

Healthcare Equipment Advisor Chatbot

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- XYZ Corporation



About: ACME Corporation Medical Equipment Sales Department

Facts about ACME corporation:

1. Provider of state-of-the-art medical equipment devices created in-house(Only sell Equipments of their own brand)
2. ACME already has a website where they support buying/renting of medical equipments.

Introduction

The chatbot we are proposing to develop will serve as a Medical Equipment Advisor, providing information and advice on medical equipment, taking orders, and offering technical support to patients and healthcare providers.

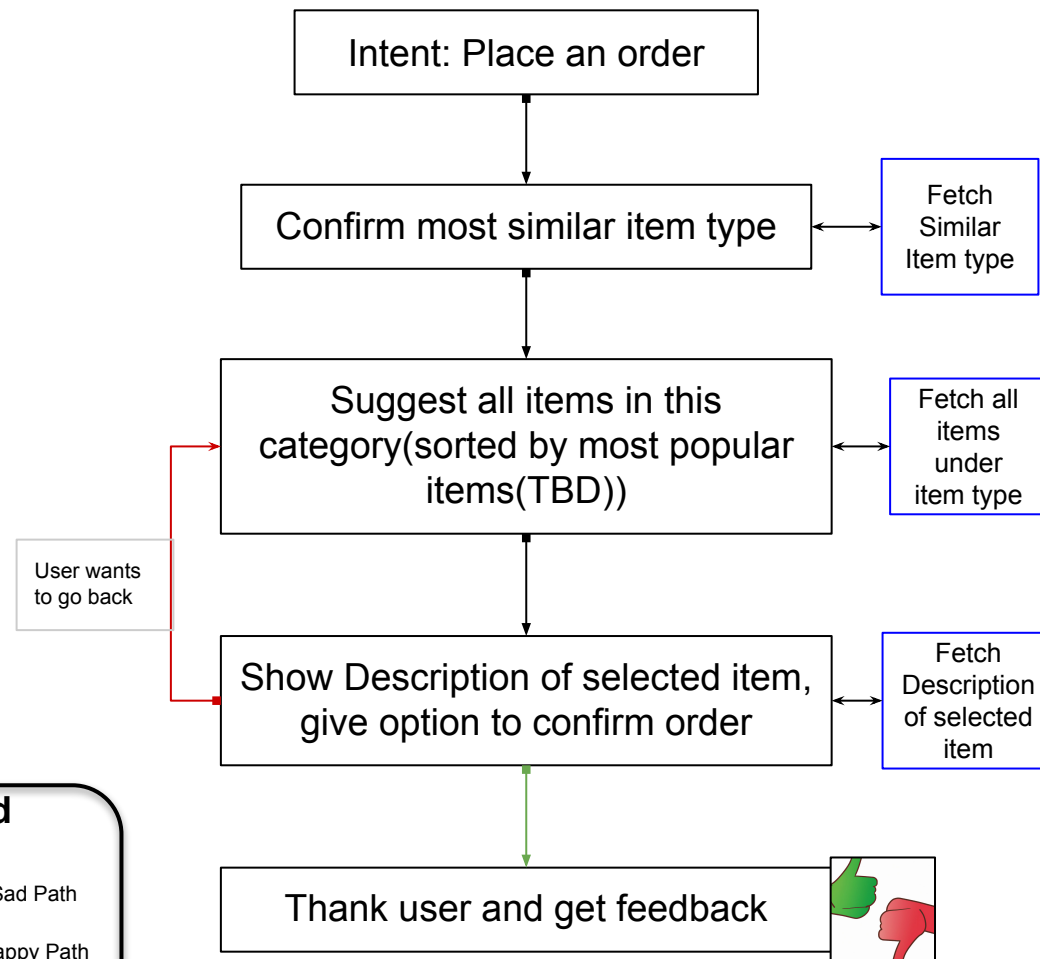
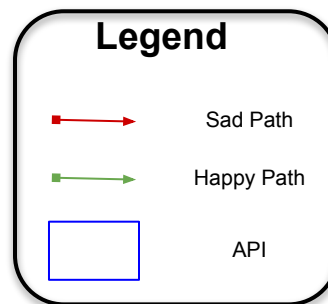
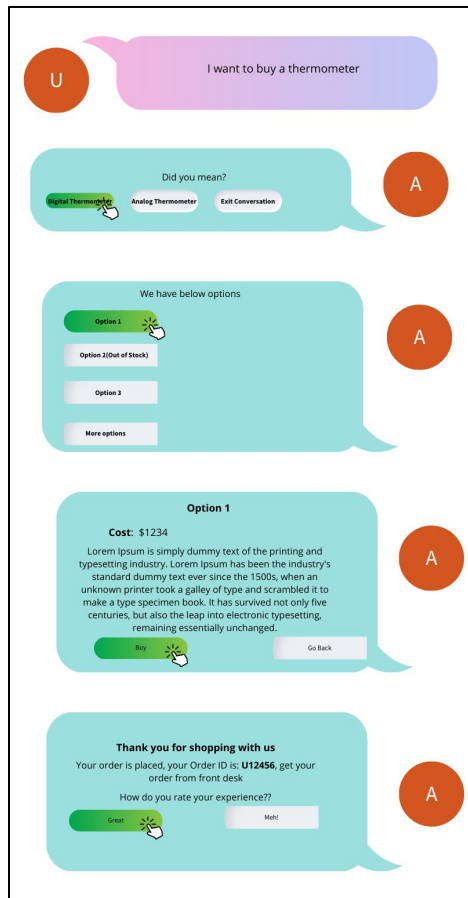
Target Audience: Younger Customers buying Medical Equipments which don't need prescription

Stories Supported

1. Deliverable 1
 - a. Ordering Equipment(Buy/Rent)
 - b. Currently Rented Equipments
 - c. File Complaint/Raise Ticket
2. Deliverable 2
 - a. Recommend Equipment
 - b. Technical Support

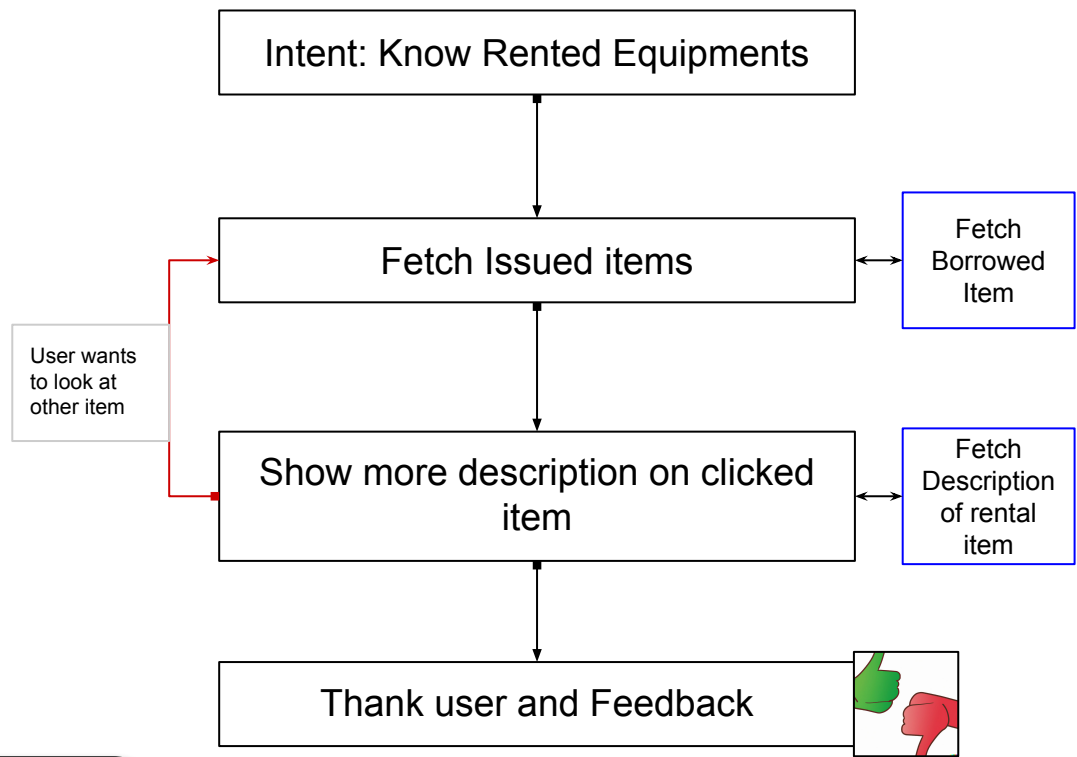
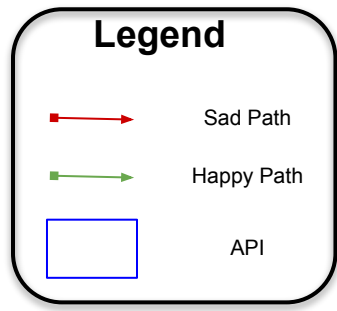
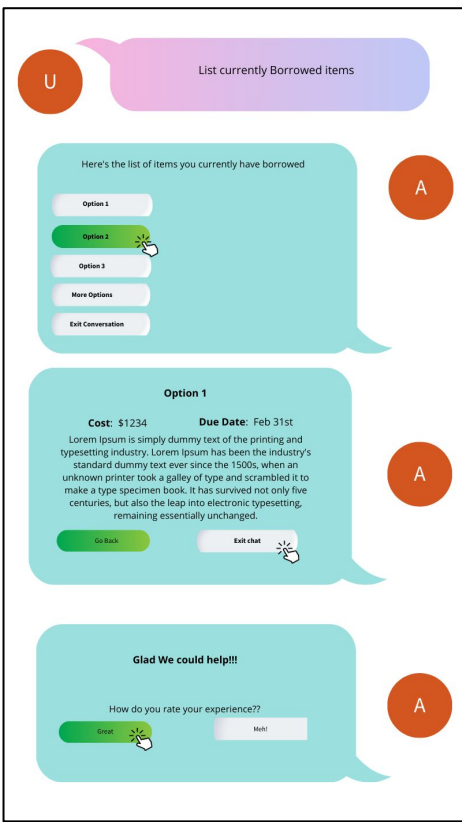
Ordering Equipment

Example conversation:



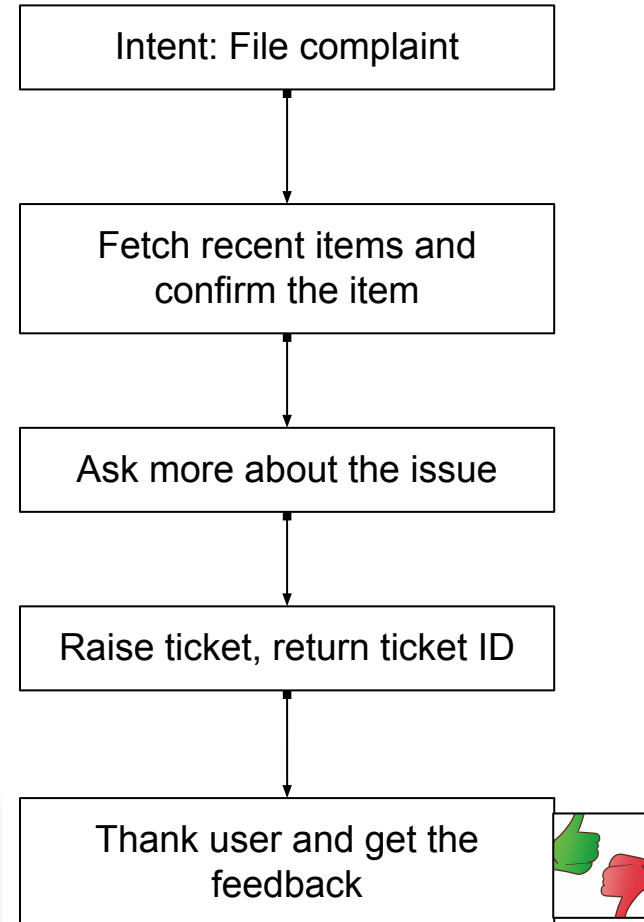
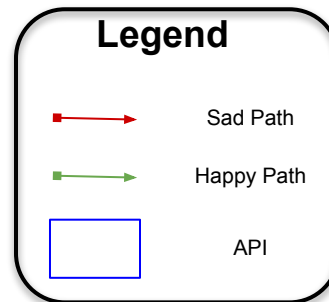
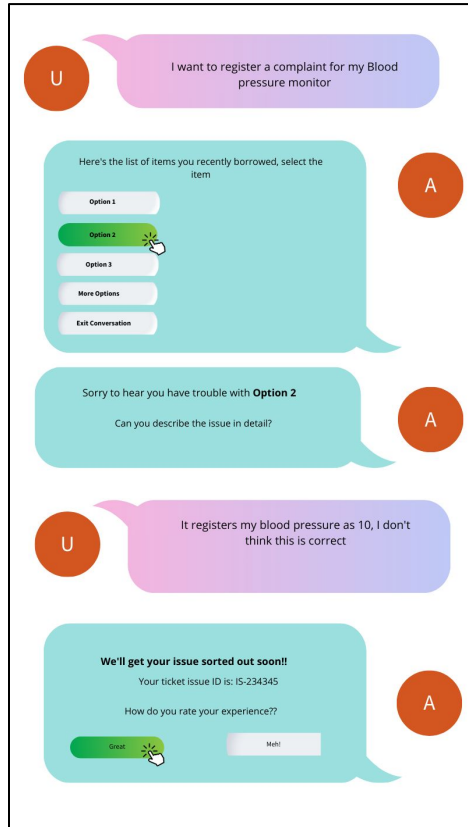
View Currently Rented Equipments

Example conversation:



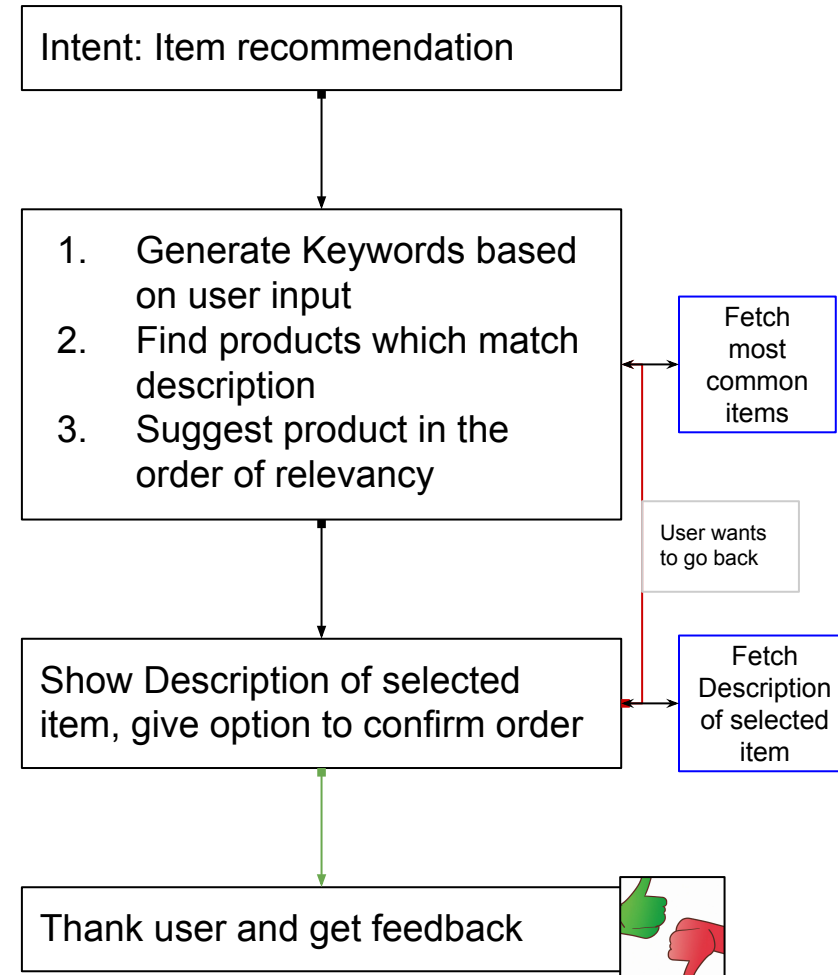
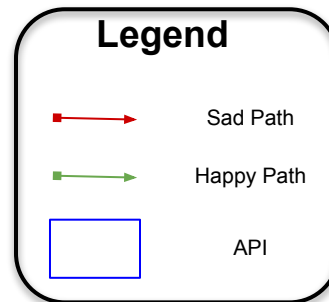
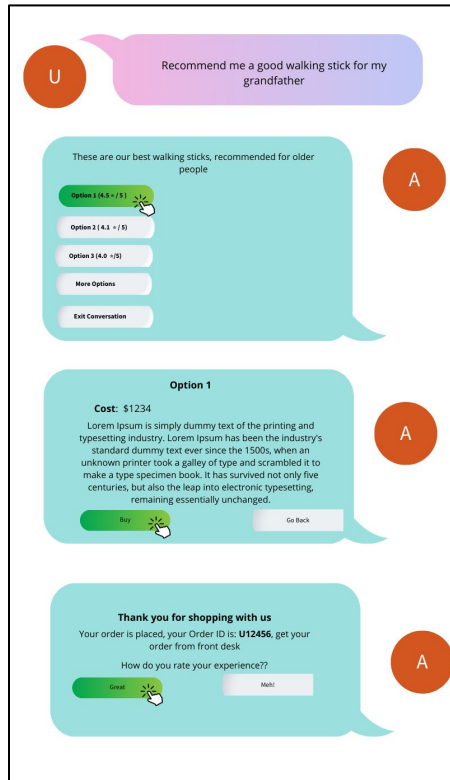
Raise ticket

Example conversation:



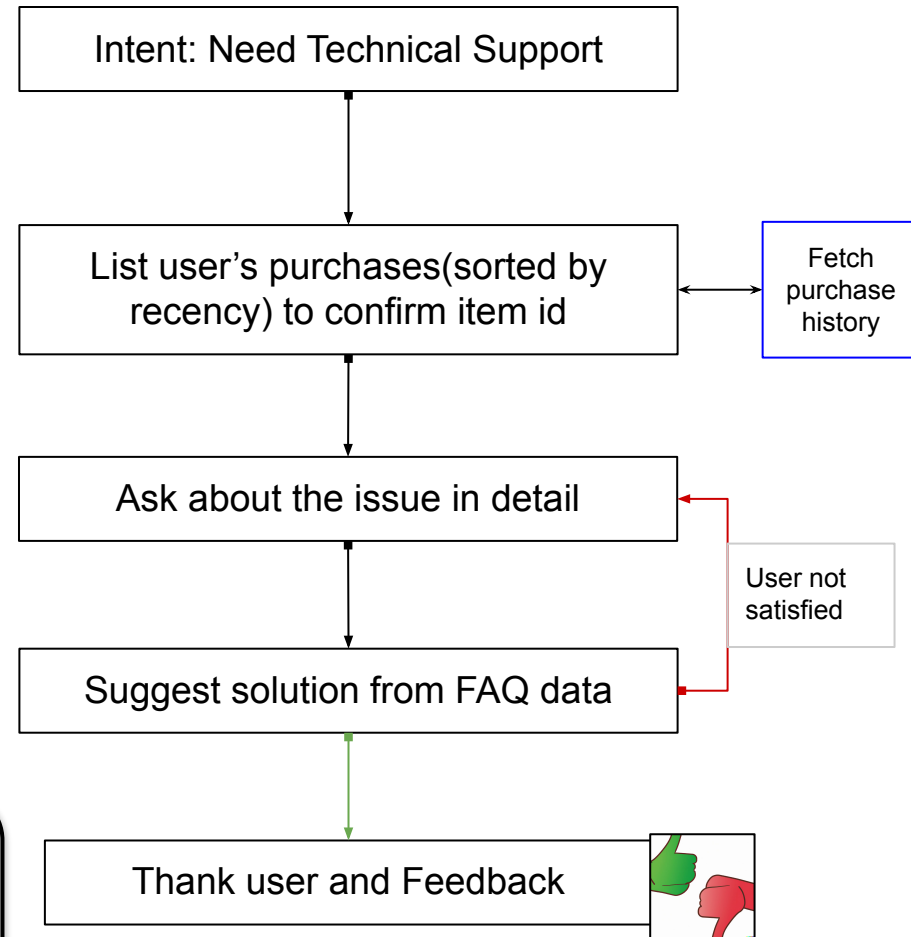
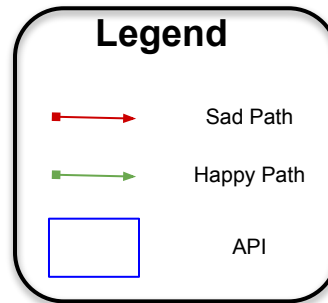
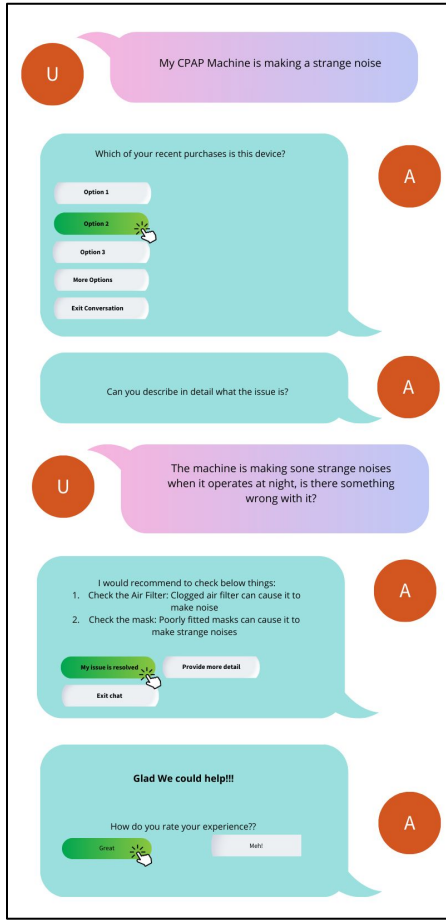
Recommend Equipment

Example conversation:

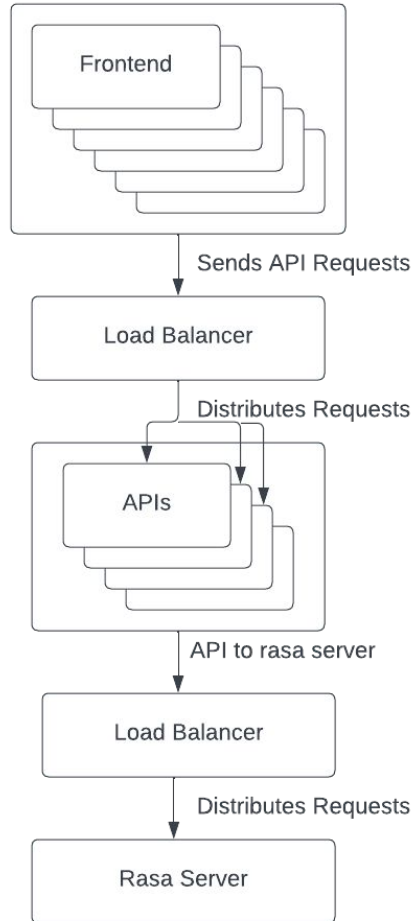


Technical Support

Example conversation:



High Level Design



Sticky Sessions to ensure that a request is processed by the correct instance of the Rasa server,

Requires a Load balancer that supports cookie-based or IP-based routing

API Endpoints

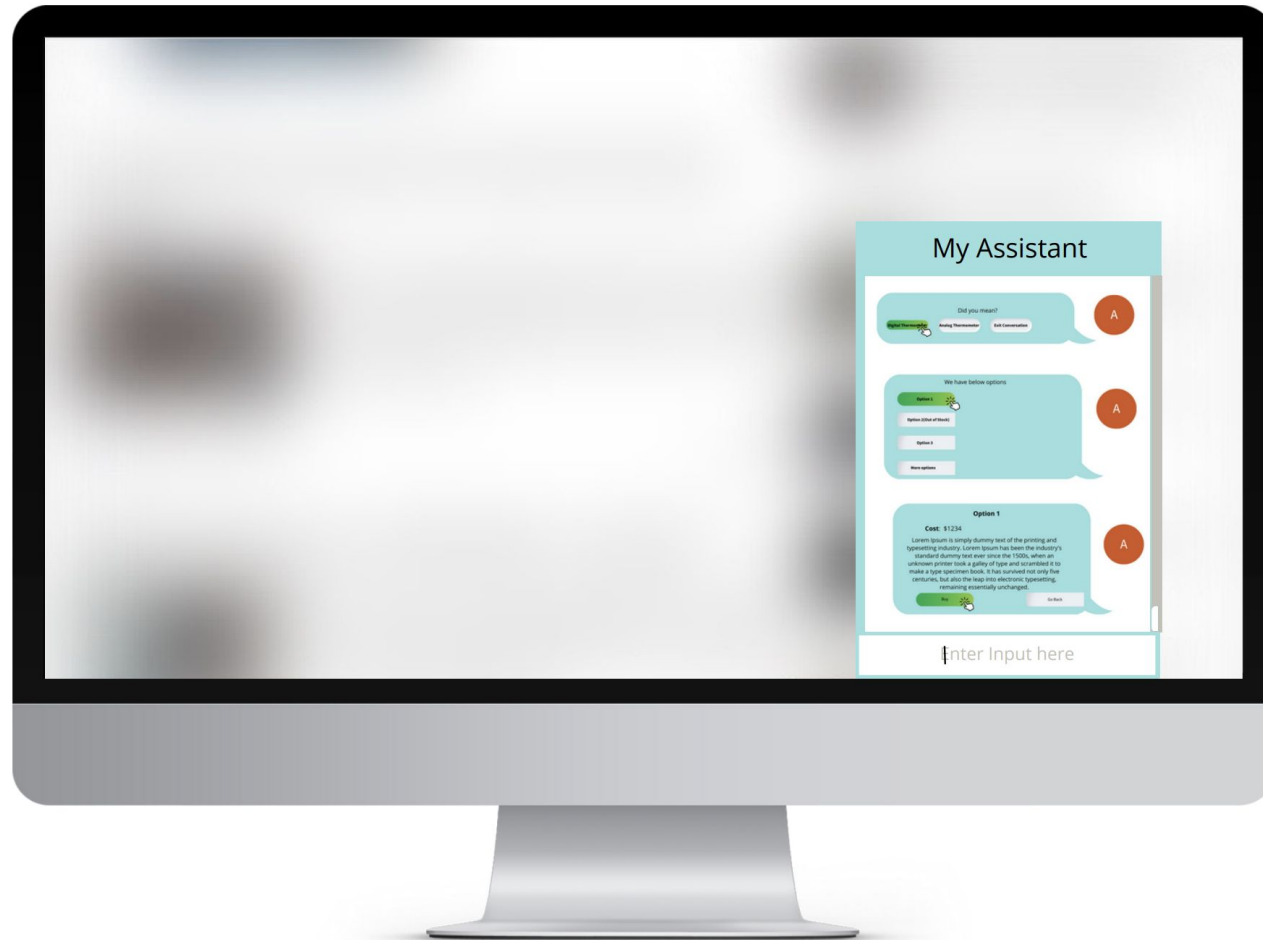
READ

- search item(s) by name/type
- get item details by id
- get user purchase history

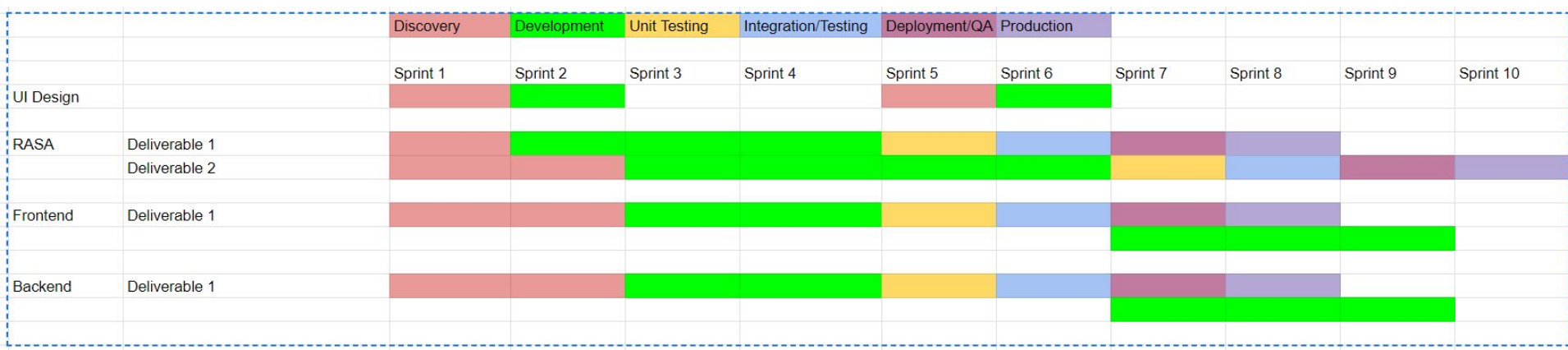
WRITE

- chat
- chat-buttons
- buy items
- rent items
- post a review/complaint

UI Mock up



Estimated Timeline



Costs - Developer costs

Phase	Task	Engineers Required	Estimated Timeline	Estimated Hours	Count	Hourly Wage	Estimated Cost Range
Discovery	Business analysis	Business Analyst	2-3 weeks	80-120	1	\$70 - \$120	\$5.6k - \$14.4k
	User research	User Researcher	2-3 weeks	80-120	1	\$70 - \$120	\$5.6k - \$14.4k
	Technical requirements analysis	Technical Analyst	1-2 weeks	40-80	1	\$70 - \$120	\$2.8k - \$9.6k
	Project planning and management	Project Manager	1-2 weeks	40-80	1	\$70 - \$120	\$2.8k - \$9.6k
Design	UI/UX design	UX Designer	3-4 weeks	120-160	1	\$70 - \$120	\$8.4k - \$19.2k
	Visual design	Visual Designer	1-2 weeks	40-80	1	\$70 - \$120	\$2.8k - \$9.6k
	Content creation	Content Creator	1-2 weeks	40-80	1	\$50 - \$100	\$2k - \$8k
Development	Front-end development	Front-end Developer	6-8 weeks	240-320	2	\$70 - \$120	\$33.6k - \$76.8k
	Back-end development	Back-end Developer	6-8 weeks	240-320	2	\$70 - \$120	\$33.6k - \$76.8k
	Integration and testing	Quality Assurance	1-2 weeks	40-80	2	\$50 - \$100	\$4k - \$16k
Infrastructure	Server setup and configuration	DevOps Engineer	1-2 weeks	40-80	1	\$70 - \$120	\$2.8k - \$9.6k
	Load balancer setup and configuration	DevOps Engineer	1-2 weeks	40-80	1	\$70 - \$120	\$2.8k - \$9.6k
	Monitoring setup and configuration	DevOps Engineer	1-2 weeks	40-80	1	\$70 - \$120	\$2.8k - \$9.6k
Data Science	Data collection and pre-processing	Data Scientist	4-6 weeks	160-240	2	\$120 - \$180	\$38.4k - \$86.4k
	Building and training the BERT-based chatbot model	Data Scientist	8-12 weeks	320-480	2	\$120 - \$180	\$76.8k - \$172.8k
Total							\$224.8k - \$542.4k

Cost - Developer tools costs

Resource	Type	Rental cost per month	# license required	Cost per month
Rasa	Free Tier	-	-	-
EC2 instance	p2.xlarge-p3.2xlarge	\$650-\$2200	2	\$1300 - \$4400
Laptop Rental Cost	MacBook rental cost	\$100	12	\$1,200.00
IntelliJ Licensing		\$60	6	\$360.00
Postman		\$12	6	\$72.00
Gitlab		\$24	12	\$288.00
Total				\$3800 - \$6800

Costs - hosting

Resource	Type	Hourly Cost	Monthly Cost (based on 720 hours)
EC2 instance	p3.2xlarge	\$3.06	\$2,203.00
	p2.xlarge	\$0.90	\$648.00
S3 bucket			\$2.3 (10 GB storage, 10 GB data transfer)
Elastic Load Balancer	Application Load Balancer	\$0.02	\$16.20
	Network Load Balancer	\$0.05	\$34.56
AWS Lambda			\$0.15 (1 million requests, 500ms average duration, 512 MB memory)
AWS API Gateway			\$0.65 (1 million API calls, 100 GB data transfer)
Total			~\$1000 - \$ 2500

Thank you!