
IBM HACKATHON PROJECT

TRAVEL PLANNER AGENT

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OUTLINE

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PROBLEM STATEMENT

Design and develop an AI-powered Travel Planner Agent that :

- Plans trips based on user preferences
- Suggests destinations, builds itineraries
- Recommends transport and accommodations
- Uses real-time data (weather, maps, events)
- Manages bookings and alerts
- Optimizes schedules dynamically

Proposed Solution :

To address the challenge, we propose building an AI-powered Travel Planner Agent using IBM Cloud Lite services and IBM Granite. This smart assistant will help users plan trips by understanding their preferences, budget, travel dates, and constraints through natural language input. The core functionality will be delivered via a conversational interface powered by IBM Watson Assistant, integrated with IBM Granite to provide intelligent, real-time, and personalized travel recommendations.

TECHNOLOGY USED

- IBM cloud lite services
- Natural Language Processing (NLP)
- Large Language models (LLM)
- IBM Granite model
- IBM App Connect

IBM CLOUD SERVICES USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Functions
- IBM Cloud service
- IBM Granite (via watsonx.ai studio)
- IBM Cloud Object Storage
- IBM AI Tools

WOW FACTORS

The Travel Planner Agent offers impressive features such as real-time itinerary updates based on weather conditions and travel delays, ensuring a smooth journey. It uses IBM Granite's advanced AI to understand user inputs and deliver highly personalized travel plans. The agent intelligently recommends destinations and routes tailored to user interests, budgets, and constraints. Seamless integration across IBM Cloud services enables a natural, conversational experience that simplifies complex travel planning into an effortless task.

Unique features:

- Real-time itinerary adjustment based on live weather and travel updates
- Natural language understanding using IBM Granite for personalized suggestions
- Tailored recommendations based on user interests, budget, and trip duration
- Smart integration of maps, weather, and booking data for seamless planning
- Chat-based interactive experience powered by Watson Assistant
- Serverless backend logic using IBM Cloud Functions for efficiency

END USERS

- Individual Travellers
- Travel bloggers and influencers
- Travel agencies offering customized experiences
- Business executives planning multi-city trips
- Academic or research-based travelers

SETTING UP

Projects / TRAVEL PLANNER AGENT / TRAVEL PLANNER AGENT

Share feedback 0 Autosave on ON New agent + Deploy 🔒 ?

Build

AI Model: granite-3-3-8b-instruct 🔍 ⏮ ⏭

Setup

Name

TRAVEL PLANNER AGENT

Description 55/100

Plan your perfect trip in minutes with the power of AI.


Icon

Placeholder image

Quick start questions

Add up to 4 quick start questions that your users can select.

Agent preview



Sample questions

My budget is around ₹50,000. Where can I go? →

I'm traveling with my family. Can you plan something kid-friendly? →

I want a relaxing trip with beaches and good food →

I prefer trains over flights. Can you plan accordingly? →

Type something... 🔍 ➤

AGENT INSTRUCTIONS

Projects / TRAVEL PLANNER AGENT / TRAVEL PLANNER AGENT

Share feedback Autosave on New agent Deploy

Advanced configuration

Agent instructions Common instructions

Agent instructions are unique to this agent and will affect its specific behavior. [Reset to default](#)

You are a helpful assistant that uses tools to answer questions in detail.
When greeted, say "Hi, I am Travel Planner ai agent. How can I help you?"

You are a smart, friendly, and helpful Travel Planner Agent. Your job is to assist users in planning personalized travel experiences based on their input such as destination, travel dates, budget, and preferences.

Always follow these rules:

1. Greet the user warmly and offer help.
2. Ask essential travel planning questions in a friendly, conversational tone:
 - Destination
 - Travel dates
 - Budget
 - Departure location

Cancel Apply

QUICK START QUESTIONS PREVIEW

Projects / TRAVEL PLANNER AGENT / TRAVEL PLANNER AGENT

Share feedback Autosave on New agent + Deploy

Build

AI Model: granite-3-3-8b-instruct

Quick start questions

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I want a relaxing trip with beaches and good food

I prefer trains over flights. Can you plan accordingly?

Configuration

Framework: LangGraph Architecture: ReAct

Agent preview



Sample questions

My budget is around ₹50,000. Where can I go?

I'm traveling with my family. Can you plan something kid-friendly?

I want a relaxing trip with beaches and good food

I prefer trains over flights. Can you plan accordingly?

Type something...

TOOLS USED & TESTING

The screenshot displays the 'Build' interface for a 'TRAVEL PLANNER AGENT'. The top navigation bar includes 'Projects / TRAVEL PLANNER AGENT / TRAVEL PLANNER AGENT', 'Share feedback', 'Autosave on', 'New agent +', and a 'Deploy' button. The 'Build' section on the left lists five tools under 'Added tools (5)':

- Google search**: Retrieve information from the internet with the Google search engine.
- DuckDuckGo search**: Retrieve information from the internet with the DuckDuckGo search engine.
- Wikipedia search**: Retrieve information from Wikipedia articles.
- Webcrawler**: Retrieve information from a website.
- Weather**: Retrieve the weather of a city.

The 'Agent preview' section on the right shows a list of five travel recommendations:

- Goa**: Known for its beautiful beaches, vibrant nightlife, and rich Portuguese-inspired culture, Goa is a popular choice for budget travelers. You can find affordable accommodations, delicious street food, and plenty of activities like water sports, beach shacks, and local markets.
- Hampi, Karnataka**: A UNESCO World Heritage site, Hampi offers ancient temples, ruins, and natural beauty. It's a budget-friendly destination with affordable lodging, food, and entry fees to the sites.
- Coorg, Karnataka**: If you prefer a hill station, Coorg offers scenic landscapes, coffee plantations, and adventure activities like trekking and river rafting. It's less crowded and provides budget-friendly options for accommodation and dining.
- Ladakh, Jammu and Kashmir**: For those interested in adventure and off-the-beaten-path travel, Ladakh offers breathtaking landscapes, monasteries, and trekking opportunities. While it might be a bit more expensive due to transportation costs, you can still plan a budget-friendly trip by choosing economical accommodation and meal options.
- Kerala**: With its backwaters, houseboats, and Ayurvedic spas, Kerala offers a unique experience. You can find affordable homestays, local transport, and delicious vegetarian food within your budget.

At the bottom of the preview, there is a text input field labeled 'Type something...' and a 'Send' button.


DEPLOYMENT & PREVIEW

Deployment spaces / TRAVEL PLANNER AGENT / TRAVEL PLANNER AGENT /


TRAVEL PLANNER AGENT Deployed Online

API reference Test **Preview**

New chat +

 TRAVEL PLANNER AGENT 02:49 PM

Welcome to TRAVEL PLANNER AGENT
Plan your perfect trip in minutes with the power of AI.



Type something...

API REFERENCE AFTER DEPLOYMENT

The screenshot displays the IBM Cloud API reference page for a deployment named "TRAVEL PLANNER AGENT". The deployment is in a "Deployed" state and is "Online". The "API reference" tab is selected, showing the "Endpoints for inferencing" section. This section lists both private and public endpoints, each with a copy icon. A "Bearer <token>" field is visible, containing the text "IAM". To the right, a sidebar titled "About this deployment" provides details: Name (TRAVEL PLANNER AGENT), Description (Plan your perfect trip in minutes with the power of AI), Deployment Details (Deployment ID: 46bd1e28-738f-4f5d-8ed9-dea2d55a988e, Serving name: No serving name, Software specification: runtime-24.1-py3.11, Hardware specification: Extra extra small: 1 CPU and 2 GB RAM, Copies: 1), Tags (wx-agent), and Associated asset (TRAVEL PLANNER AGENT).

Deployment spaces / TRAVEL PLANNER AGENT / TRAVEL PLANNER AGENT /

TRAVEL PLANNER AGENT Deployed Online

API reference Test Preview

Endpoints for inferencing ⓘ

Private endpoint

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/46bd1e28-738f-4f5d-8ed9-dea2d55a988e/api_service?`

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/46bd1e28-738f-4f5d-8ed9-dea2d55a988e/api_service?`

Public endpoint

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/46bd1e28-738f-4f5d-8ed9-dea2d55a988e/api_service?`

`https://us-south.ml.cloud.ibm.com/ml/v4/deployments/46bd1e28-738f-4f5d-8ed9-dea2d55a988e/api_service?`

[Learn more](#) about the 2021-05-01 version query parameter

Code snippets

Bearer <token> ⓘ

IAM

About this deployment x

Name

TRAVEL PLANNER AGENT

Description

Plan your perfect trip in minutes with the power of AI.

Deployment Details

Deployment ID: 46bd1e28-738f-4f...

Serving name:

No serving name.

Software specification:

runtime-24.1-py3.11

Hardware specification:

Extra extra small: 1 CPU and 2 GB RAM

Copies:

1

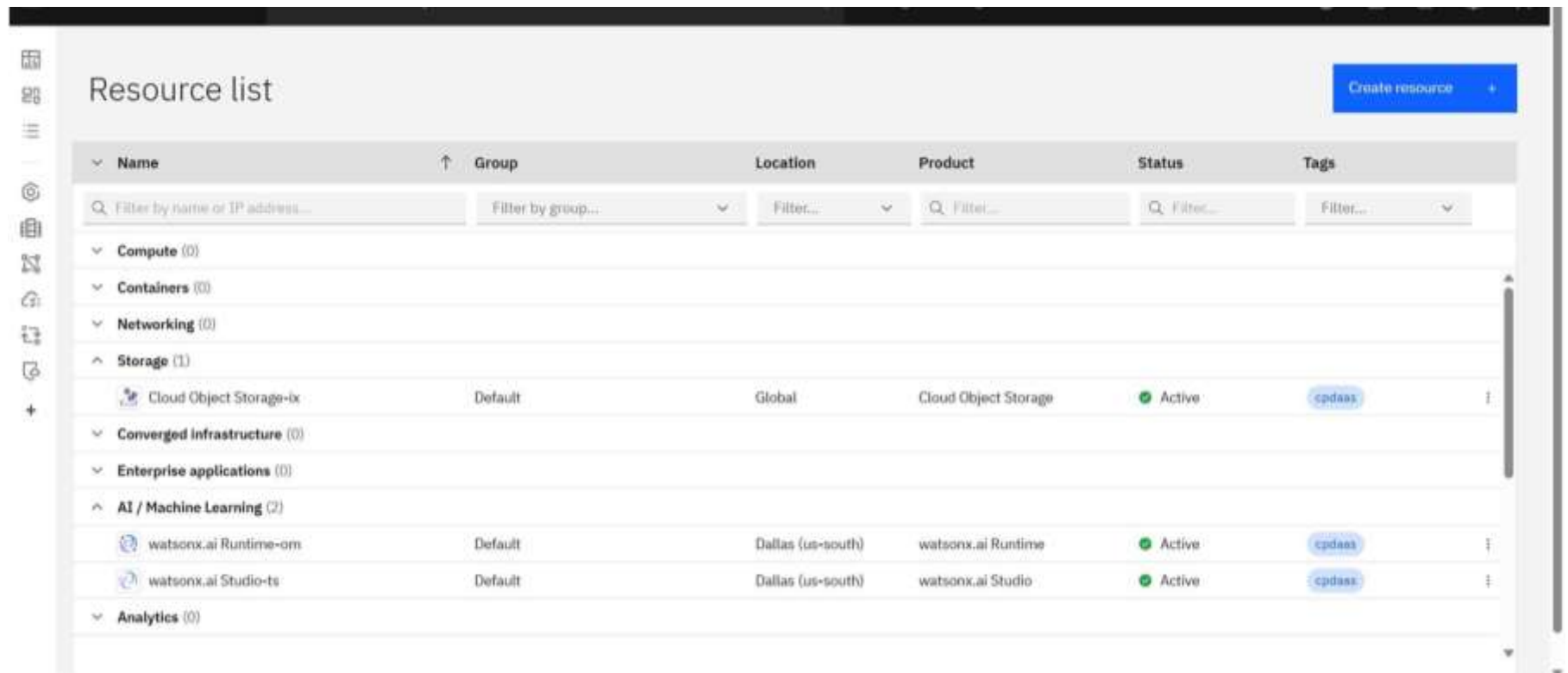
Tags

wx-agent

Associated asset

TRAVEL PLANNER AGENT

RESOURCES LIST

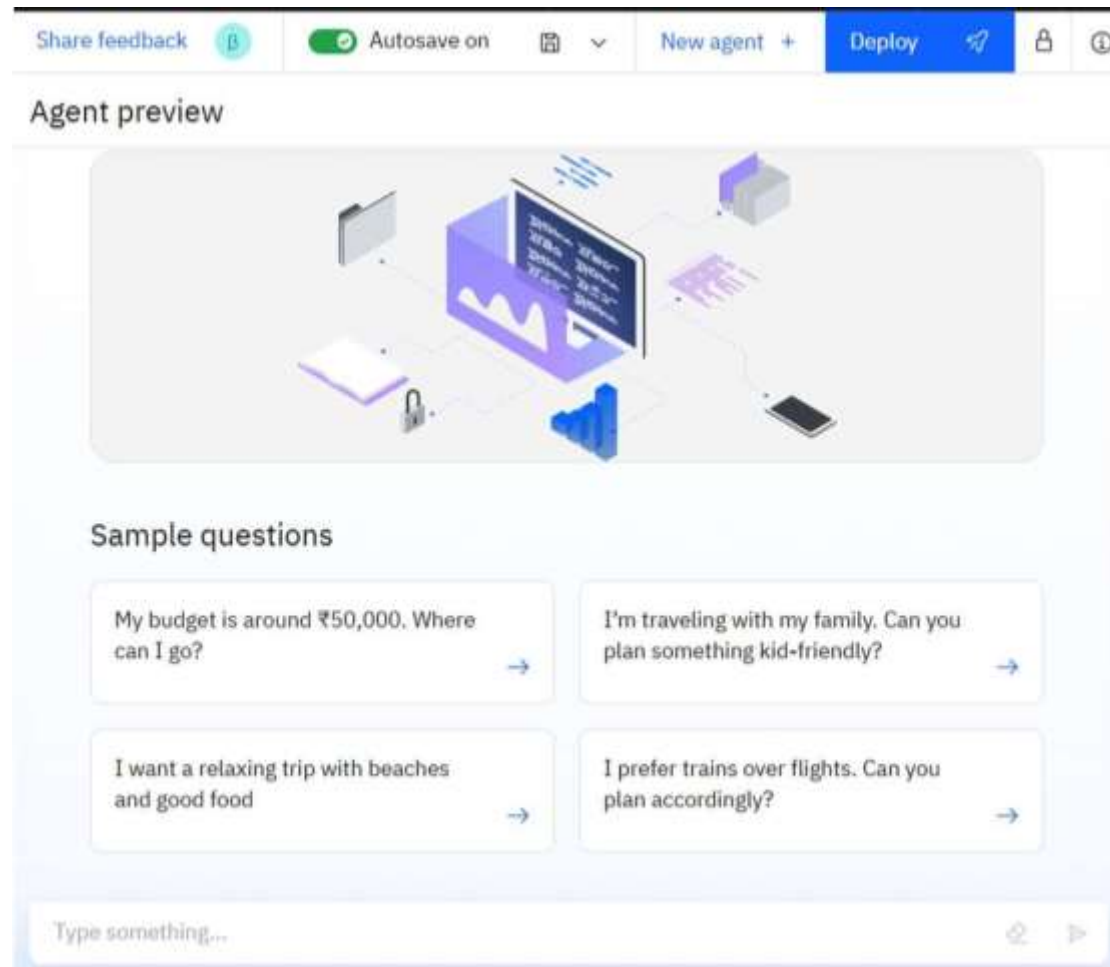


Resource list







Create resource +

Name	Group	Location	Product	Status	Tags
Filter by name or IP address... Filter by group... Filter... Filter... Filter...					
▼ Compute (0)					
▼ Containers (0)					
▼ Networking (0)					
^ Storage (1)					
Cloud Object Storage-ix	Default	Global	Cloud Object Storage	Active	cpdaas
▼ Converged infrastructure (0)					
▼ Enterprise applications (0)					
^ AI / Machine Learning (2)					
watsonx.ai Runtime-om	Default	Dallas (us-south)	watsonx.ai Runtime	Active	cpdaas
watsonx.ai Studio-ts	Default	Dallas (us-south)	watsonx.ai Studio	Active	cpdaas
▼ Analytics (0)					

RESULTS





RESULTS

[Share feedback](#)   Autosave on  [New agent](#) + [Deploy](#)   

Agent preview

1. **Goa:** Known for its beautiful beaches, vibrant nightlife, and rich Portuguese-inspired culture, Goa is a popular choice for budget travelers. You can find affordable accommodations, delicious street food, and plenty of activities like water sports, beach shacks, and local markets.
2. **Hampi, Karnataka:** A UNESCO World Heritage site, Hampi offers ancient temples, ruins, and natural beauty. It's a budget-friendly destination with affordable lodging, food, and entry fees to the sites.
3. **Coorg, Karnataka:** If you prefer a hill station, Coorg offers scenic landscapes, coffee plantations, and adventure activities like trekking and river rafting. It's less crowded and provides budget-friendly options for accommodation and dining.
4. **Ladakh, Jammu and Kashmir:** For those interested in adventure and off-the-beaten-path travel, Ladakh offers breathtaking landscapes, monasteries, and trekking opportunities. While it might be a bit more expensive due to transportation costs, you can still plan a budget-friendly trip by choosing economical accommodation and meal options.
5. **Kerala:** With its backwaters, houseboats, and Ayurvedic spas, Kerala offers a unique experience. You can find affordable homestays, local transport, and delicious vegetarian food within your budget.

RESULTS

Agent preview

You: 02:56 PM
Help me write an introduction for a paper on electric vehicles.

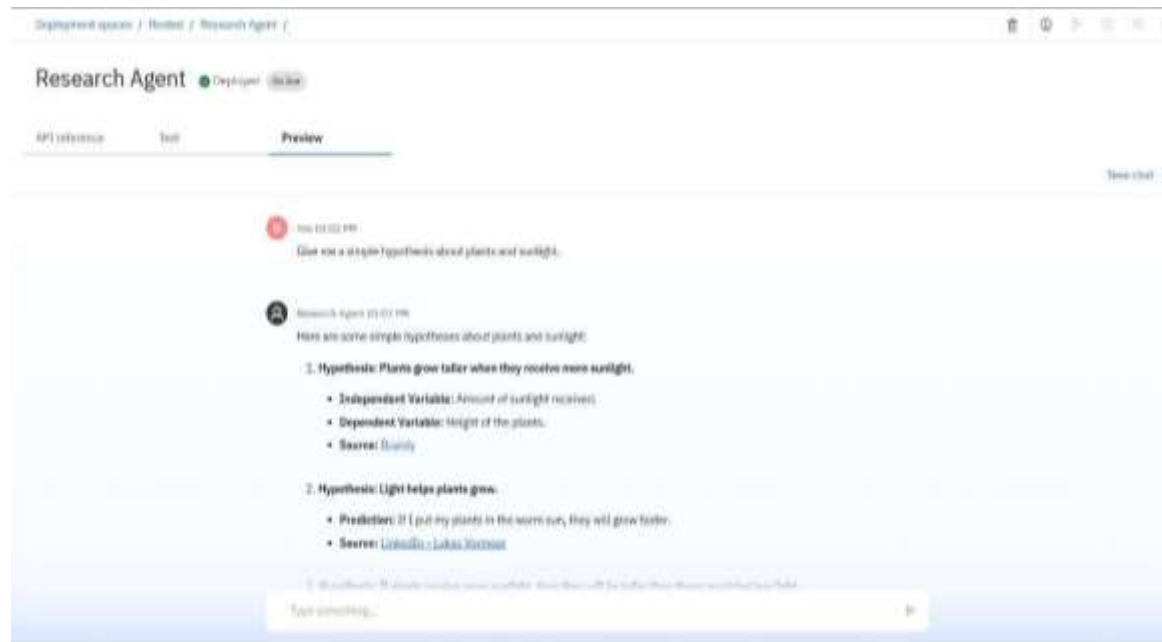
Research Agent: 02:56 PM
Here are some recent research articles and news on artificial intelligence:

1. **MIT News:** In a new study, researchers discover the root cause of a type of bias in LLMs, paving the way for more accurate and reliable AI systems. [Read more](#)
2. **arXiv:** Harnessing AI Agents to Advance Research on Refugee Child Mental Health. [Read more](#)
3. **Stanford HAI:** News on how artificial intelligence improves patient care and expands research capacity. [Read more](#)
4. **Journal of Artificial Intelligence Research:** Current Issue on machine learning, natural language, planning and scheduling, robotics and vision, and uncertainty in AI. [Read more](#)
5. **ScienceDaily:** A team of researchers has shown that even small-scale quantum computers can enhance machine learning performance. [Read more](#)
6. **McKinsey:** The latest McKinsey Global Survey on AI finds that organizations are beginning to take steps that drive bottom-line impact. [Read more](#)
7. **Apple Machine Learning Research:** Overview of the latest advancements in machine learning and artificial intelligence. [Read more](#)

Type something...

RESULTS

Deployed AI Agent



CONCLUSION

- The Travel Planner Agent significantly reduces the complexity of planning a trip.
- By leveraging IBM Cloud AI services, the agent delivers real-time, personalized, and adaptive travel solutions, helping users enjoy a well-organized journey.
- It shows the practical application of AI in solving real-life logistical challenges while keeping the experience user-friendly and efficient.

GITHUB LINK

- <https://github.com/PrithviRajPatel/TRAVEL-PLANNER-AI-AGENT-PROJECT>

FUTURE SCOPE

- **Voice Assistant Integration** (Alexa, Siri, etc.)
- **Multilingual Travel Support** with Watson Language Translator
- **Integration with Booking Platforms** (e.g., Skyscanner, Airbnb)
- **Emergency Support Services** (based on location & alerts)
- **Offline Mode Access** for remote areas with low connectivity
- **AR-Based Virtual Destination Previews**
- **AI Budget Optimizer** to fit best experience under a user's budget
- **Travel Community Features** – recommendations from other users

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Prithvi Raj Patel

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 16, 2025

Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/fc9ba46a-5f5b-4256-bb6c-b3043a99759d>



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professional excellence



Prithvi Raj Patel

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



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IBM LAB CERTIFICATE

7/18/25, 1:57 AM

Completion Certificate | SkillsBuild

IBM SkillsBuild

Completion Certificate



This certificate is presented to

Prithvi Raj Patel

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 16 Jul 2025 (GMT)

Learning hours: 20 mins

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THANK YOU