TalentScout: AI Hiring Assistant Chatbot

TalentScout is an AI-powered hiring assistant built using Streamlit and Gemini LLM. It collects candidate details, generates personalized technical questions based on the tech stack, and stores their responses for evaluation.

Features

Step-by-step flow: Basic info → Tech Stack → Auto-generated questions → Answer submission

Uses Google Gemini API (via google.generativeai)

Automatically saves:

Candidate details to candidates.csv

Q\&A responses to qa_pairs.csv

Streamlit-based interactive UI

Exit option at any point

How It Works

1. Candidate enters personal and professional info.

2. Based on the tech stack (languages, frameworks, tools), Gemini generates 3–5 technical interview questions.

3. Candidate answers each question one by one.

4. On submission, answers are stored for review.

Project Structure

📁 hiring_assistant_chatbot_5/

├── app.py Main Streamlit app

├── .gitignore Ignore virtual environment and other unnecessary files

├── requirements.txt Python package dependencies

├── candidates.csv Stores candidate info

└── qa_pairs.csv Stores question-answer responses

Installation & Running

Step 1: Clone the repository

git clone https://github.com/varshithaga/hiring_assistant_chatbot_5.git

cd hiring_assistant_chatbot_5

Step 2: Create and activate virtual environment

python -m venv venv

For Windows:

.\venv\Scripts\activate

For Mac/Linux:

source venv/bin/activate

Step 3: Install dependencies

pip install -r requirements.txt

Step 4: Run the Streamlit app

streamlit run app.py

Gemini API Setup

1. Get your Gemini API key from: https://makersuite.google.com/app/apikey

2. Replace this line in app.py:

API_KEY = "YOUR_API_KEY"

with:

API_KEY = "your_actual_key"

Output Files

candidates.csv

Stores fields: user_id, name, email, phone, experience, position, location, languages, frameworks, databases, tools

qa_pairs.csv

Stores each question-answer pair with the associated user_id.

Example

Candidate Name: Alice

Languages: Python, Java

Frameworks: Django, Spring

Databases: MySQL

Tools: Docker, Git

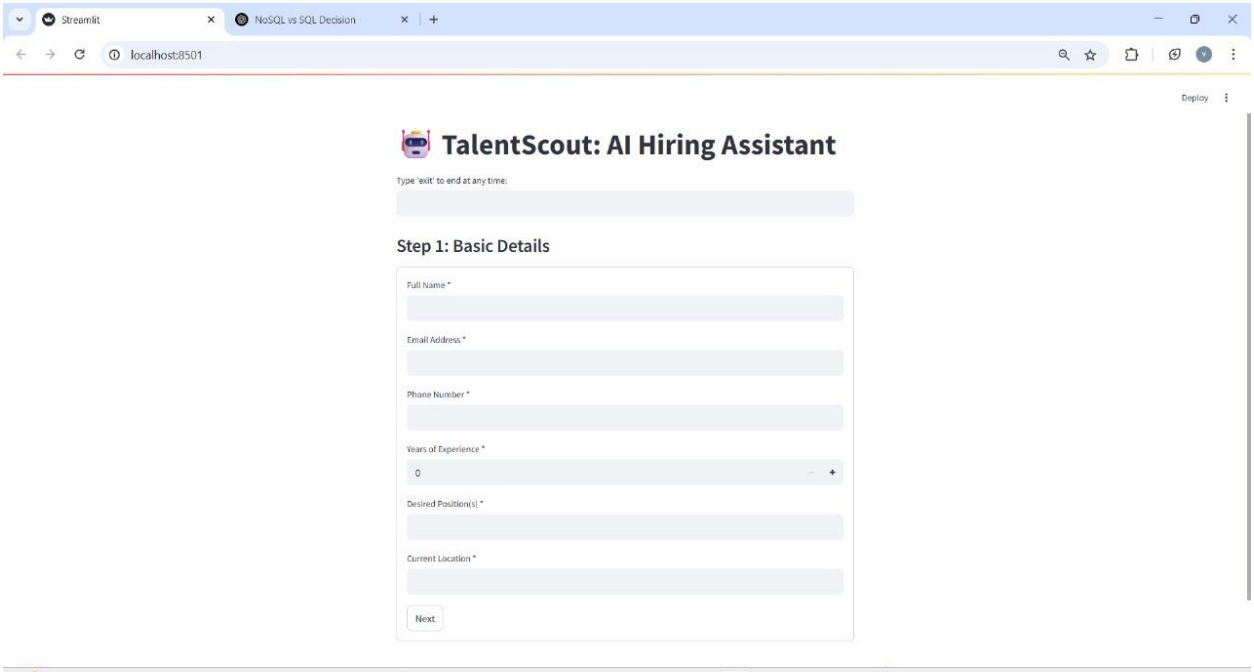
Sample Question: What are the key features of Django ORM?

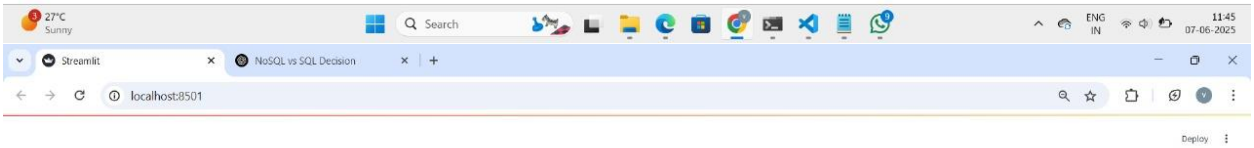
Notes

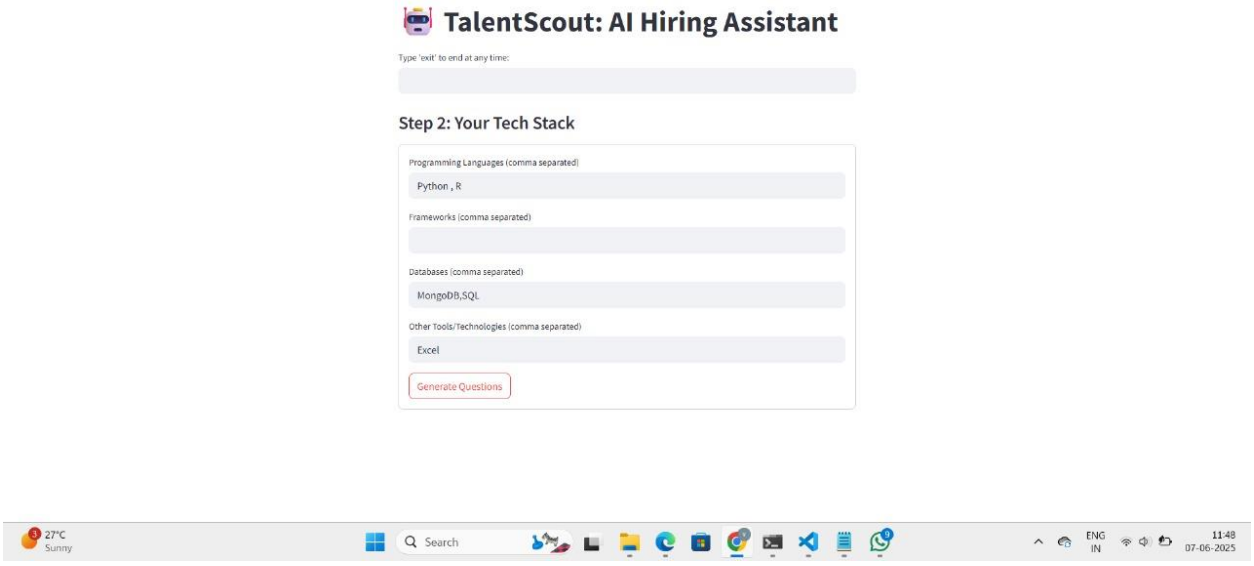
The app skips generic explanations in LLM outputs to keep questions concise.

You can type "exit", "quit", or "bye" anytime to end the session early.

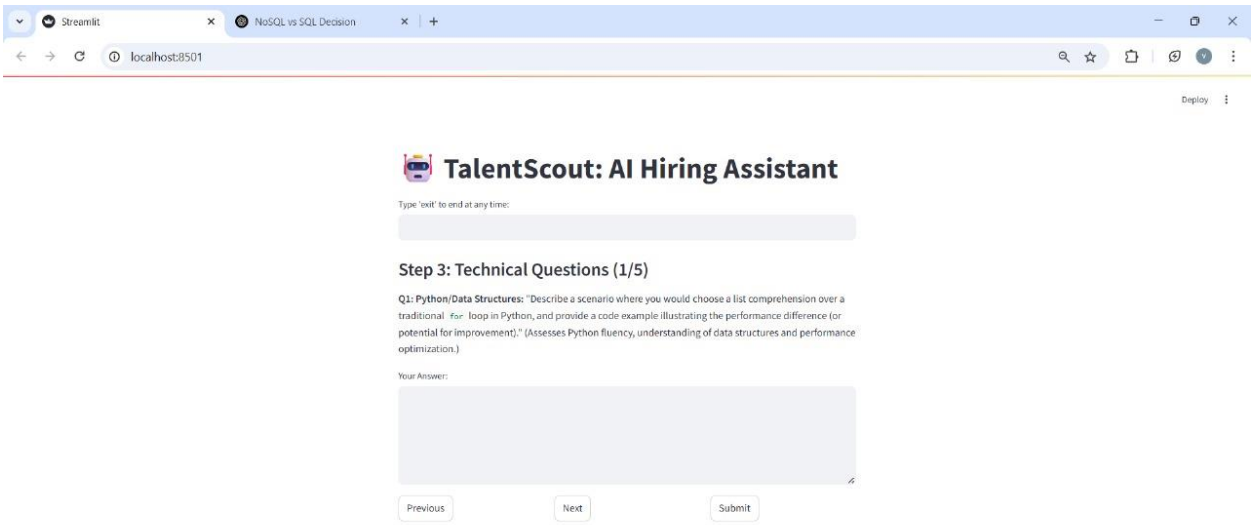
-

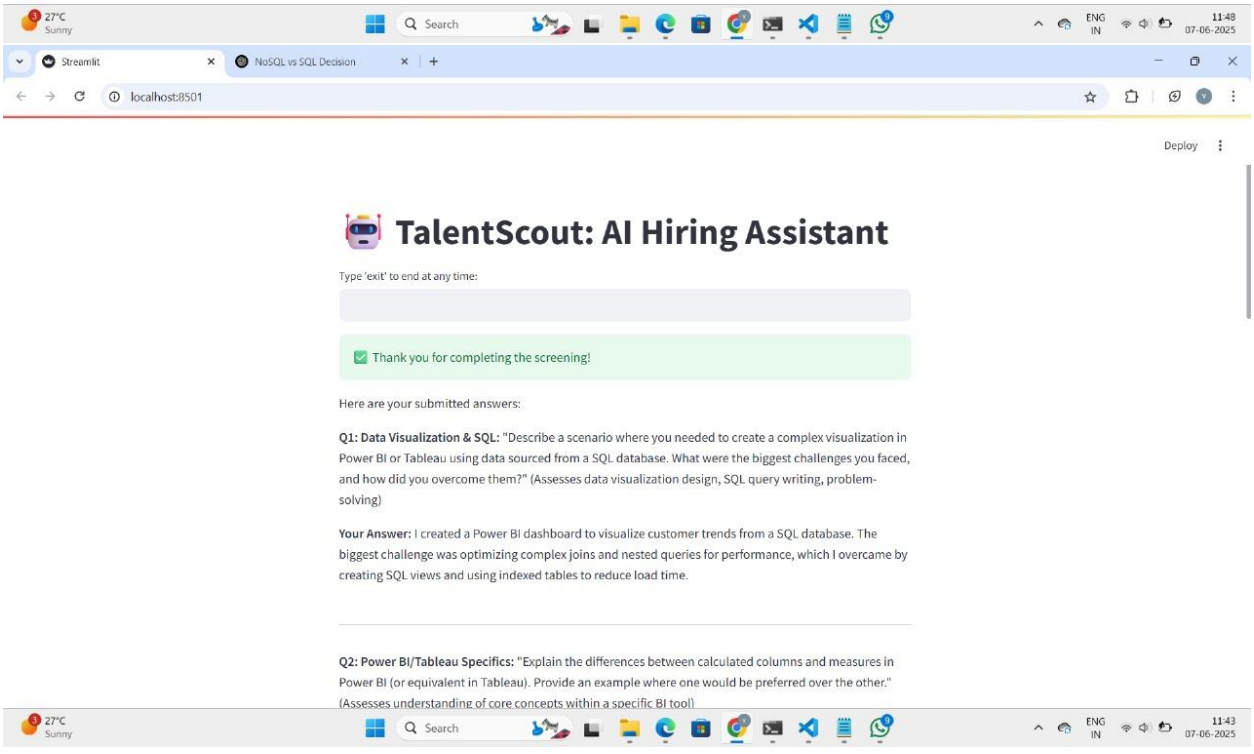

Streamlit
NoSQL vs SQL Decision
localhost:8501
Deploy
TalentScout: AI Hiring Assistant
Type 'exit' to end at any time:
Step 1: Basic Details
Full Name *
Email Address *
Phone Number *
Years of Experience *
0
Desired Position(s) *
Current Location *
Next

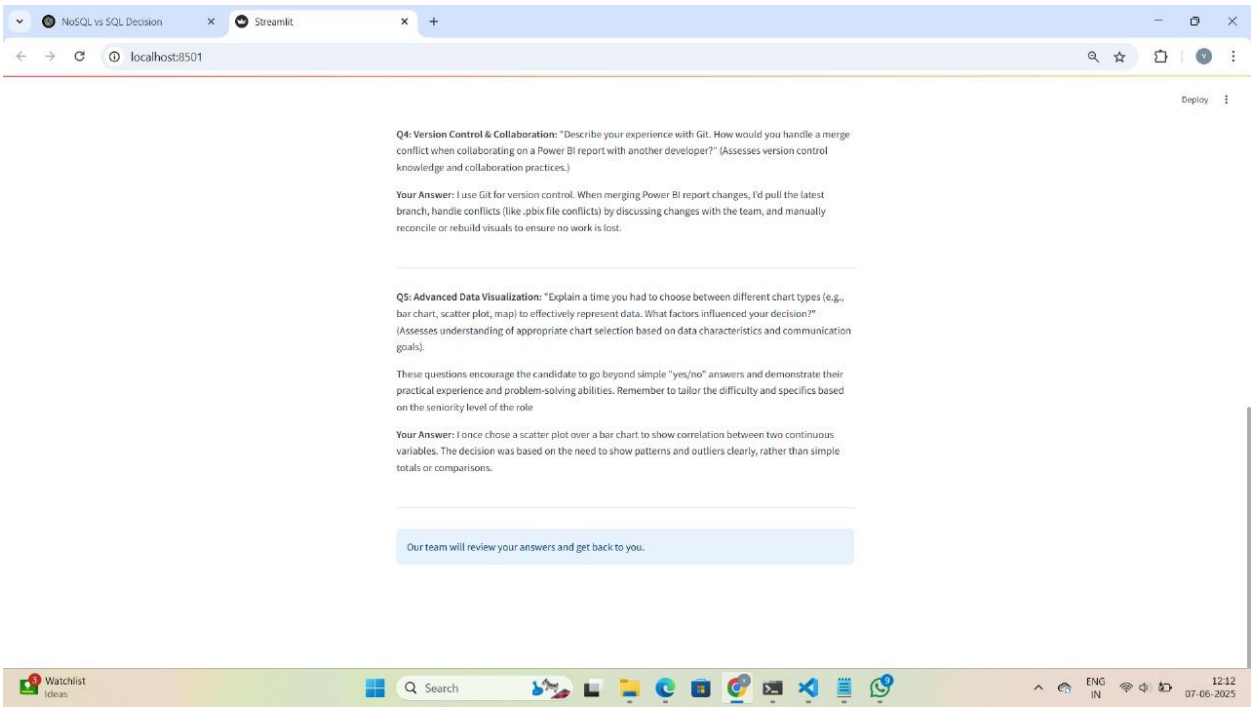

27°C
Sunny
Search
ENG
IN
11:45
07-06-2025
Streamlit
NoSQL vs SQL Decision
localhost:8501
Deploy


TalentScout: AI Hiring Assistant
Type 'exit' to end at any time:
Step 2: Your Tech Stack
Programming Languages (comma separated)
Python , R
Frameworks (comma separated)
Databases (comma separated)
MongoDB,SQL
Other Tools/Technologies (comma separated)
Excel
Generate Questions

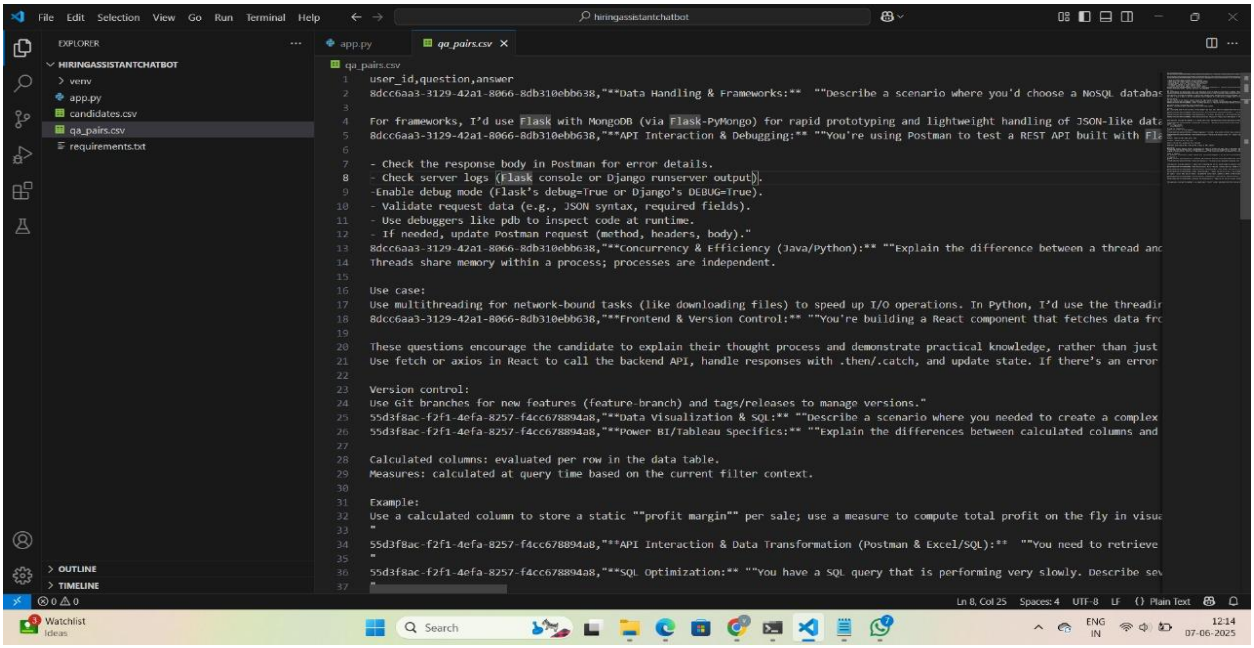
27°C
Sunny
Search
ENG
IN
11:48
07-06-2025

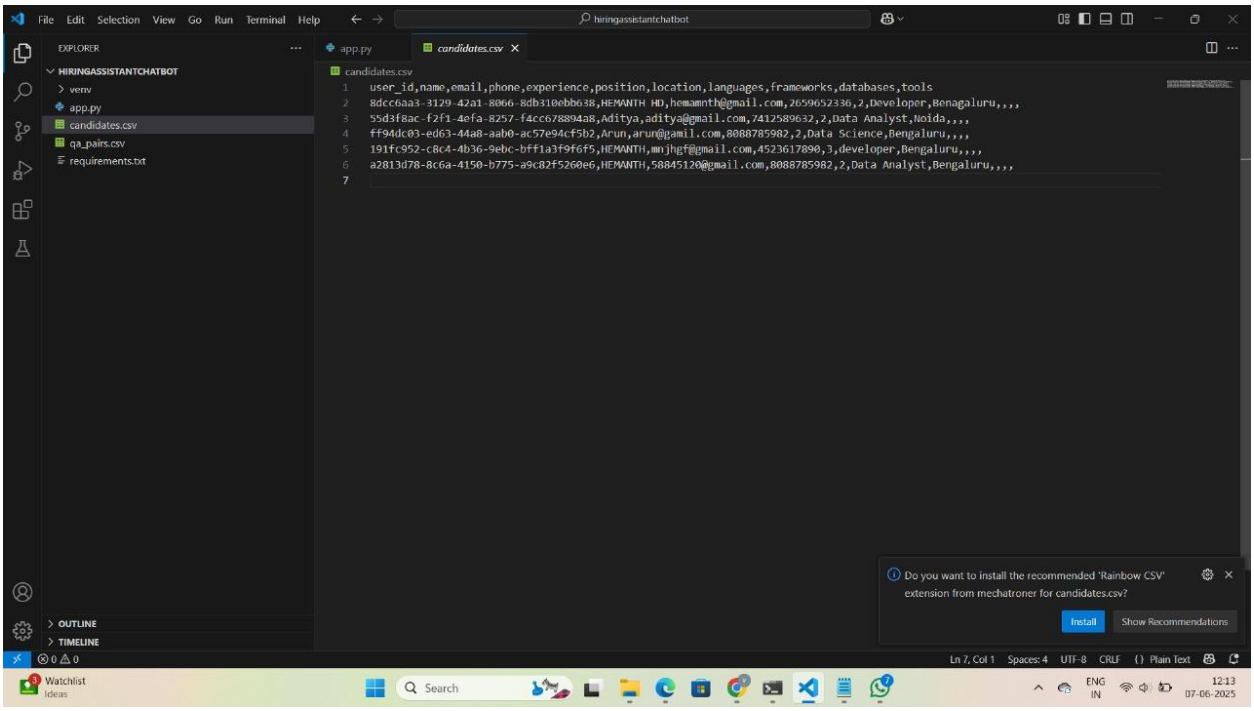

Streamlit
NoSQL vs SQL Decision
localhost:8501
Deploy
TalentScout: AI Hiring Assistant
Type 'exit' to end at any time:
Step 3: Technical Questions (1/5)
Q1: Python/Data Structures: "Describe a scenario where you would choose a list comprehension over a traditional for loop in Python, and provide a code example illustrating the performance difference (or potential for improvement)." (Assesses Python fluency, understanding of data structures and performance optimization.)
Your Answer:
Previous
Next
Submit


27°C
Sunny
Search
ENG
IN
11:48
07-06-2025
Streamlit
NoSQL vs SQL Decision
localhost:8501
Deploy
TalentScout: AI Hiring Assistant
Type 'exit' to end at any time:
Thank you for completing the screening!
Here are your submitted answers:
Q1: Data Visualization & SQL: "Describe a scenario where you needed to create a complex visualization in Power BI or Tableau using data sourced from a SQL database. What were the biggest challenges you faced, and how did you overcome them?" (Assesses data visualization design, SQL query writing, problem-solving)
Your Answer: I created a Power BI dashboard to visualize customer trends from a SQL database. The biggest challenge was optimizing complex joins and nested queries for performance, which I overcame by creating SQL views and using indexed tables to reduce load time.
Q2: Power BI/Tableau Specifics: "Explain the differences between calculated columns and measures in Power BI (or equivalent in Tableau). Provide an example where one would be preferred over the other." (Assesses understanding of core concepts within a specific BI tool)
27°C
Sunny
Search
ENG
IN
11:43
07-06-2025



Data Stored in csv files




File Edit Selection View Go Run Terminal Help
hiringassistantchatbot
EXPLORER
HIRINGASSISTANTCHATBOT
venv
app.py
candidates.csv
qa_pairs.csv
requirements.txt
app.py
candidates.csv
candidates.csv
1 user_id,name,email,phone,experience,position,location,languages,frameworks,databases,tools
2 8dcc6aa3-3129-42a1-8066-8db310ebb638,HEMANTH HD,hemamnth@gmail.com,2659652336,2,Developer,Benagaluru,,,,
3 55d3f8ac-f2f1-4efa-8257-f4cc678894a8,Aditya,aditya@gmail.com,7412589632,2,Data Analyst,Noida,,,,
4 ff94dc03-ed63-44a8-aab0-ac57e94cf5b2,Arun,arun@gamil.com,8088785982,2,Data Science,Bengaluru,,,,
5 191fc952-c8c4-4b36-9ebc-bff1a3f9f6f5,HEMANTH,mnjhgf@gmail.com,4523617890,3,developer,Bengaluru,,,,
6 a2813d78-8c6a-4150-b775-a9c82f5260e6,HEMANTH,5884512@gmail.com,8088785982,2,Data Analyst,Bengaluru,,,,
7
Do you want to install the recommended 'Rainbow CSV' extension from mechatroner for candidates.csv?
Install
Show Recommendations
OUTLINE
TIMELINE
Ln 7, Col 1 Spaces: 4 UTF-8 CRLF Plain Text
Watchlist
Ideas
Search
ENG
IN
12:13
07-06-2025