quick Actions
Export Excel
Run EOQ/ROP/ABC Calculation
SKU
Description
Quantity
Low Stock Threshold
Reorder Amount
EOQ
ROP
Safety Stock
ABC Category
Annual Consumption Value
Holding Cost
Annual Demand
LED6000K8W
LED Light Bulb, 6000K, 8Watt, E27 Base
1000
100
250
SPKR01BT
Portable Bluetooth Speaker, Water Resistant
750
15
30
SKU-T49D60-5120
Food: Perishable
16
10
25
34
9
4
4495
1.3485
500
1.37
A6789BCD
Organic Cotton T-Shirt - Medium Size - Blue
200
30
75
SKU-RTD7WA-3448
Electronics
80
100
50
8
2
1
197.82
1.6485
18
0.049315068493150684
SKU-T49D60-1826
Food
0
500
100
0
0
USB32GBBLK
Electronics
500
50
100
BOOK00123ENG
Introduction to Philosophy by J. Doe, Paperback Edition
400
10
20
Page Size: 20
1 to 6 of 6
Page 1 of 1

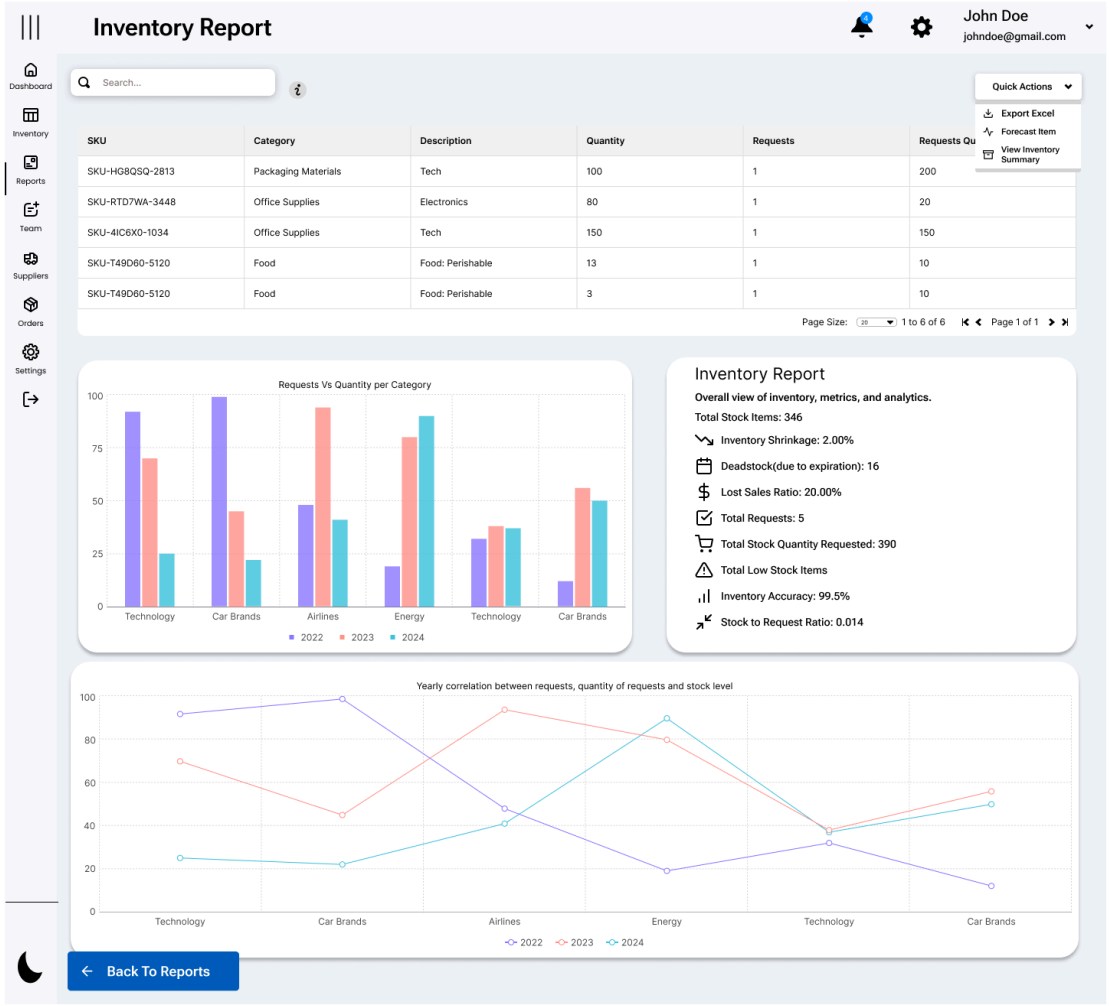
2.4 Reports


Reports
John Doe
johndoe@gmail.com
Dashboard
Inventory
Reports
Team
Suppliers
Orders
Settings
Your Reports Dashboard
Access and analyze key data with our comprehensive reports
Inventory Report
The Inventory Report provides a holistic view of your inventory status, movements, and forecasts. By leveraging advanced analytics and predictive modeling, this powerful tool offers actionable insights to optimize inventory levels, automate ordering processes, and enhance overall supply chain efficiency.cscs
Order Report
The Order Report provides a holistic view of your ordering system, encompassing both manual and automated orders. This powerful tool offers insights into order quality, processing times, and associated analytics, enabling data-driven decisions to optimize your order fulfillment process.
Supplier Report
The Supplier Report provides a holistic view of your supplier network, their activities, performance metrics, and associated analytics. This powerful tool offers insights into supplier reliability, quality, cost-effectiveness, overall impact on your supply chain and enabling data-driven decisions to optimize supplier relationships.
Activity Report
The Team Activity Report provides a holistic view of your team's performance, activities, and associated analytics. This powerful tool streamlines team management by offering actionable insights through intuitive visualizations and detailed metrics.

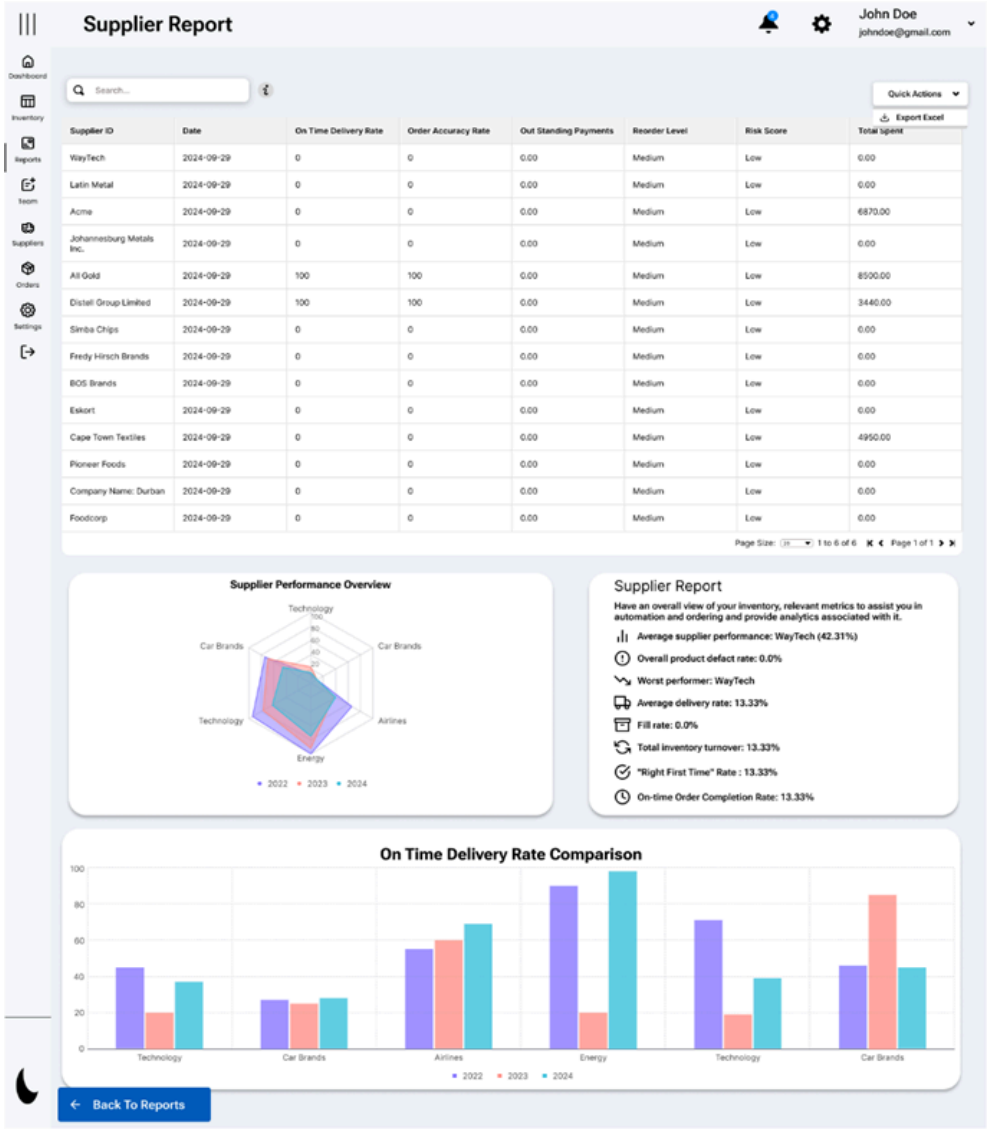
2.4.1 Orders Report



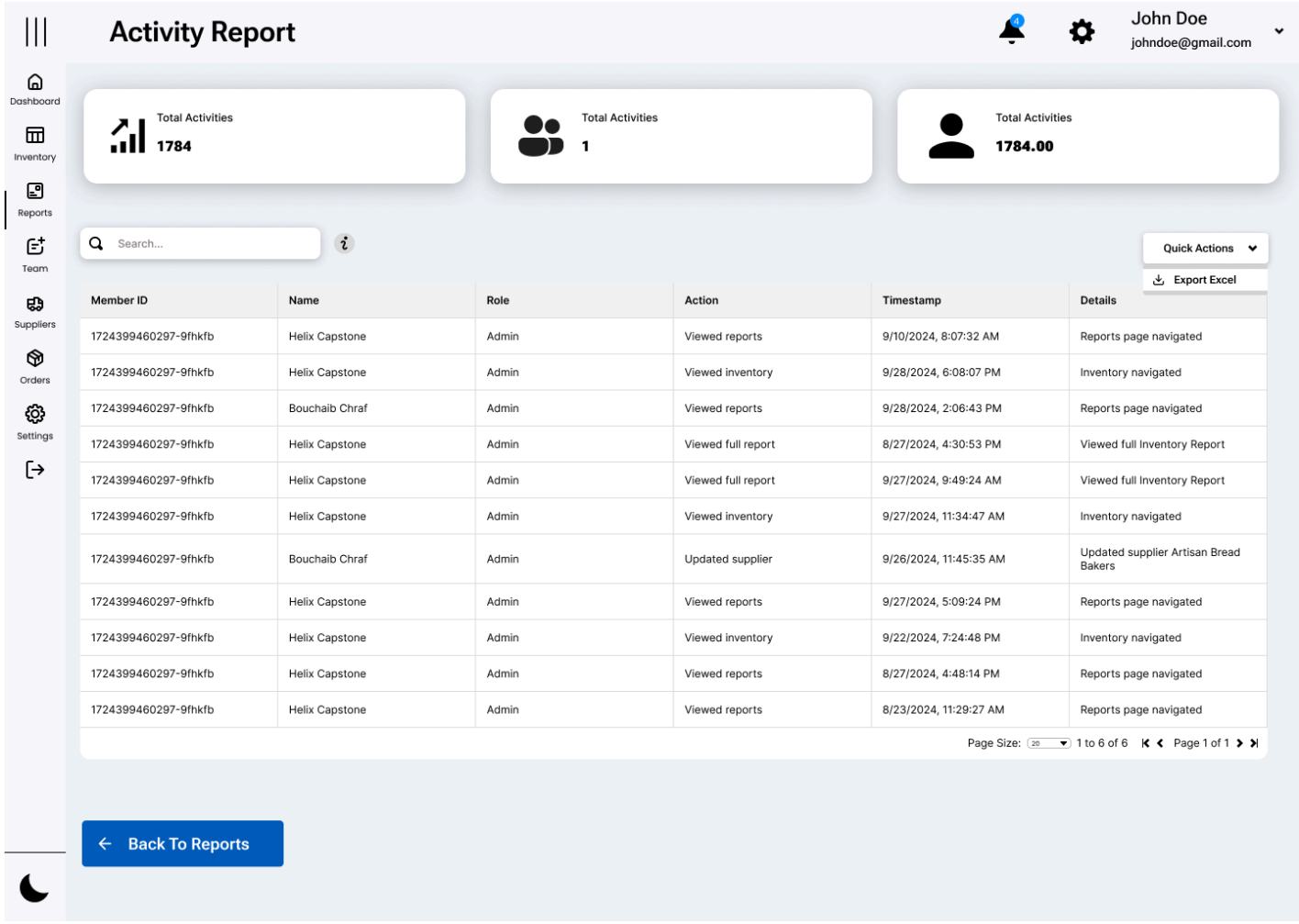
2.4.2 Inventory Report



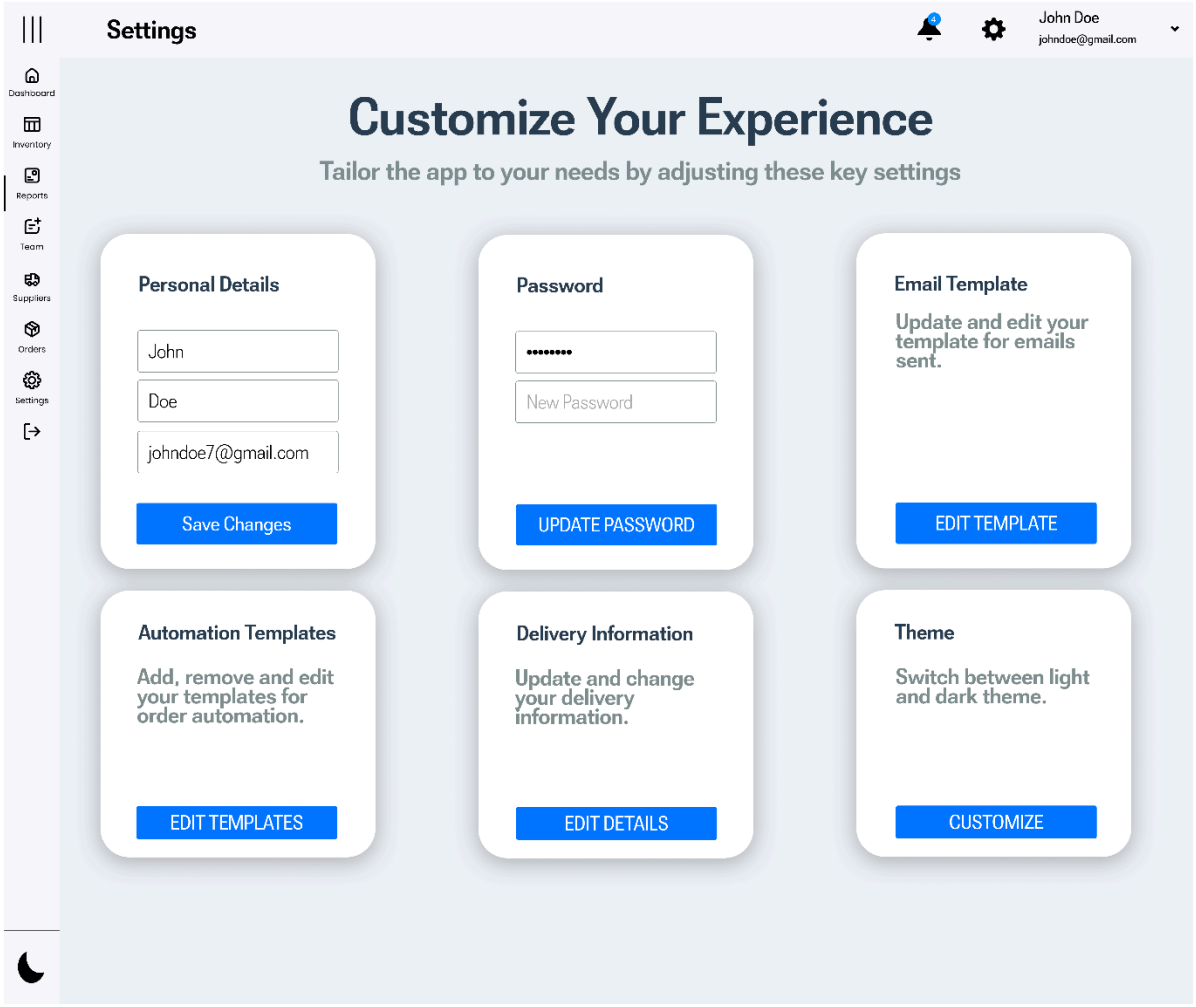
2.4.3 Supplier Report



2.4.4 Activity Report

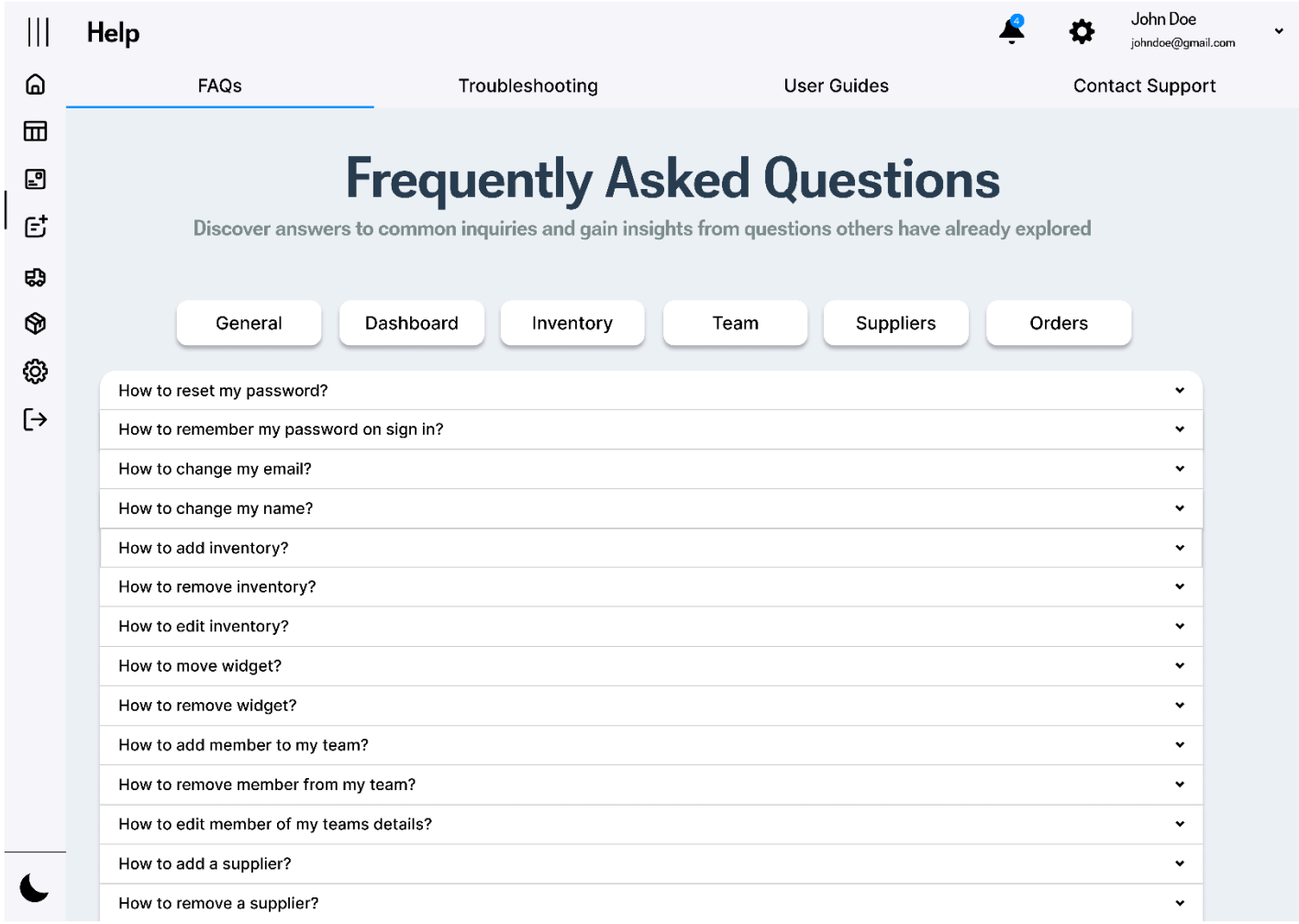


2.5 Settings

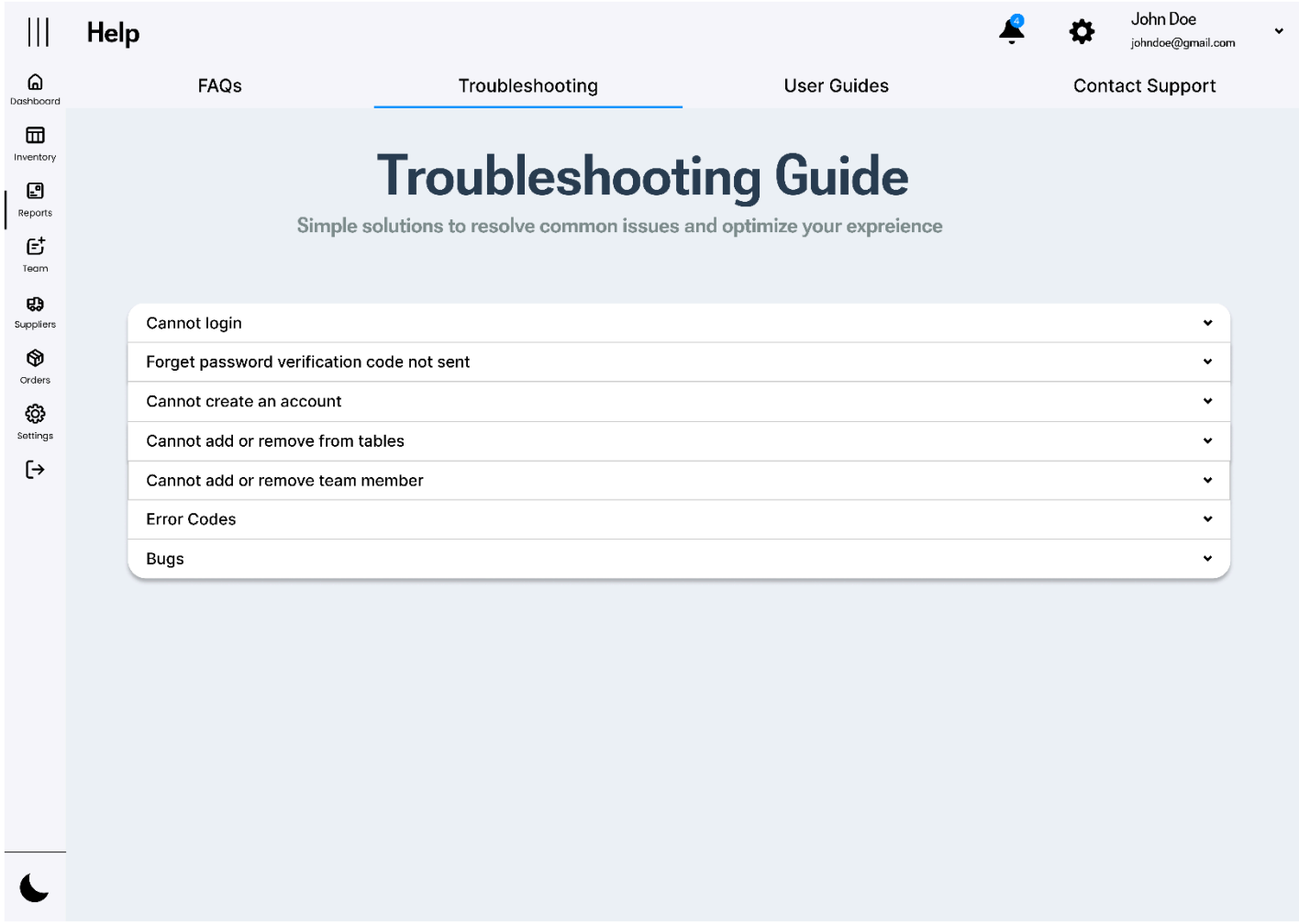

Settings
John Doe
johndoe@gmail.com
Dashboard
Inventory
Reports
Team
Suppliers
Orders
Settings
Customize Your Experience
Tailor the app to your needs by adjusting these key settings
Personal Details
John
Doe
johndoe7@gmail.com
Save Changes
Password
New Password
UPDATE PASSWORD
Email Template
Update and edit your template for emails sent.
EDIT TEMPLATE
Automation Templates
Add, remove and edit your templates for order automation.
EDIT TEMPLATES
Delivery Information
Update and change your delivery information.
EDIT DETAILS
Theme
Switch between light and dark theme.
CUSTOMIZE

2.6 Help

2.6.1 FAQs

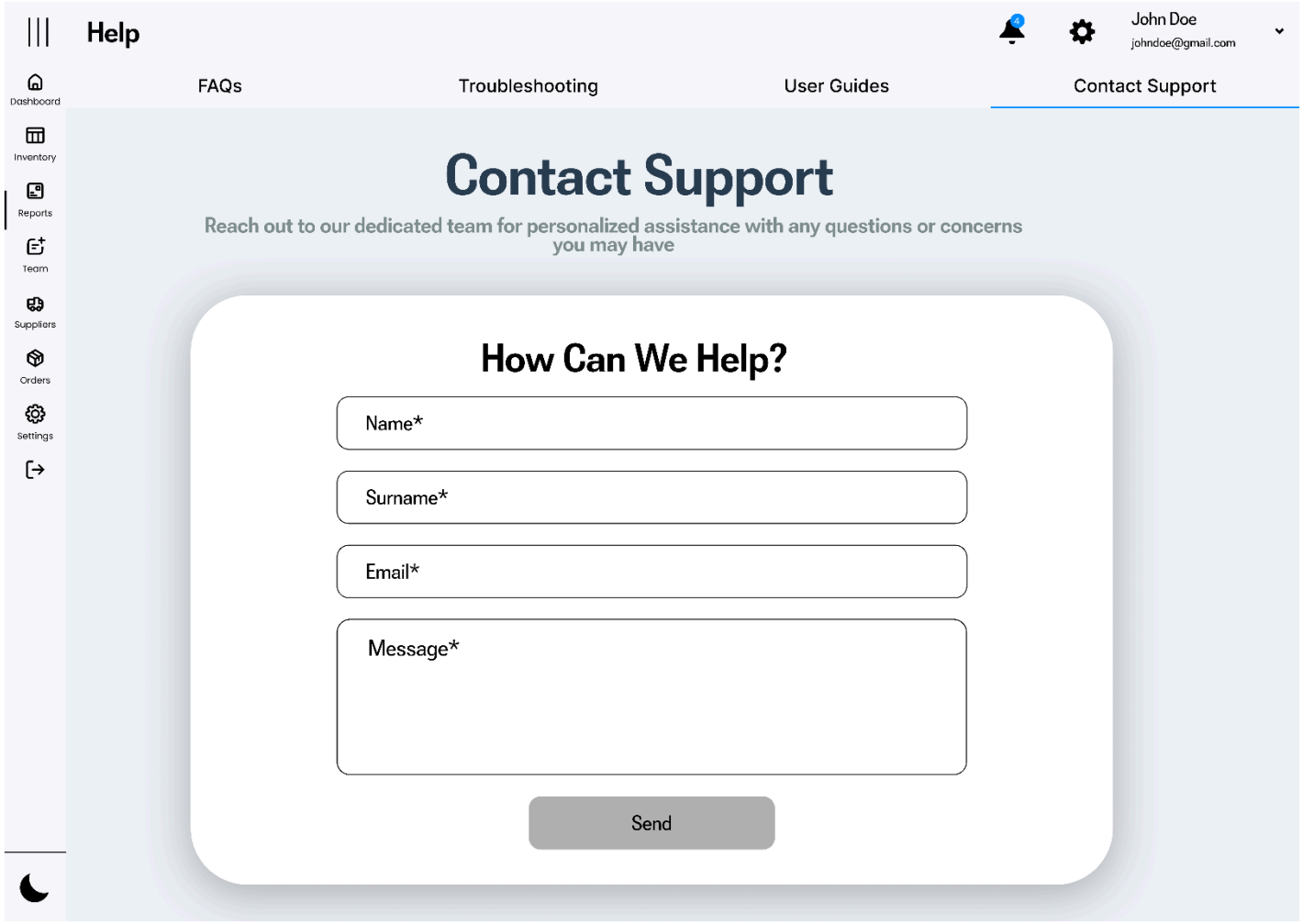


2.6.2 Troubleshooting



2.6.3 User Guides

2.6.4 Contact Support



3 Database Design

The Smart Inventory system will utilize Amazon DynamoDB, a fully managed NoSQL database service provided by Amazon Web Services (AWS). DynamoDB offers high scalability, low latency, and flexible data modeling, making it suitable for the inventory management system. The key tables and their sample data are as follows:

Table 1: Users Table (Cognito)

Partition Key:	**Username**
Attributes:	
Username	First
Email	Last
Verified	tenetID

Table 2: Suppliers Table

Partition Key:	**SupplierID**
Attributes	
supplierID	contactPhone
Address	createdAt
contactEmail	name
updatedAt	

Table 3: Stock Request Table

Partition Key	**stockRequestId**
Attributes	
stockRequestId	SKU
tenetId	Supplier
createdAt	Type
qtyReq	

Table 4: Inventory Table

Partition Key: **Sort Key:**	**inventoryID** **tenentId**
Attributes	
inventoryID	lowStockThreshold
tenetId	upc
Category	reorderFreq
createdAt	SKU
Description	Supplier
expirationDate	

Table 5: Orders Table

Partition Key: **Sort Key:**	**Order_ID** **Order_Date**
Attributes	
Order_ID	Order_Status
Order_Date	Quote_ID
Actual_Delivery_Date	Quote_Status
Creation_Time	Selected_Supplier
Expected_Delivery_Date	tenentId

Table 6: Generated Quote Suppliers

Partition Key: **Sort Key:**	**QuoteID** **Company_name**
Attributes	
QuoteID	SupplierID
Company_name	tenentId

Table 7: Generated Quote Items Table

Partition Key: **Sort Key:**	**QuoteID** **ItemSKU**
Attributes	
QuoteID	Quantity
ItemSKU	tenentId
inventoryID	

Table 8: Supplier Quote Summary Table

Partition Key: **Sort Key:**	**QuoteID** **SupplierID**
Attributes	
QuoteID	Subtotal
SupplierID	Total_Quote_Value
VAT_Percentage	Currency
VAT_Amount	Additional_Comments

Delivery_Date	tenentId
Delivery_Cost	Timestamp

Table 9: Supplier Quotes Prices Table

Partition Key: **Sort Key:**	**QuoteID** **Upc_SupplierID**
Attributes	
QuoteID	TotalPrice
upc	Discount
SupplierID	IsAvailable
ItemSKU	tenentId
UnitPrice	Timestamp
AvailableQuantity	

DynamoDB's querying capabilities and AWS integration make it suitable for the Smart Inventory system. The design can evolve, leveraging DynamoDB's scalability and flexibility.