Project Report

Course Name	**SCTP-PDDS**
Product Name (Marketing & Sales)	PDDS
Module Name	WSQ- Machine Learning Applications (SF)
Product Name (Marketing & Sales)	Machine Learning Applications

Student name	**Assessor name**
Gangeswaran Rajavalarmathi	Ryon Suryonto

Date issued	**Completion date**	**Submitted on**
27-11-2023	11-01-2024	11-01-2024

Project title	**Object Detection and Text Analysis using Azure**

Learner declaration
I certify that the work submitted for this assignment is my own and research sources are fully acknowledged. Student signature: Date:

Content

1. **Project Overview:** Describe the Project with summary of analytical processes and project outcomes (Explain the Project in your own words in 15 – 20 lines)

To develop an object detection system for vehicle recognition using Azure Custom Vision service. The project aims to collect and compile a diverse dataset of vehicle images encompassing cars, buses, motorcycles, ambulances, and trucks. Furthermore, it seeks to provision Azure resources required for object detection, including the creation of a Custom Vision project and obtaining necessary API keys. The goal is to leverage Azure's capabilities to train an object detection model capable of identifying and localizing various types of vehicles within images."

This objective highlights the key aspects of the project, which are:

1. **Data Collection:** Gathering and assembling a diverse dataset of vehicle images.
2. **Azure Resource Provisioning:** Setting up Azure resources specifically for object detection using Custom Vision.
3. **Model Training:** Utilizing the collected dataset and Azure resources to train an object detection model capable of recognizing different types of vehicles.

The ultimate aim is to build a functional object detection system that can accurately identify and locate vehicles in images, aiding in various applications such as traffic monitoring, security surveillance, or inventory management.

2. **Project Technical Environment:** (Describe the Environment used)

1. **Python Virtual Environments:** Setting up virtual environments using tools like venv or conda to manage dependencies and package versions.
2. **Integrated Development Environments (IDEs):** Utilizing IDEs such as Visual Studio Code, PyCharm, or Jupyter Notebooks for coding and development.
3. **Git and Version Control:** Employing Git for version control, collaboration, and tracking changes in code and resources.
4. **Code Repositories:** Storing code, scripts, and project-related data in repositories like GitHub, Azure DevOps, or Bitbucket for collaboration and version control.

3. Analytical Technique & Tools used: Describe the Analytical Technique used in the Project

Analytical Techniques:

1. **Object Detection:** Applying deep learning-based object detection techniques such as Convolutional Neural Networks (CNNs) using frameworks like TensorFlow or PyTorch.
2. **Data Labeling:** Manually labeling data or using semi-automated tools to annotate images for object detection model training.

Cloud Infrastructure and Deployment:

1. **Azure Cloud Services:** Leveraging Azure cloud infrastructure for hosting and deploying trained models, utilizing cloud-based resources for scalability and accessibility.
2. **REST APIs:** Integrating trained object detection models via APIs for use in applications or services.

These techniques and tools collectively contribute to the acquisition, manipulation, provisioning, training, and deployment stages involved in the creation of an object detection system using Azure Custom Vision and Python. Adjustments and additional tools may be included based on specific project requirements and expertise.

4. List and explain the project plan.

Project Plan: Data Collection and Azure Resource Provisioning for Object Detection

Phase 1: Preparation and Setup

1. **Define Project Scope and Objectives:**
    - Clearly define the goals, objectives, and deliverables of the project.
    - Specify the types of vehicles (cars, buses, motorcycles, ambulances, trucks) to be included in the dataset.
2. **Environment Setup:**
    - Set up the development environment, install necessary tools, and create a virtual environment for Python.

Phase 2: Data Collection

3. **Research and Data Gathering:**
    - Explore various sources (internet, databases, APIs) to collect a diverse dataset of vehicle images.
    - Ensure inclusivity and diversity within the dataset in terms of vehicle types, angles, lighting conditions, and backgrounds.
4. **Data Preprocessing:**
    - Organize collected images, perform data augmentation (if required), and ensure uniformity in data format and size.

Phase 3: Azure Resource Provisioning

5. **Azure Custom Vision Setup:**
    - Create an Azure account (if not done already) and set up the necessary Azure services.
    - Provision Azure resources specifically for object detection, including setting up the Custom Vision service.
6. **Obtaining API Keys and Endpoints:**
    - Obtain API keys and endpoints required for accessing Azure services (e.g., Custom Vision) and integrate them into the development environment.

Phase 4: Model Training and Deployment

7. **Custom Vision Project Creation:**
    - Use the Azure Cognitive Services SDK in Python to create a Custom Vision project specifically for vehicle object detection.
8. **Data Labeling and Model Training:**
    - Label the collected images with appropriate tags for different vehicle types.
    - Train the object detection model using Azure Custom Vision by providing the labeled dataset.

9. **Evaluation and Testing:**
    - Evaluate the trained model's performance using test data to ensure accuracy and effectiveness in detecting vehicles.

Phase 5: Finalization and Deployment

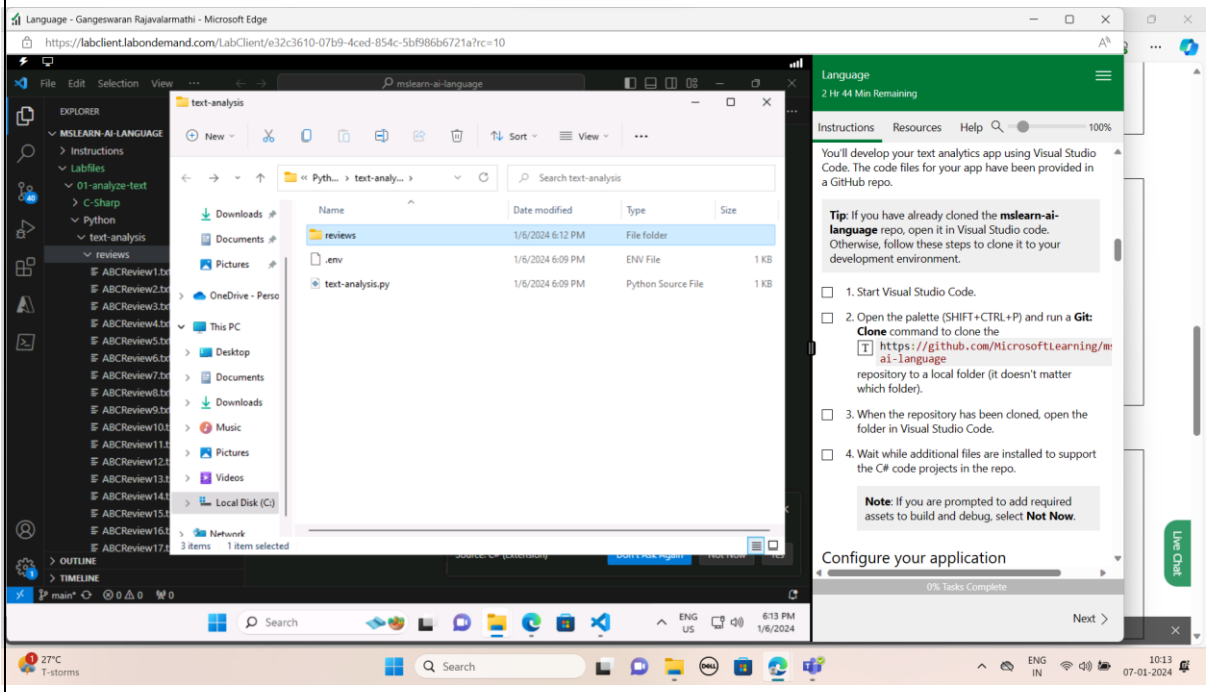
10. **Model Deployment:**
    - Deploy the trained object detection model on Azure cloud infrastructure.
    - Integrate the deployed model using REST APIs for real-time object detection.
11. **Documentation and Review:**
    - Document the project's process, including steps taken, challenges faced, and solutions implemented.
    - Review the entire project, validate results, and ensure alignment with project objectives.
12. **Completion and Handover:**
    - Prepare for project handover, including sharing documentation, code repository access, and insights gained from the project.

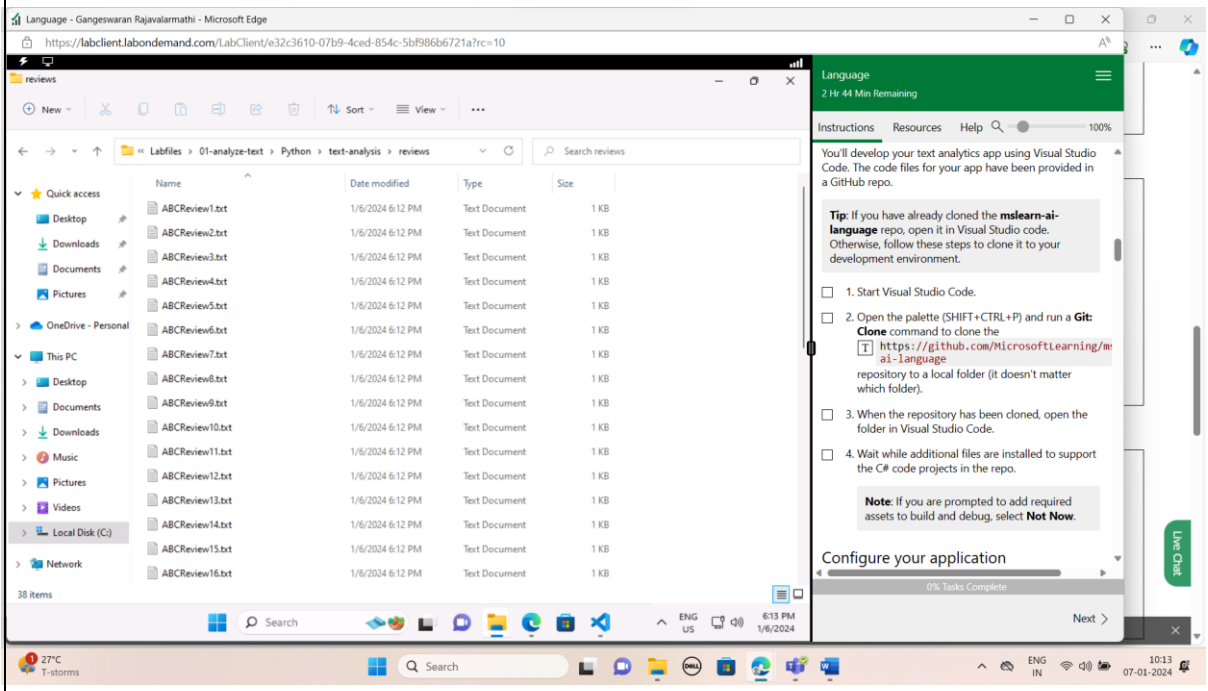
5. **Screenshot of experiment setup**

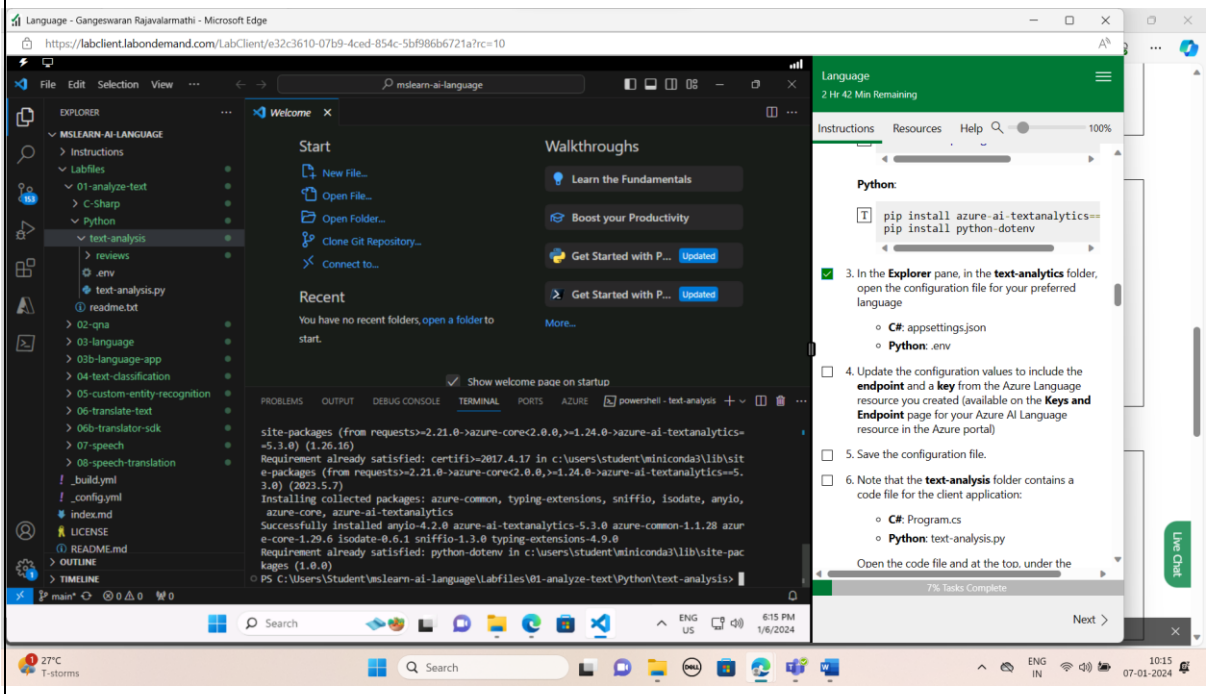
Task 1: Define and Prepare the Social Media Reviews Dataset

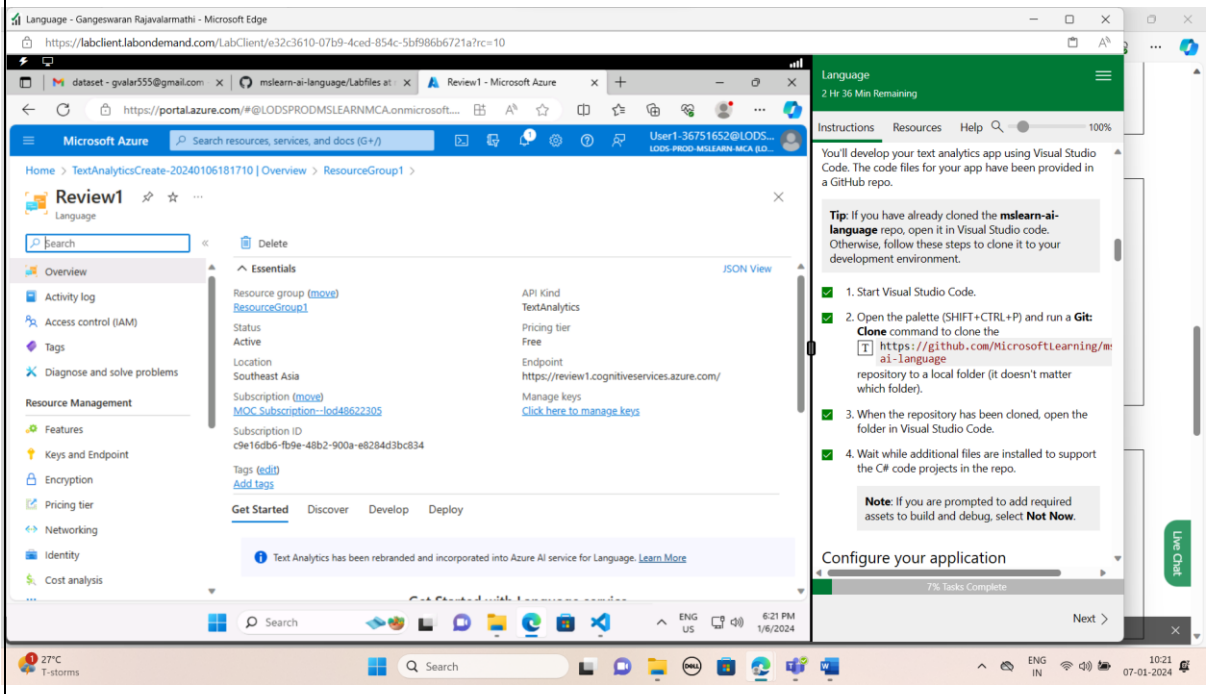
1. **Data Collection**: Collect reviews from social media platforms (Twitter, Facebook, TripAdvisor, etc.) using their APIs or web scraping techniques. Ensure these reviews cover a wide range of sentiments and topics related to ABC Travels.
2. **Data Compilation**: Organize the collected reviews into a structured format, such as a CSV file or a database, including attributes like the review text, sentiment score, source, date, etc. Preprocess the data by removing noise, handling missing values, and standardizing the format if necessary.
3. **Diversity and Representation**: Aim for diversity in the dataset, including positive, negative, and neutral sentiments. Ensure representation across different demographics, geographical locations, and types of services offered by ABC Travels (flights, accommodations, customer service, etc.).

6. Screenshots of each task of Activity 1






Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 42 Min Remaining
Instructions
Resources
Help
100%
Python:
pip install azure-ai-textanalytics==
pip install python-dotenv
3. In the Explorer pane, in the text-analytics folder, open the configuration file for your preferred language
C#: appsettings.json
Python: .env
4. Update the configuration values to include the endpoint and a key from the Azure Language resource you created (available on the Keys and Endpoint page for your Azure AI Language resource in the Azure portal)
5. Save the configuration file.
6. Note that the text-analysis folder contains a code file for the client application:
C#: Program.cs
Python: text-analysis.py
Open the code file and at the top, under the
7% Tasks Complete
Next
Live Chat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Review1 - Microsoft Azure
https://portal.azure.com/#@LODSPRODMSLEARNMCA.onmicrosoft....
Microsoft Azure
Review1
Language
Essentials
JSON View
Resource group (move)
ResourceGroup1
API Kind
TextAnalytics
Status
Active
Pricing tier
Free
Location
Southeast Asia
Endpoint
https://review1.cognitiveservices.azure.com/
Subscription (move)
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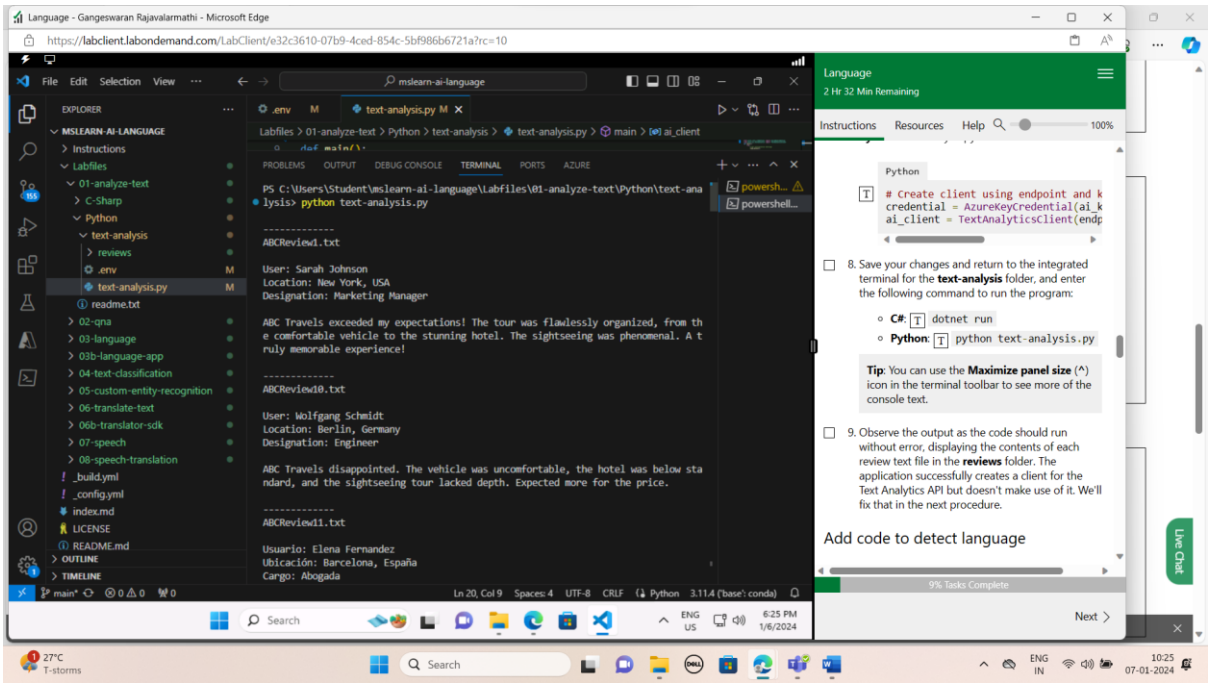
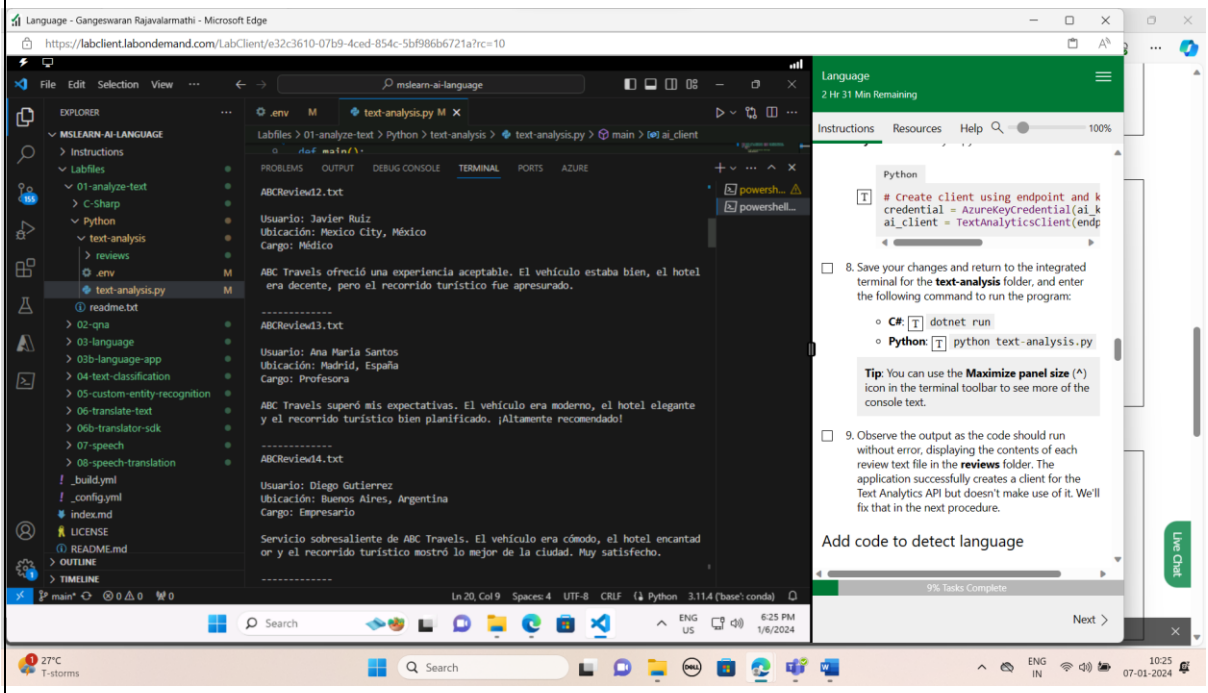
Manage keys
Click here to manage keys
Subscription ID
c9e16db6-fb9e-48b2-900a-e8284d3bc834
Tags (edit)
Add tags
Get Started
Discover
Develop
Deploy
Text Analytics has been rebranded and incorporated into Azure AI service for Language. Learn More
Language
2 Hr 36 Min Remaining
Instructions
Resources
Help
100%
You'll develop your text analytics app using Visual Studio Code. The code files for your app have been provided in a GitHub repo.
Tip: If you have already cloned the mslearn-ai-language repo, open it in Visual Studio code. Otherwise, follow these steps to clone it to your development environment.
1. Start Visual Studio Code.
2. Open the palette (SHIFT+CTRL+P) and run a Git: Clone command to clone the
https://github.com/MicrosoftLearning/m
ai-language
repository to a local folder (it doesn't matter which folder).
3. When the repository has been cloned, open the folder in Visual Studio Code.
4. Wait while additional files are installed to support the C# code projects in the repo.
Note: If you are prompted to add required assets to build and debug, select Not Now.
Configure your application
7% Tasks Complete
Next
Live Chat

7. Screenshots of each task of Activity 2

Task 2: Provision Azure Resources for Text Analytics

To set up and provision Azure resources required for text analytics, including creating a Custom Vision project and obtaining necessary API keys, here's an example of how you might do it using Python and the Azure SDK:




Language - Gangeswaran Rajavalarmathi - Microsoft Edge
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06b-translator-sdk
07-speech
08-speech-translation
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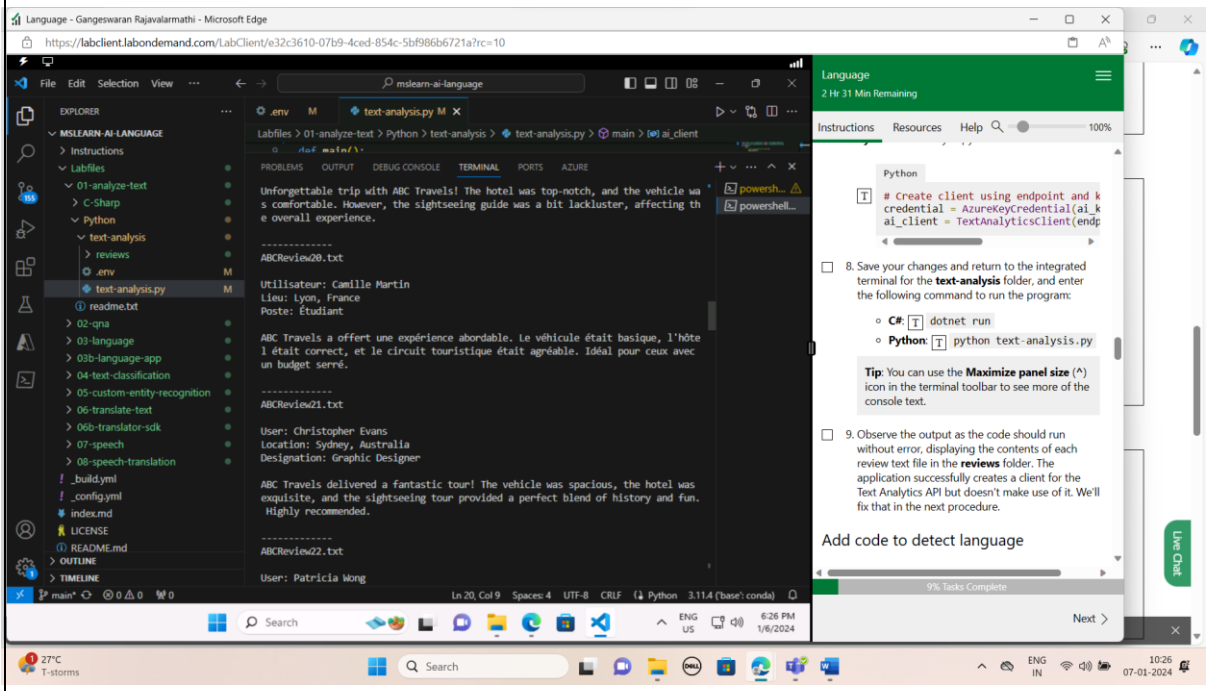
_config.yml
index.md
LICENSE
README.md
OUTLINE
TIMELINE
.env M
text-analysis.py M
Labfiles > 01-analyze-text > Python > text-analysis > text-analysis.py > main > ai_client
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS AZURE
ABCReview12.txt
Usuario: Javier Ruiz
Ubicación: Mexico City, México
Cargo: Médico
ABC Travels ofreció una experiencia aceptable. El vehículo estaba bien, el hotel era decente, pero el recorrido turístico fue apresurado.
ABCReview13.txt
Usuario: Ana Maria Santos
Ubicación: Madrid, España
Cargo: Profesora
ABC Travels superó mis expectativas. El vehículo era moderno, el hotel elegante y el recorrido turístico bien planificado. ¡Altamente recomendado!
ABCReview14.txt
Usuario: Diego Gutierrez
Ubicación: Buenos Aires, Argentina
Cargo: Empresario
Servicio sobresaliente de ABC Travels. El vehículo era cómodo, el hotel encantador y el recorrido turístico mostró lo mejor de la ciudad. Muy satisfecho.
Ln 20, Col 9 Spaces: 4 UTF-8 CRLF Python 3.11.4 ('base': conda)
Language
2 Hr 31 Min Remaining
Instructions Resources Help 100%
Python
# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
Add code to detect language
9% Tasks Complete
Next
Live Chat
27°C T-storms
Search
ENG US 6:25 PM 1/6/2024
ENG IN 10:25 07-01-2024

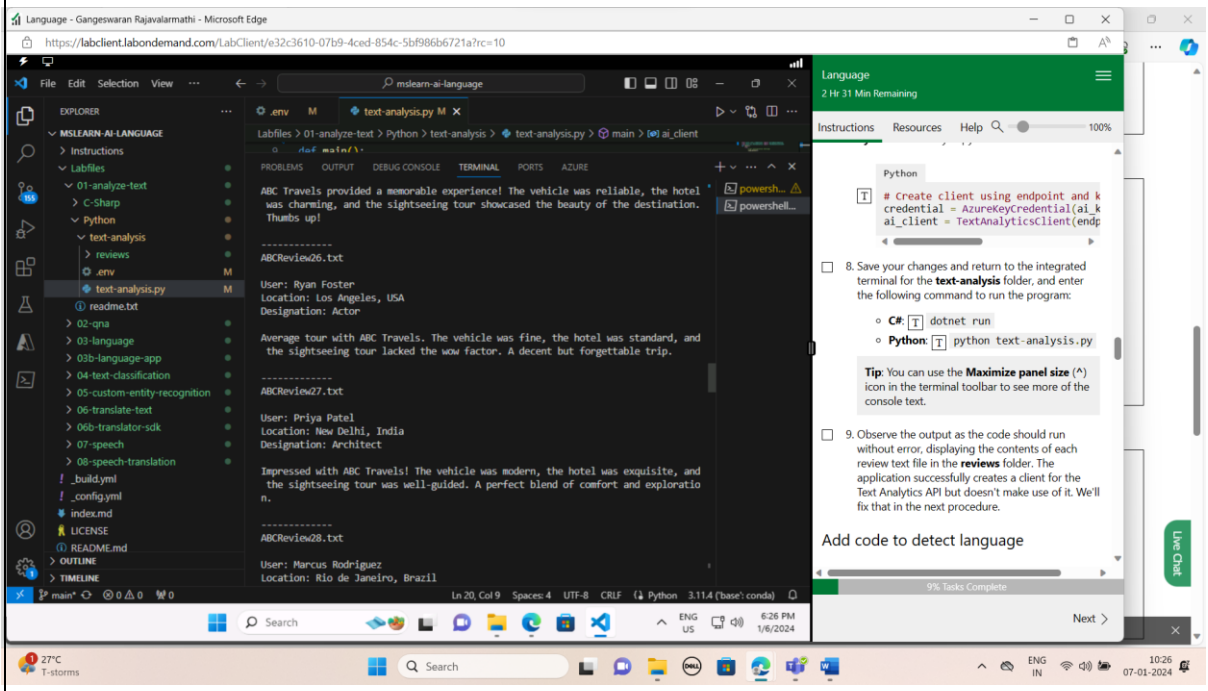
9. Screenshots of each task of Activity 4

KeyPhrase Extraction

This task utilizes Azure Text Analytics to identify and extract important phrases from social media reviews.

Before running the code, make sure you have your Azure Text Analytics resource created and the necessary keys and endpoint information. Replace `TEXT_ANALYTICS_KEY` and `TEXT_ANALYTICS_ENDPOINT` with your actual Text Analytics API key and endpoint.

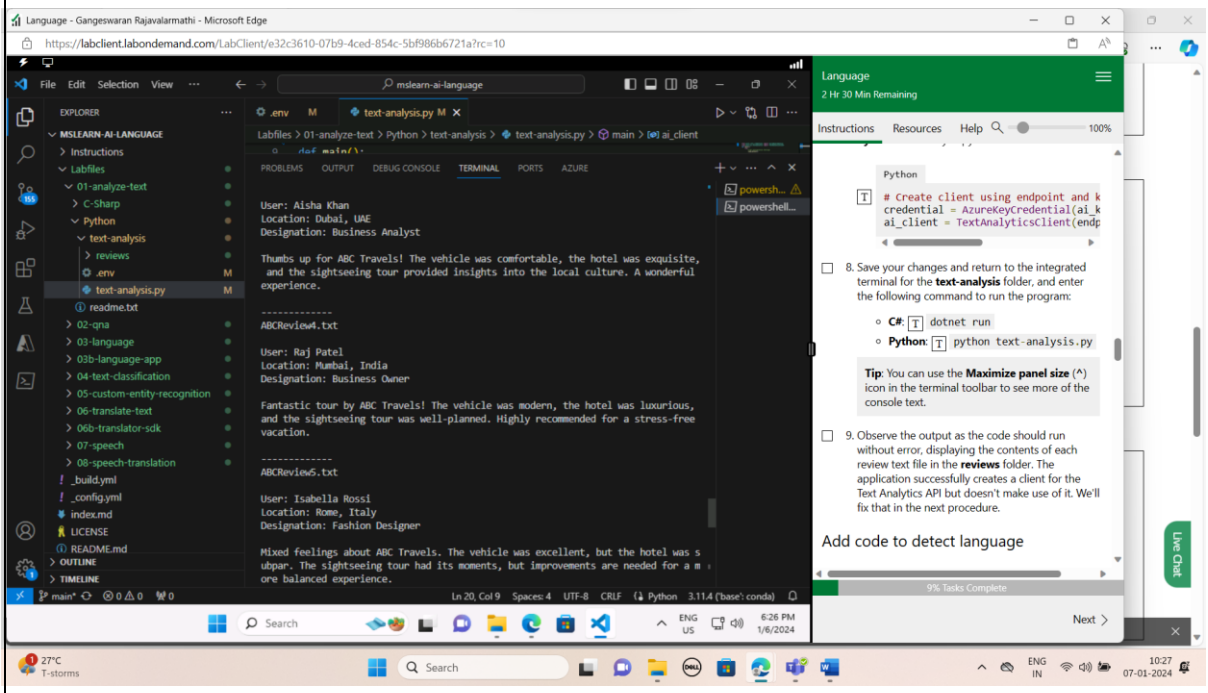




10. Screenshots of each task of Activity 5

Task 5: Sentiment Analysis

This task involves utilizing Azure Text Analytics to assess the sentiment expressed in social media reviews (positive, negative, neutral).



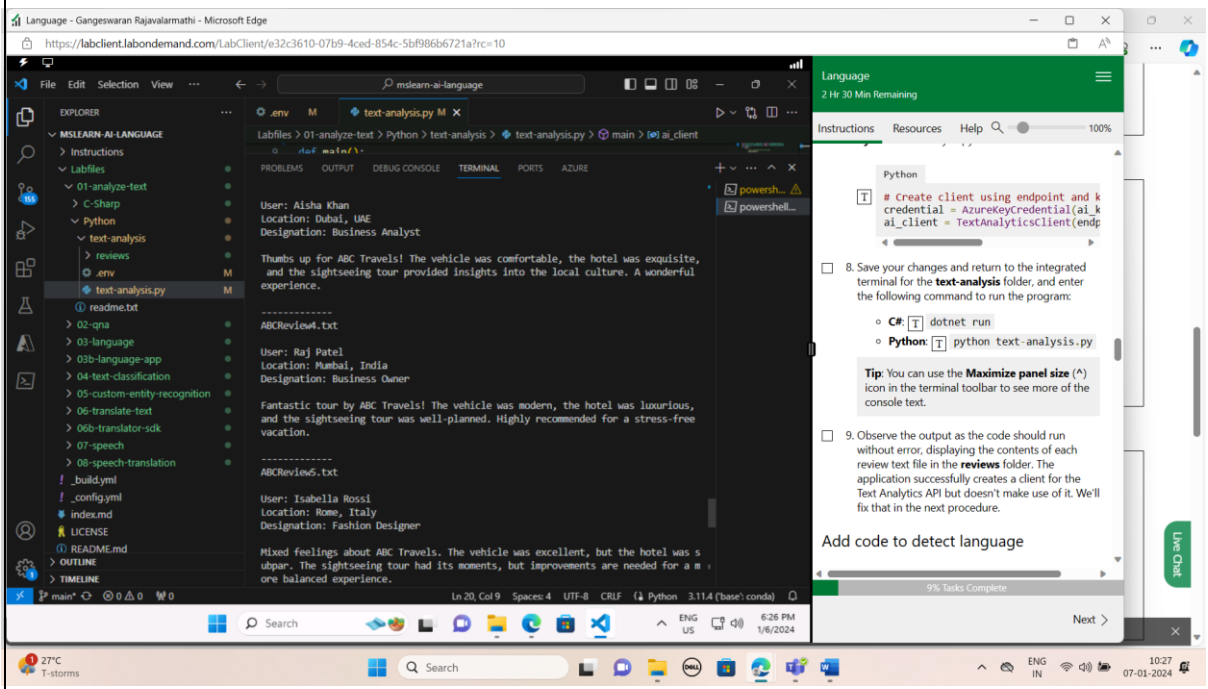
10. Screenshots of each task of Activity 6

Task 6: Entity Recognition

This task utilizes Azure Text Analytics to identify and categorize entities mentioned in social media reviews.

Below is a Python code example illustrating how to perform sentiment analysis and entity recognition using the Azure Text Analytics SDK:

Before running the code, ensure you have the necessary Azure Text Analytics resource created. Replace `YOUR_TEXT_ANALYTICS_KEY` and `YOUR_TEXT_ANALYTICS_ENDPOINT` with your actual Text Analytics API key and endpoint.



Task 1: Collect and Assemble the Vehicle Dataset

This task involves sourcing and compiling a diverse dataset of vehicle images, focusing on specific types such as cars, buses, motorcycles, ambulances, and trucks.

Explanation:

1. **Data Collection**: Gather images from various sources (e.g., internet, image databases) that contain different types of vehicles - cars, buses, motorcycles, ambulances, and trucks.
2. **Diversity**: Ensure diversity in the dataset by including images with various backgrounds, lighting conditions, angles, and variations in vehicle types to create a comprehensive dataset.

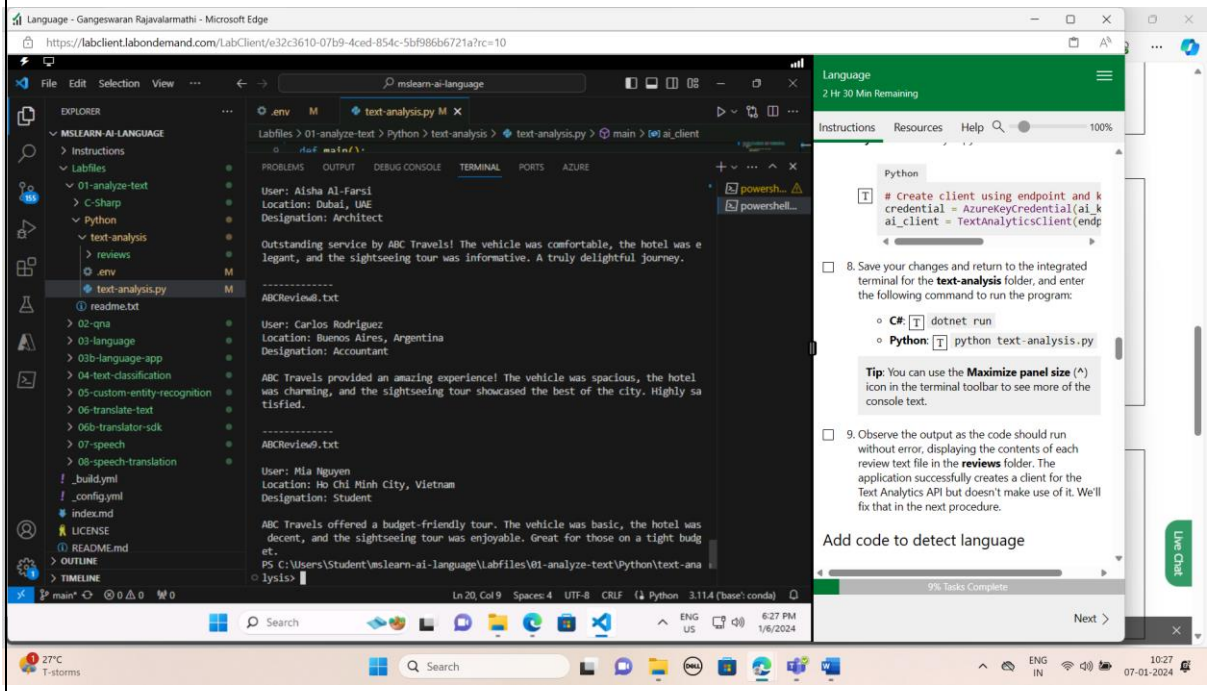
Task 2: Provision Azure Resources for Object Detection

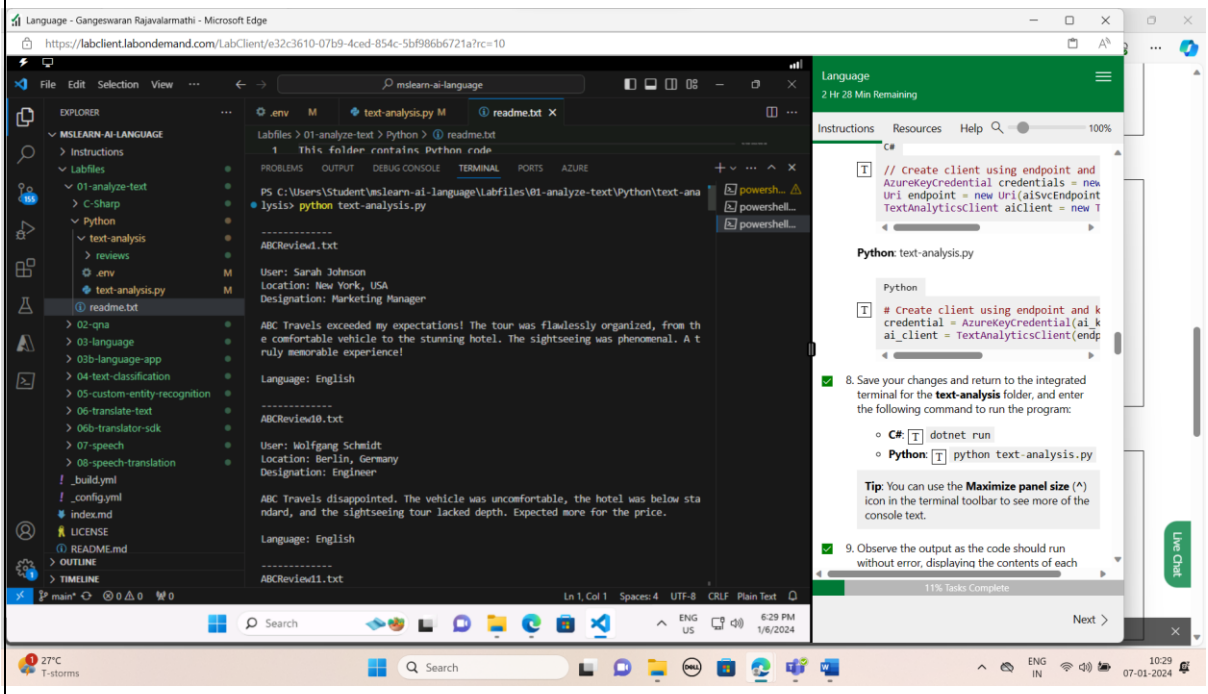
This task involves setting up and provisioning Azure resources required for object detection, including creating a Custom Vision project and obtaining necessary API keys.

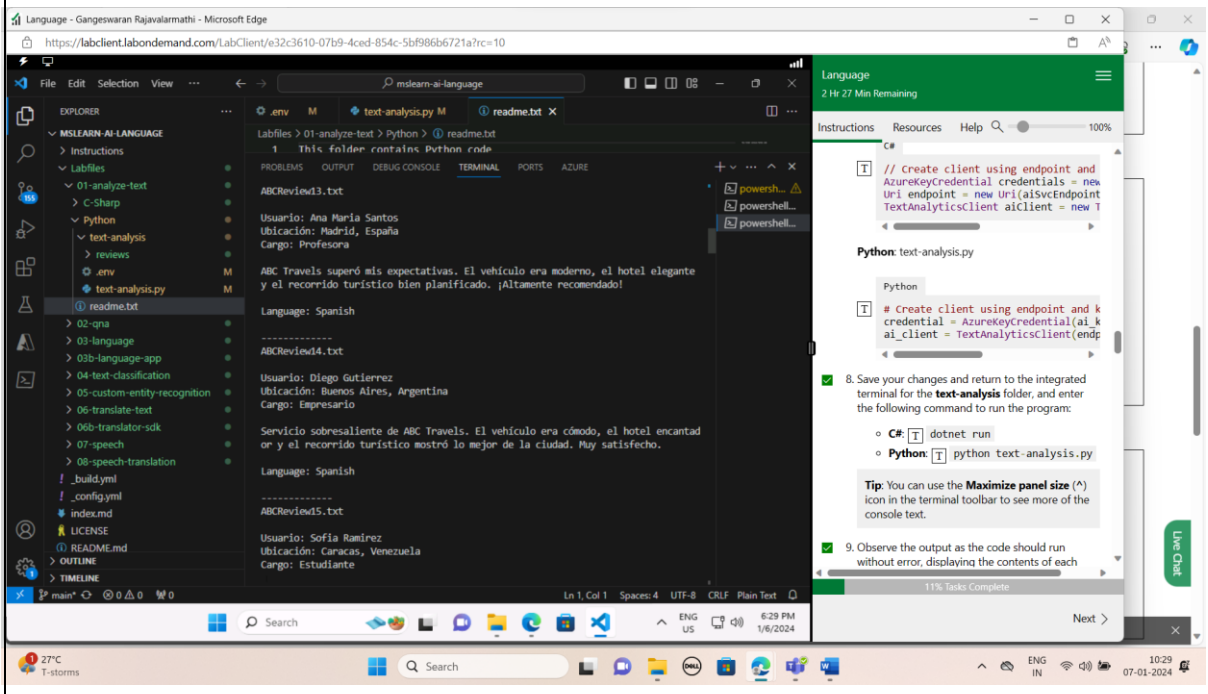
Explanation:

1. **Azure Custom Vision Setup**: Create an Azure Custom Vision project where you'll train an object detection model.
2. **Azure Resource Provisioning**: Obtain the necessary API keys and endpoints for the Azure Custom Vision service to be used in your Python code for interacting with Custom Vision.

Here's an example Python code snippet that demonstrates the provisioning of Azure resources for object detection using Azure Custom Vision:

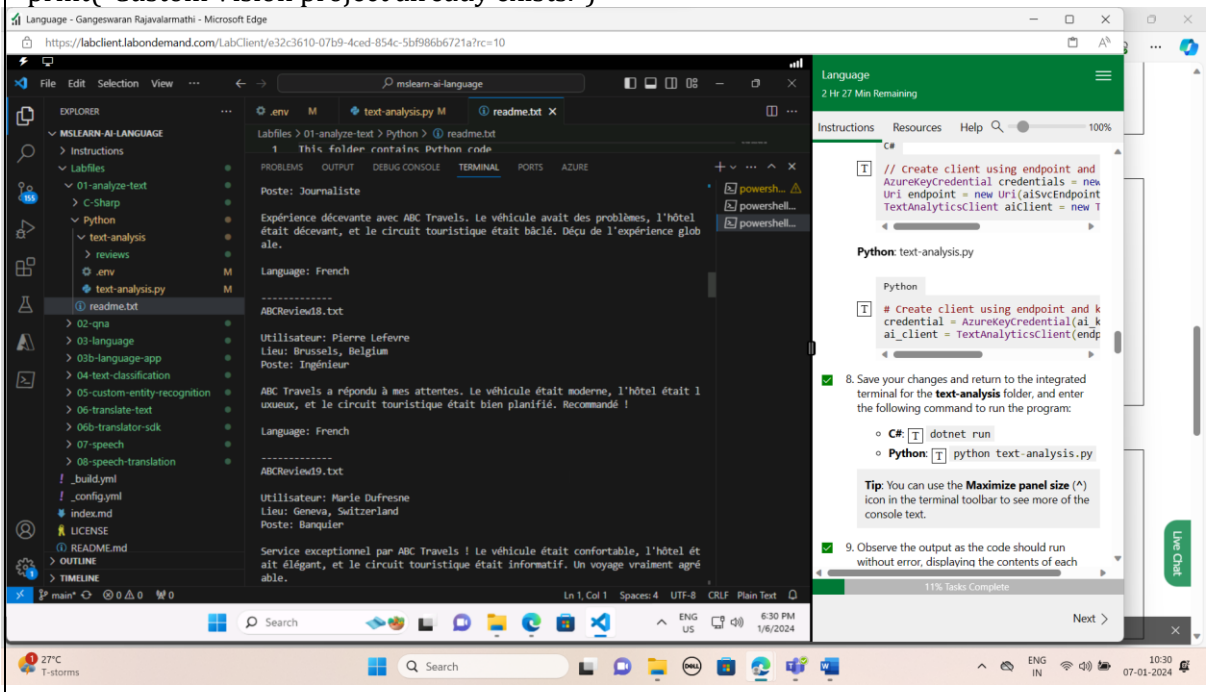


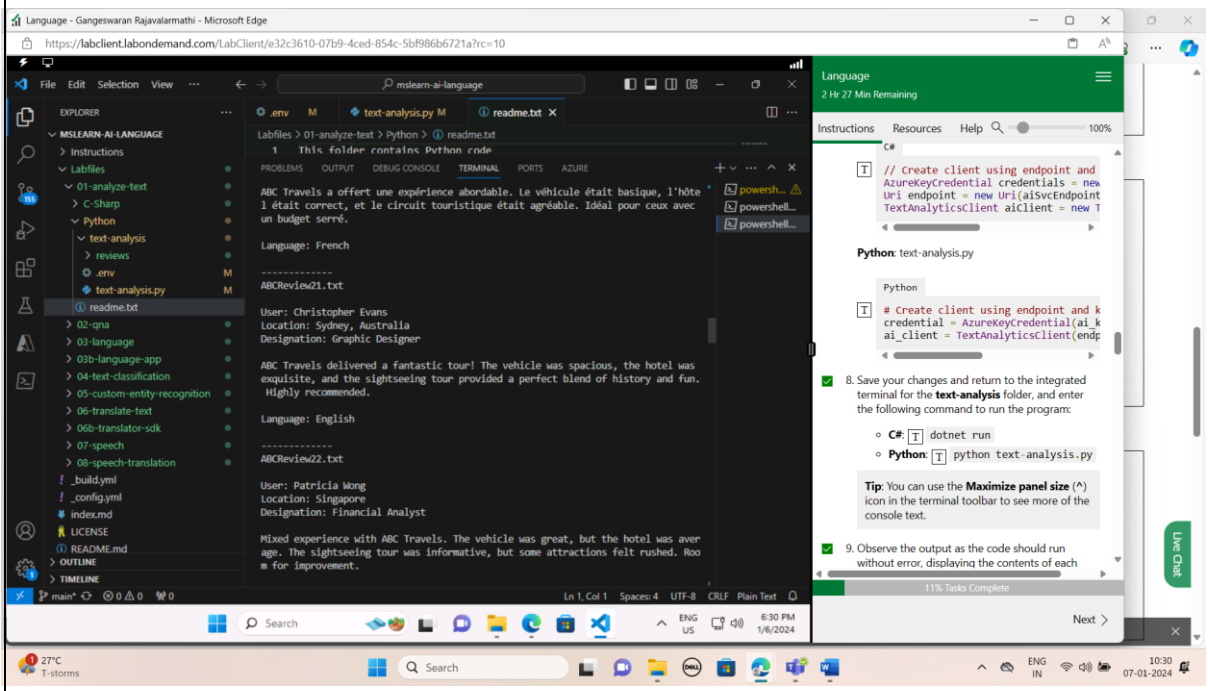


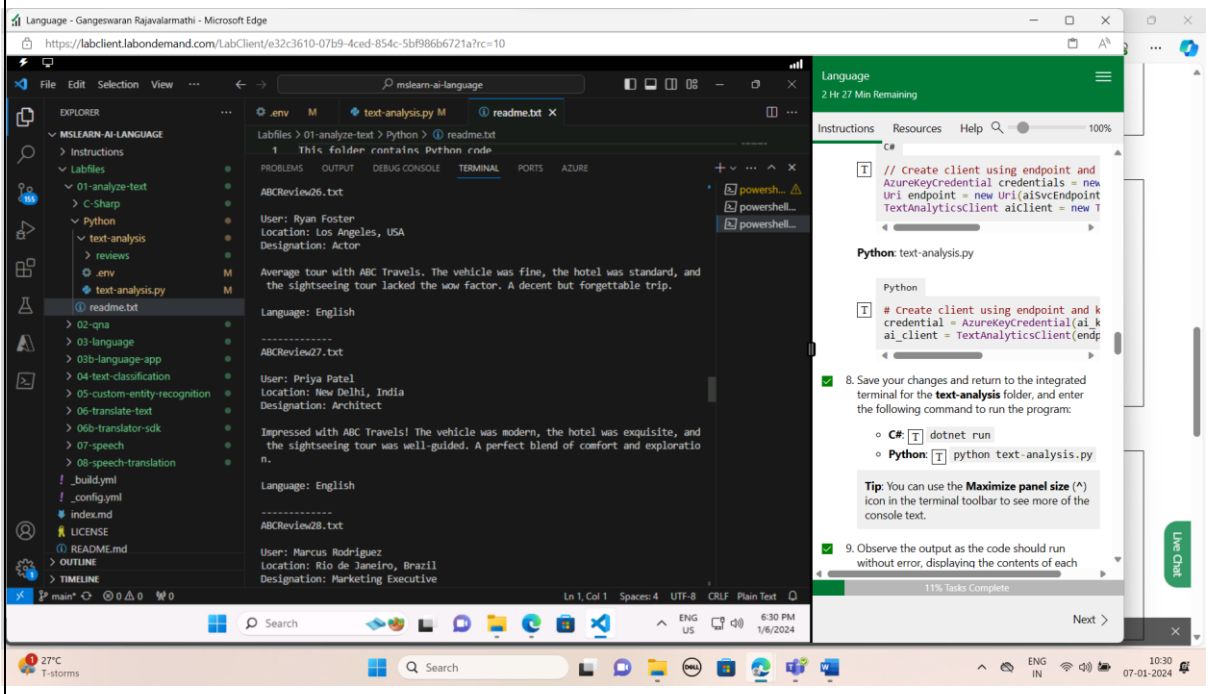



```
from azure.cognitiveservices.vision.customvision.training import CustomVisionTrainingClient
from azure.cognitiveservices.vision.customvision.training.models import Project

# Azure Custom Vision setup
ENDPOINT = "YOUR_CUSTOM_VISION_ENDPOINT"
training_key = "YOUR_TRAINING_KEY"
project_name = "Vehicle_Object_Detection"  # Name for the Custom Vision project

# Create a Custom Vision Training Client
trainer = CustomVisionTrainingClient(training_key, endpoint=ENDPOINT)

# Check if the project exists, if not, create a new project
existing_projects = trainer.get_projects()
project_exists = any(proj.name == project_name for proj in existing_projects)

if not project_exists:
    print("Creating a new Custom Vision project...")
```

```
    project = trainer.create_project(name=project_name, description="Object Detection for Vehicles")
    print("Custom Vision project created.")
else:
    print("Custom Vision project already exists.")
```



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text-analysis.py M
readme.txt
Labfiles > 01-analyze-text > Python > readme.txt
1 This folder contains Python code
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS AZURE
ABCReview26.txt
User: Ryan Foster
Location: Los Angeles, USA
Designation: Actor
Average tour with ABC Travels. The vehicle was fine, the hotel was standard, and the sightseeing tour lacked the wow factor. A decent but forgettable trip.
Language: English
ABCReview27.txt
User: Priya Patel
Location: New Delhi, India
Designation: Architect
Impressed with ABC Travels! The vehicle was modern, the hotel was exquisite, and the sightseeing tour was well-guided. A perfect blend of comfort and exploratio n.
Language: English
ABCReview28.txt
User: Marcus Rodriguez
Location: Rio de Janeiro, Brazil
Designation: Marketing Executive
powersh...
powershell...
powershell...
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Language
2 Hr 27 Min Remaining
Instructions Resources Help 100%
C#
// Create client using endpoint and
AzureKeyCredential credentials = new
Uri endpoint = new Uri(aiSvcEndpoint
TextAnalyticsClient aiClient = new T
Python: text-analysis.py
Python
# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
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11% Tasks Complete
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Live Chat
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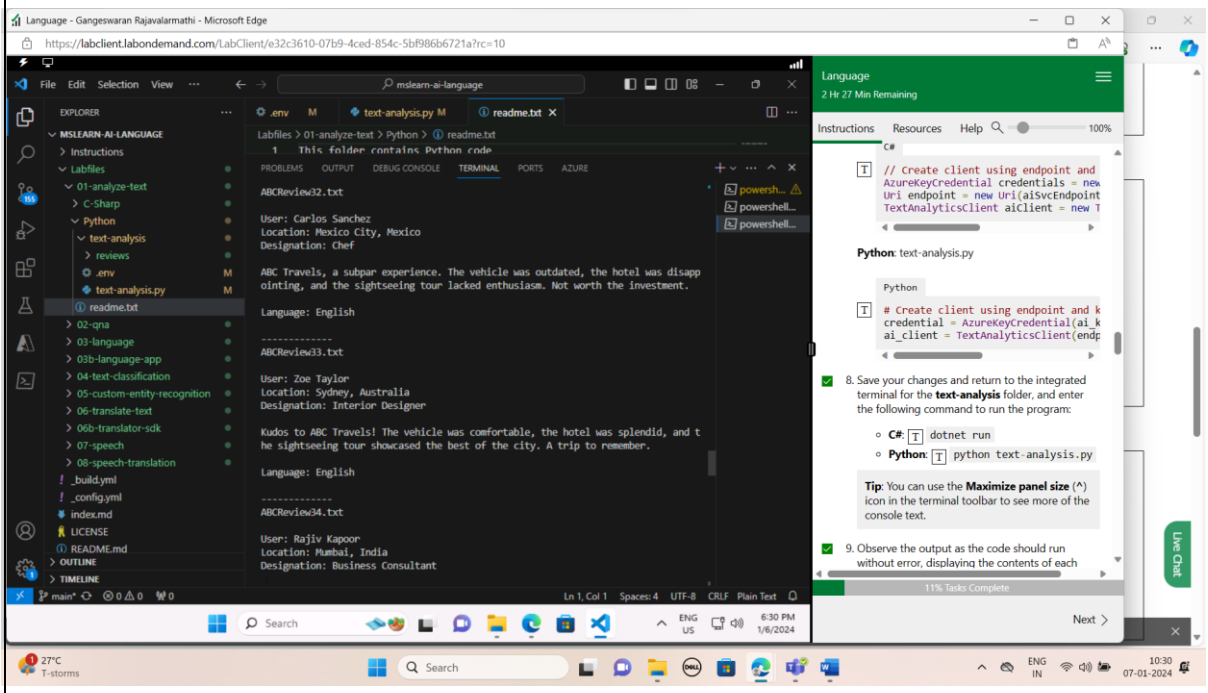
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readme.txt
Labfiles > 01-analyze-text > Python > readme.txt
1 This folder contains Python code
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS AZURE
ABCReview32.txt
User: Carlos Sanchez
Location: Mexico City, Mexico
Designation: Chef
ABC Travels, a subpar experience. The vehicle was outdated, the hotel was disapp ointing, and the sightseeing tour lacked enthusiasm. Not worth the investment.
Language: English
ABCReview33.txt
User: Zoe Taylor
Location: Sydney, Australia
Designation: Interior Designer
Kudos to ABC Travels! The vehicle was comfortable, the hotel was splendid, and t he sightseeing tour showcased the best of the city. A trip to remember.
Language: English
ABCReview34.txt
User: Rajiv Kapoor
Location: Mumbai, India
Designation: Business Consultant
powersh...
powershell...
powershell...
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Language
2 Hr 27 Min Remaining
Instructions Resources Help 100%
C#
// Create client using endpoint and
AzureKeyCredential credentials = new
Uri endpoint = new Uri(aiSvcEndpoint
TextAnalyticsClient aiClient = new T
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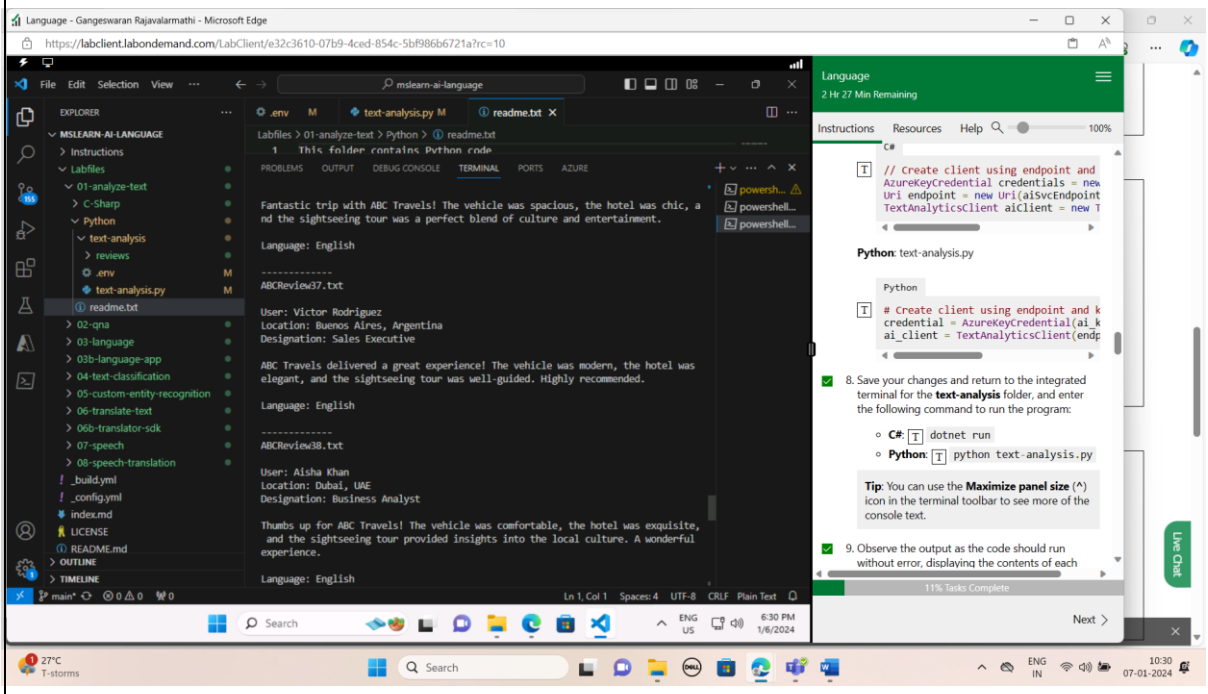
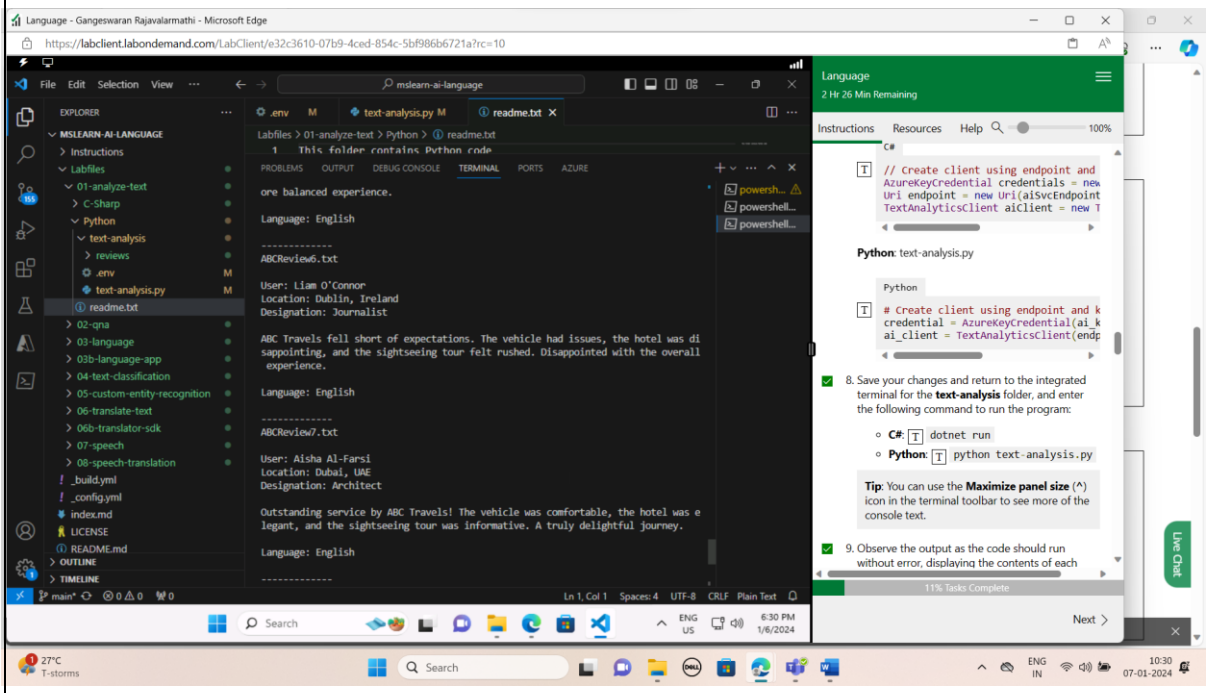
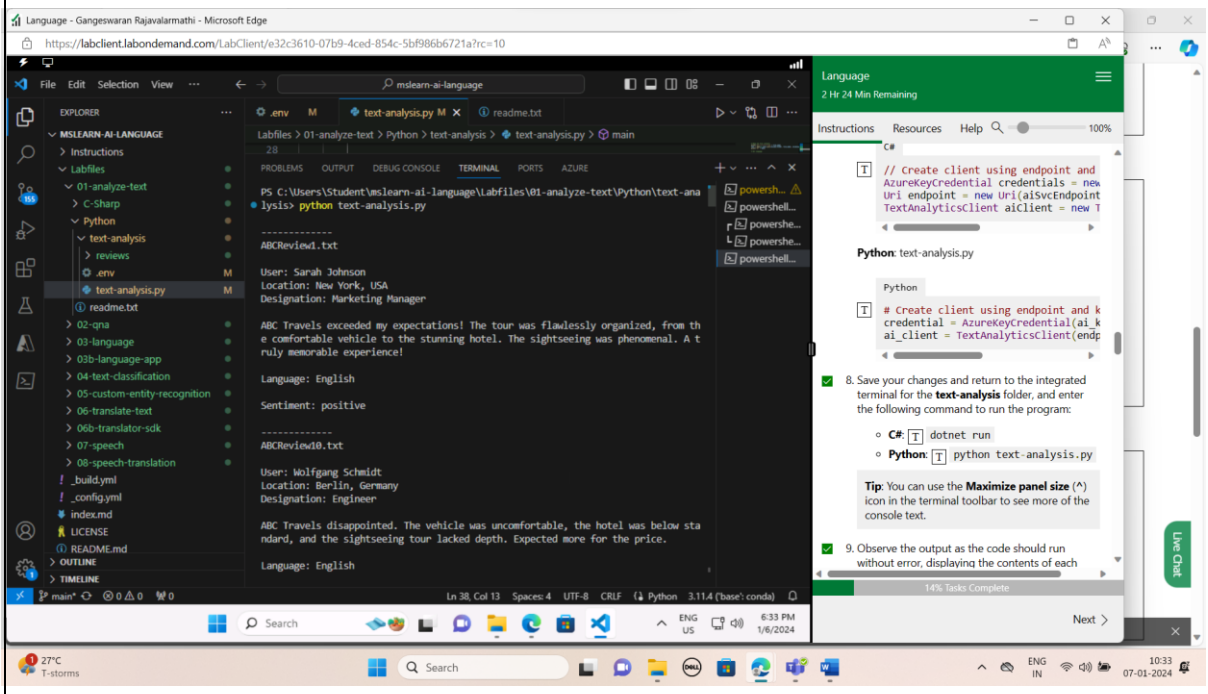




Sentiment analyses:


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
mslearn-ai-language
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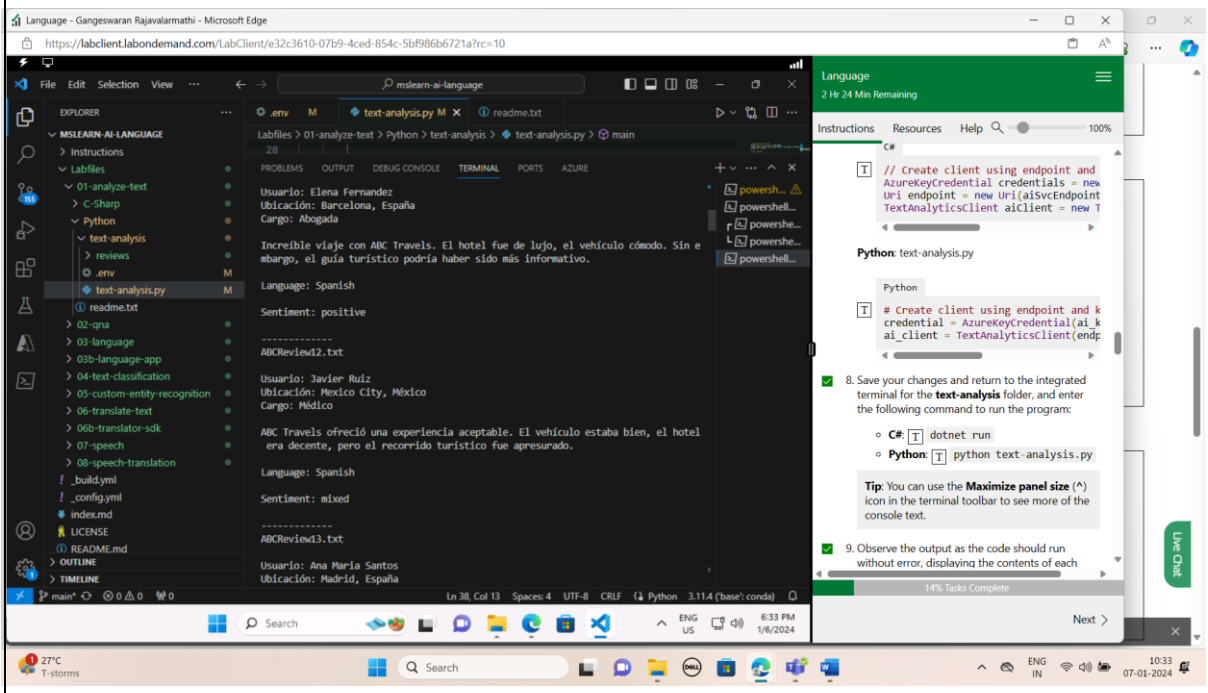
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS AZURE
PS C:\Users\Student\mslearn-ai-language\Labfiles\01-analyze-text\Python\text-analysis> python text-analysis.py
ABCReview1.txt
User: Sarah Johnson
Location: New York, USA
Designation: Marketing Manager
ABC Travels exceeded my expectations! The tour was flawlessly organized, from the comfortable vehicle to the stunning hotel. The sightseeing was phenomenal. A truly memorable experience!
Language: English
Sentiment: positive
ABCReview10.txt
User: Wolfgang Schmidt
Location: Berlin, Germany
Designation: Engineer
ABC Travels disappointed. The vehicle was uncomfortable, the hotel was below standard, and the sightseeing tour lacked depth. Expected more for the price.
Language: English
Language
2 Hr 24 Min Remaining
Instructions
Resources
Help
100%
// Create client using endpoint and
AzureKeyCredential credentials = new
Uri endpoint = new Uri(aiSvcEndpoint
TextAnalyticsClient aiClient = new T
Python: text-analysis.py
Python
# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each
14% Tasks Complete
Next
Live Chat


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
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_config.yml
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OUTLINE
TIMELINE
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS AZURE
Usuario: Elena Fernandez
Ubicación: Barcelona, España
Cargo: Abogada
Increíble viaje con ABC Travels. El hotel fue de lujo, el vehículo cómodo. Sin embargo, el guía turístico podría haber sido más informativo.
Language: Spanish
Sentiment: positive
ABCReview12.txt
Usuario: Javier Ruiz
Ubicación: Mexico City, México
Cargo: Médico
ABC Travels ofreció una experiencia aceptable. El vehículo estaba bien, el hotel era decente, pero el recorrido turístico fue apresurado.
Language: Spanish
Sentiment: mixed
ABCReview13.txt
Usuario: Ana Maria Santos
Ubicación: Madrid, España
Language
2 Hr 24 Min Remaining
Instructions
Resources
Help
100%
// Create client using endpoint and
AzureKeyCredential credentials = new
Uri endpoint = new Uri(aiSvcEndpoint
TextAnalyticsClient aiClient = new T
Python: text-analysis.py
Python
# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
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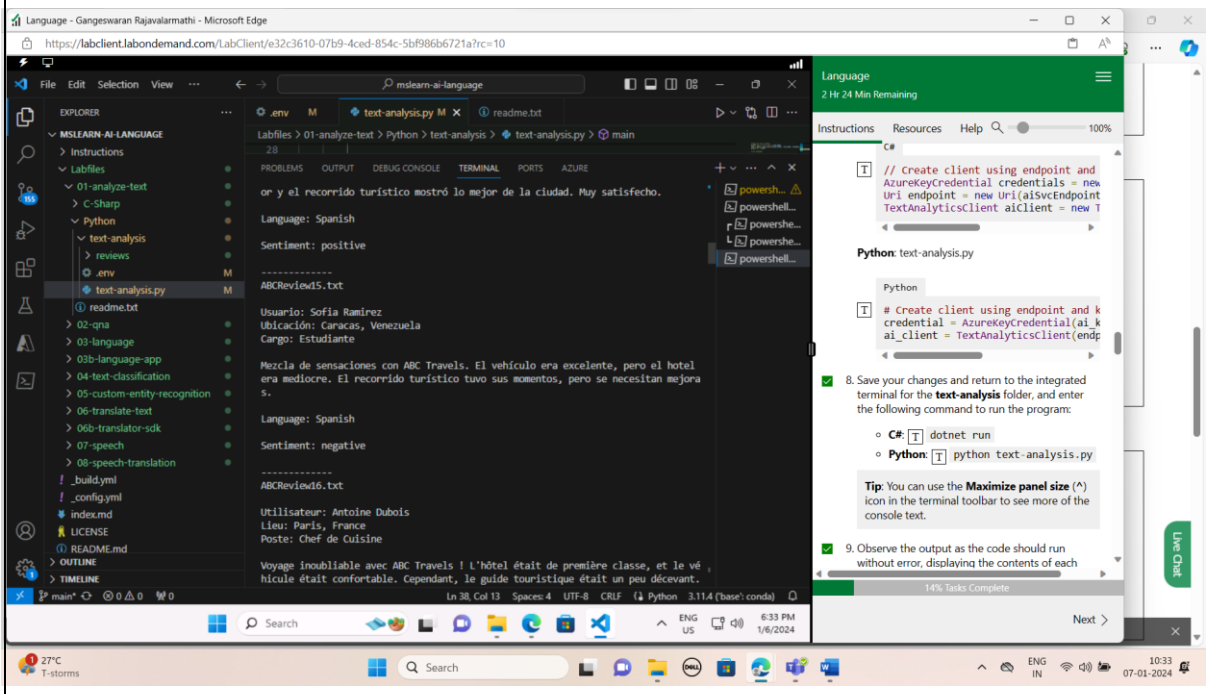
Live Chat


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
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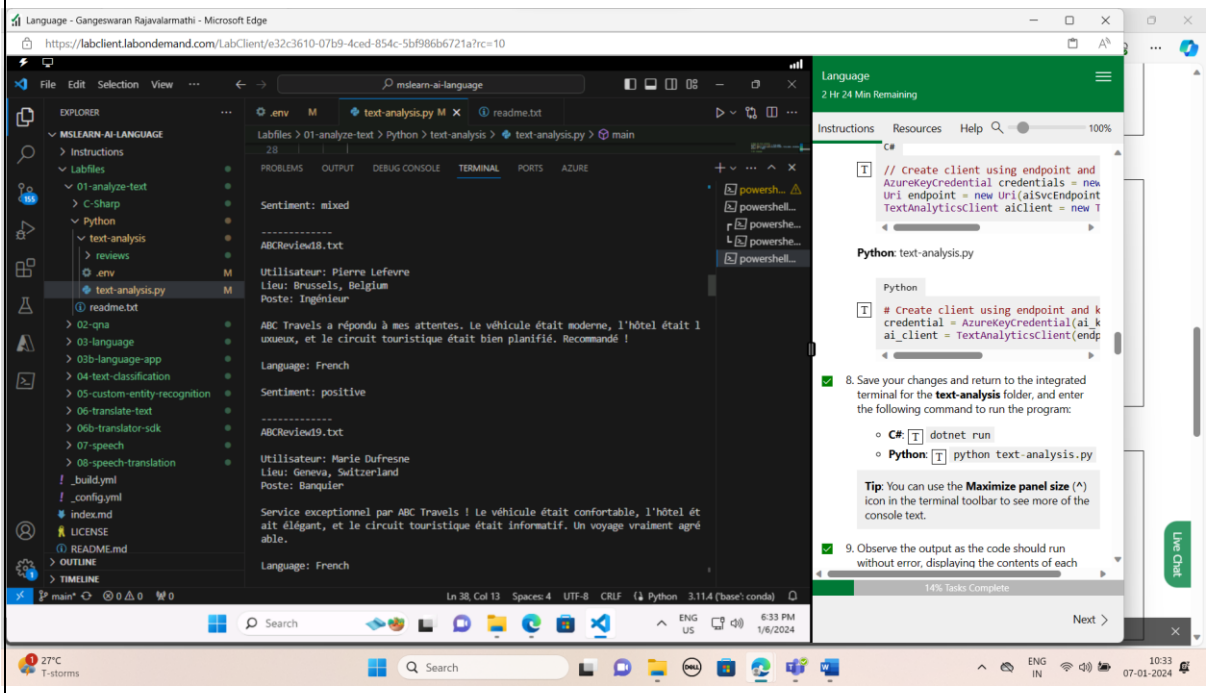
Live Chat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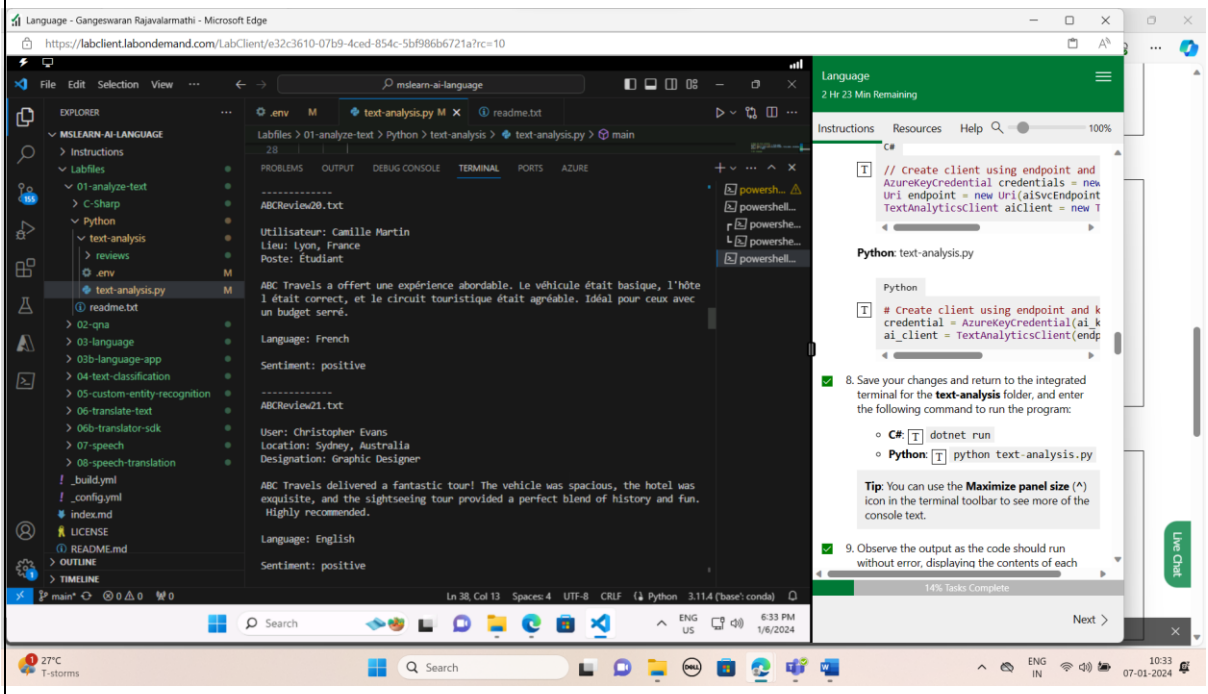
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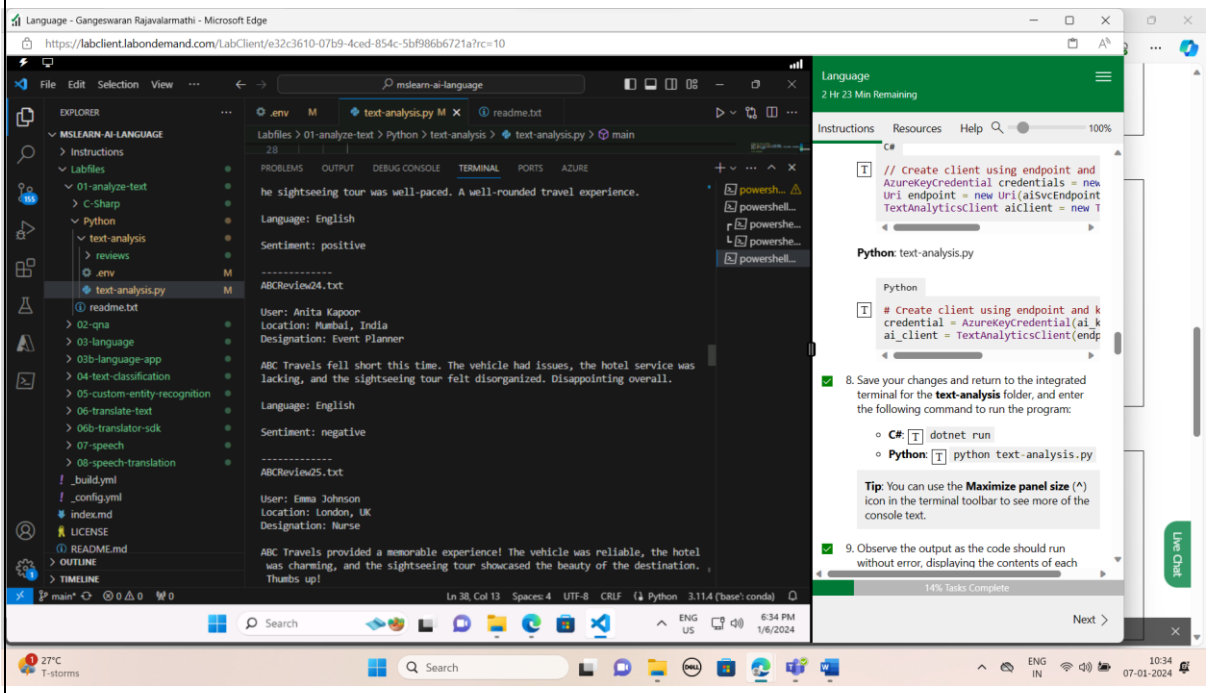
Live Chat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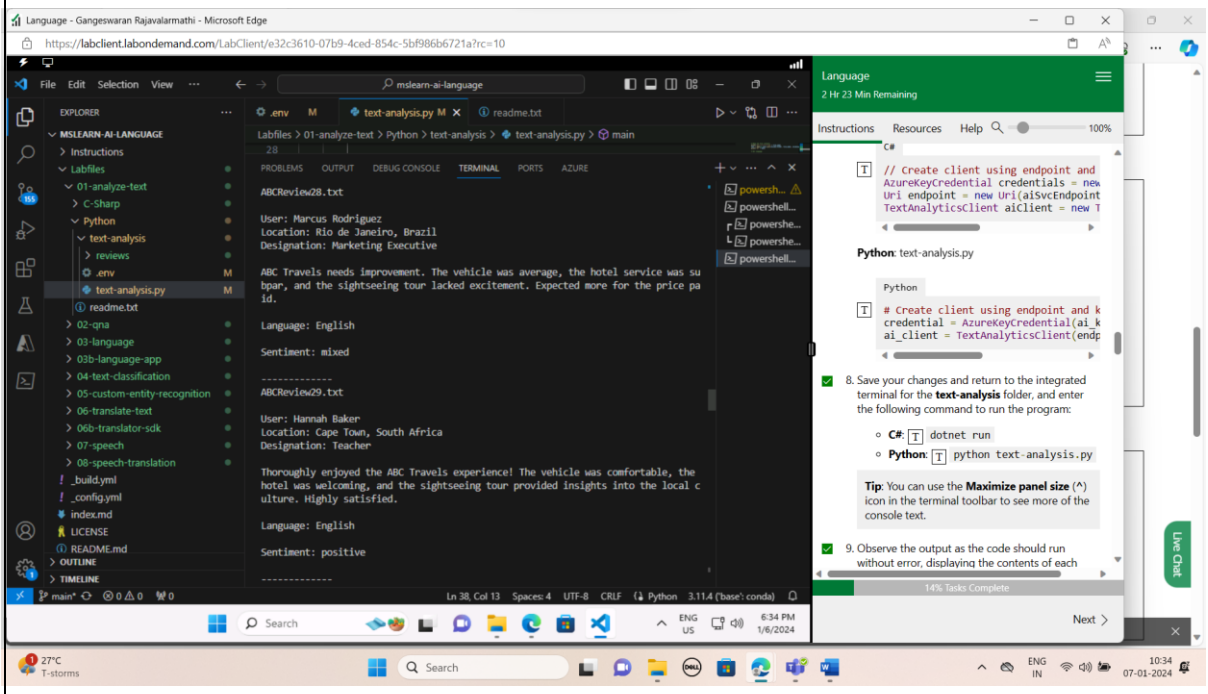
Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
mslearn-ai-language
Language
2 Hr 23 Min Remaining
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100%
Python: text-analysis.py
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Python: python text-analysis.py
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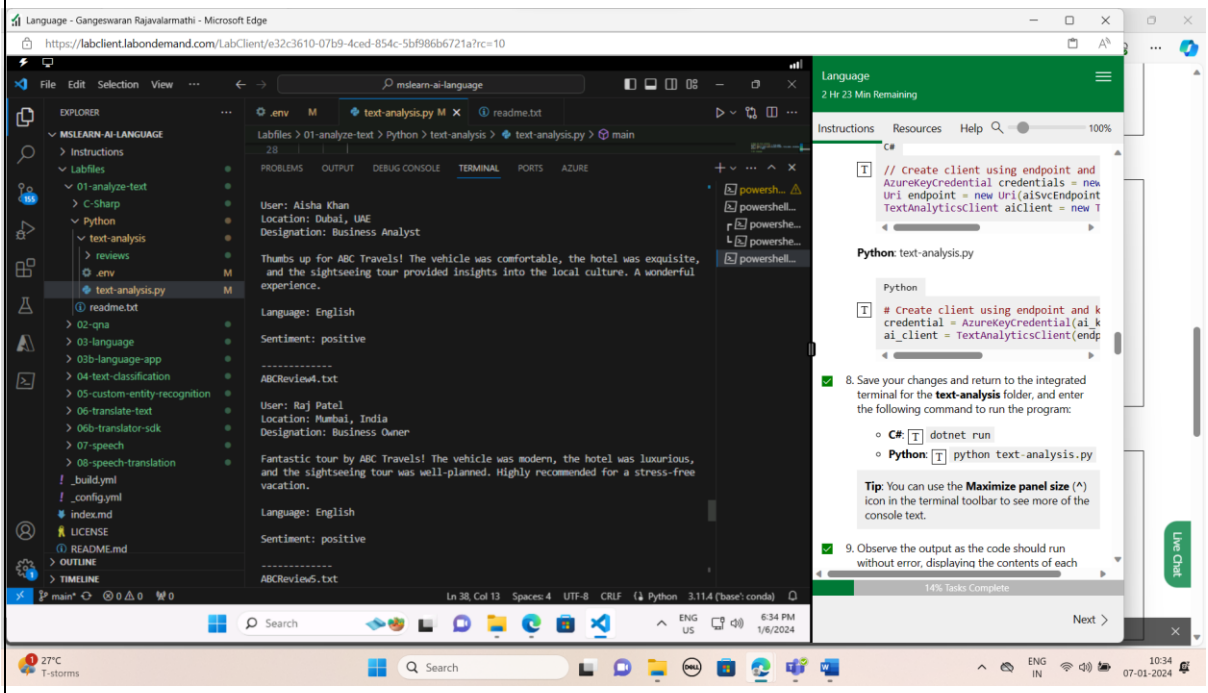
9. Observe the output as the code should run without error, displaying the contents of each
14% Tasks Complete
Next
Live Chat
ABCReview28.txt
User: Marcus Rodriguez
Location: Rio de Janeiro, Brazil
Designation: Marketing Executive
ABC Travels needs improvement. The vehicle was average, the hotel service was subpar, and the sightseeing tour lacked excitement. Expected more for the price paid.
Language: English
Sentiment: mixed
ABCReview29.txt
User: Hannah Baker
Location: Cape Town, South Africa
Designation: Teacher
Thoroughly enjoyed the ABC Travels experience! The vehicle was comfortable, the hotel was welcoming, and the sightseeing tour provided insights into the local culture. Highly satisfied.
Language: English
Sentiment: positive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9. Observe the output as the code should run without error, displaying the contents of each
14% Tasks Complete
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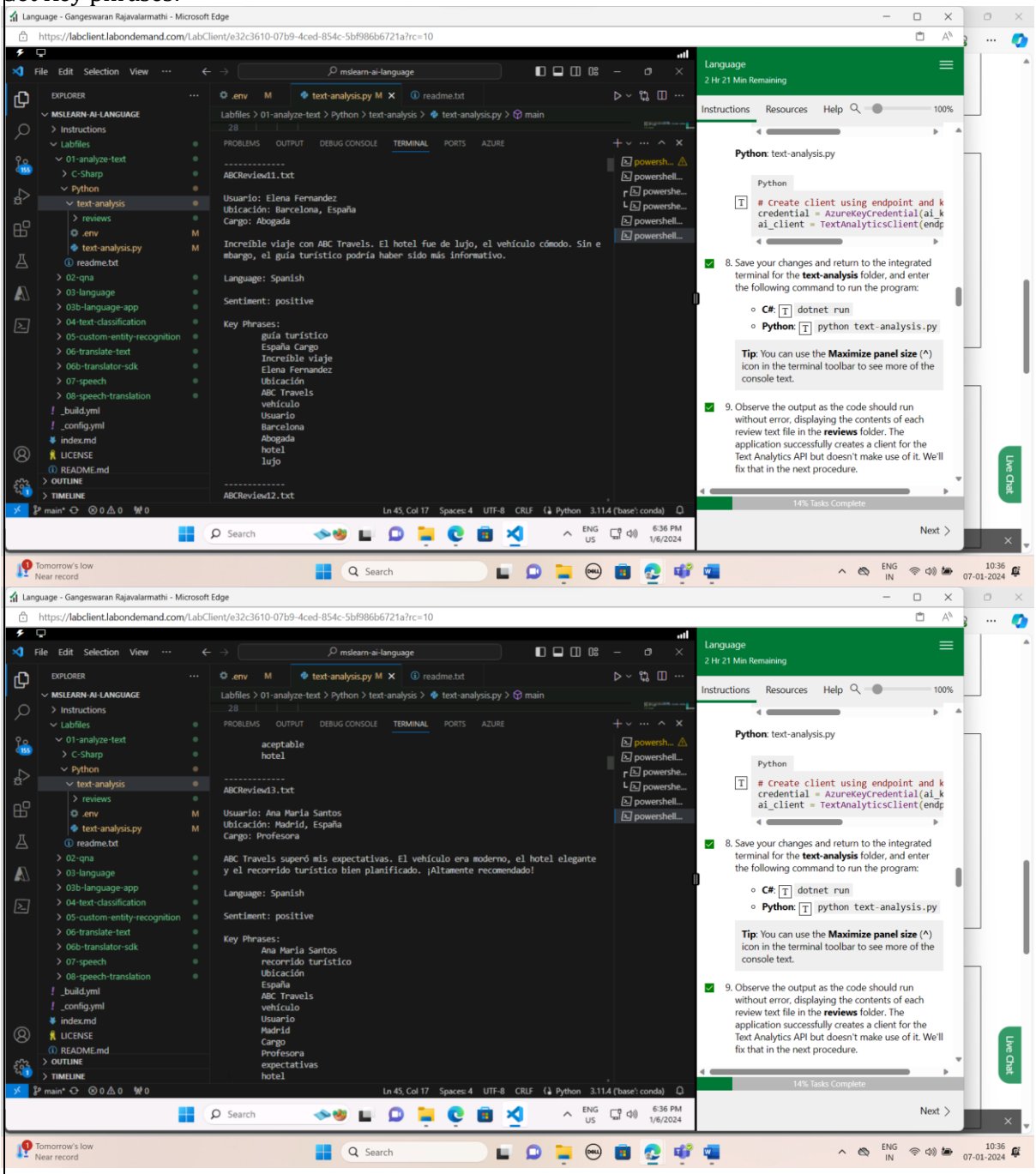
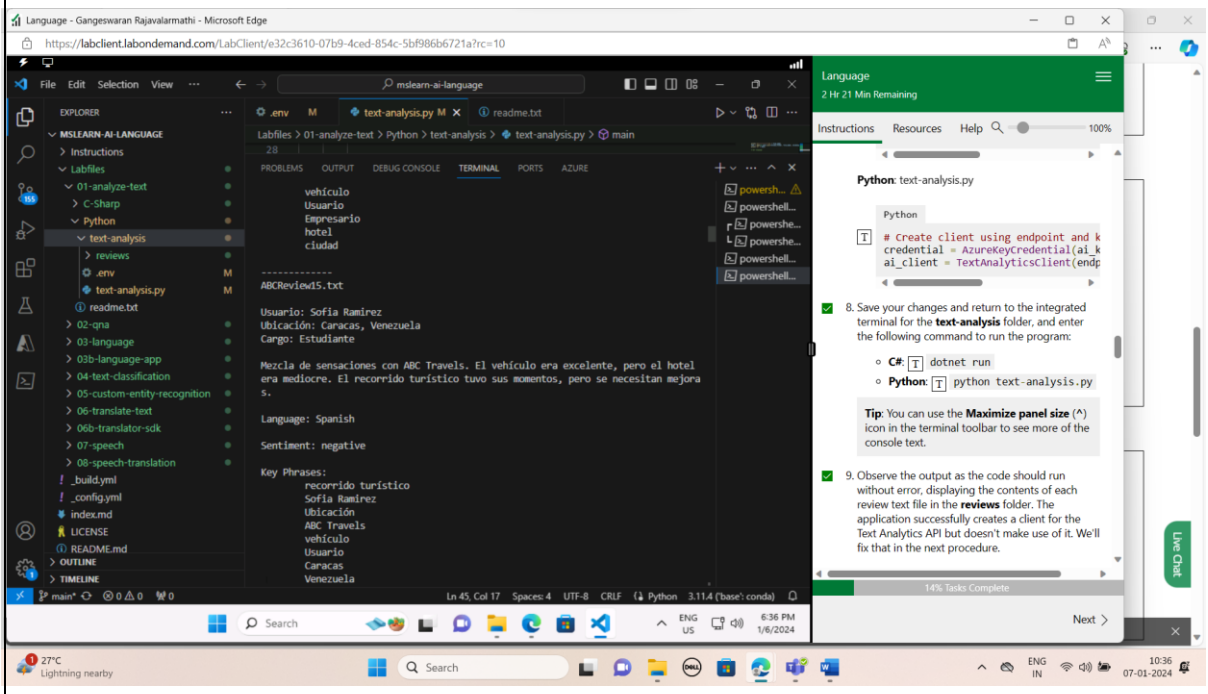
Live Chat
User: Aisha Khan
Location: Dubai, UAE
Designation: Business Analyst
Thumbs up for ABC Travels! The vehicle was comfortable, the hotel was exquisite, and the sightseeing tour provided insights into the local culture. A wonderful experience.
Language: English
Sentiment: positive
ABCReview4.txt
User: Raj Patel
Location: Mumbai, India
Designation: Business Owner
Fantastic tour by ABC Travels! The vehicle was modern, the hotel was luxurious, and the sightseeing tour was well-planned. Highly recommended for a stress-free vacation.
Language: English
Sentiment: positive
ABCReview5.txt

Get Key phrases:

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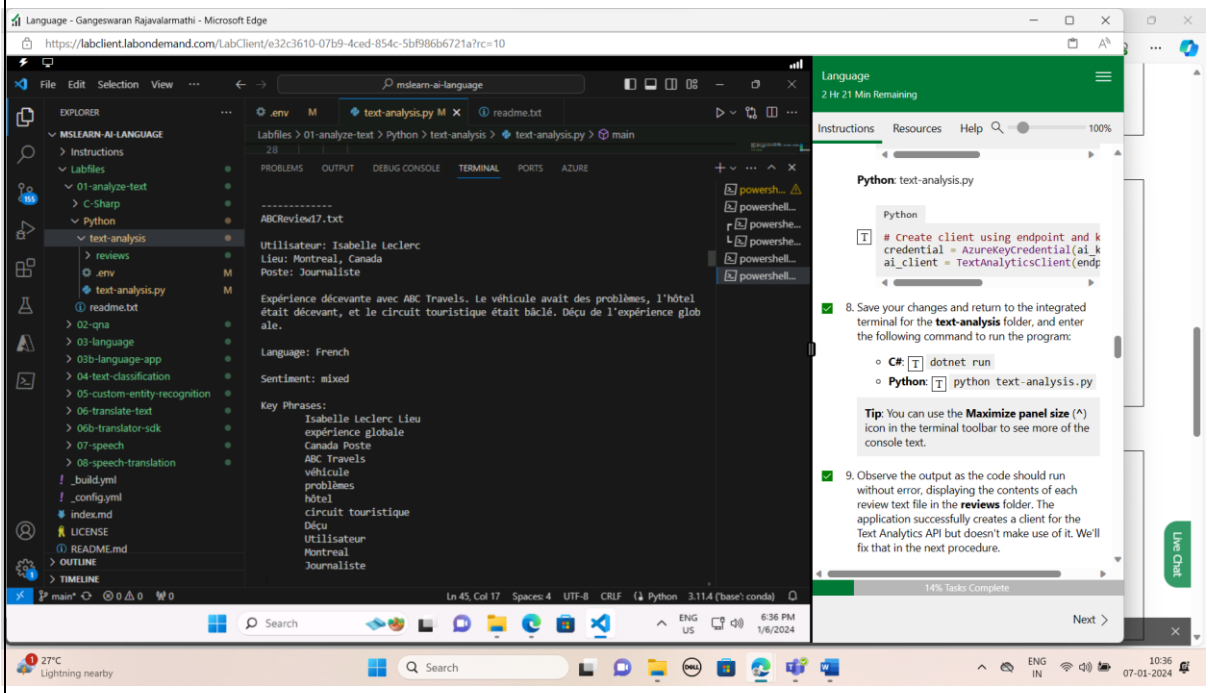
PORTS
AZURE
vehículo
Usuario
Empresario
hotel
ciudad
ABCReview15.txt
Usuario: Sofia Ramirez
Ubicación: Caracas, Venezuela
Cargo: Estudiante
Mezcla de sensaciones con ABC Travels. El vehículo era excelente, pero el hotel era mediocre. El recorrido turístico tuvo sus momentos, pero se necesitan mejoras.
Language: Spanish
Sentiment: negative
Key Phrases:
recorrido turístico
Sofia Ramirez
Ubicación
ABC Travels
vehículo
Usuario
Caracas
Venezuela
Ln 45, Col 17
Spaces: 4
UTF-8
CRLF
Python
3.11.4 ('base': conda)
Language
2 Hr 21 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
Python
# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
14% Tasks Complete
Next
Live Chat
Search
ENG
US
6:36 PM
1/6/2024
27°C
Lightning nearby
ENG
IN
10:36
07-01-2024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PORTS
AZURE
ABCReview17.txt
Utilisateur: Isabelle Leclerc
Lieu: Montreal, Canada
Poste: Journaliste
Expérience décevante avec ABC Travels. Le véhicule avait des problèmes, l'hôtel était décevant, et le circuit touristique était bâclé. Déçu de l'expérience globale.
Language: French
Sentiment: mixed
Key Phrases:
Isabelle Leclerc Lieu
expérience globale
Canada Poste
ABC Travels
véhicule
problèmes
hôtel
circuit touristique
Déçu
Utilisateur
Montreal
Journaliste
Ln 45, Col 17
Spaces: 4
UTF-8
CRLF
Python
3.11.4 ('base': conda)
Language
2 Hr 21 Min Remaining
Instructions
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# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
14% Tasks Complete
Next
Live Chat
Search
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US
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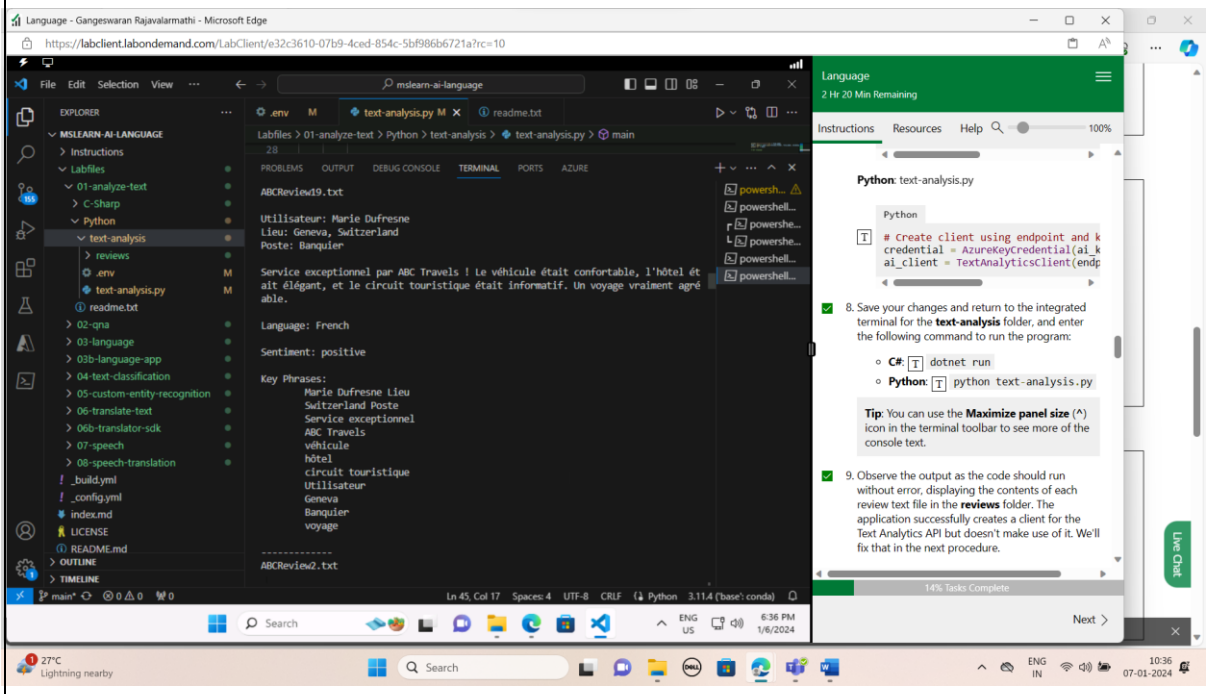
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mslearn-ai-language
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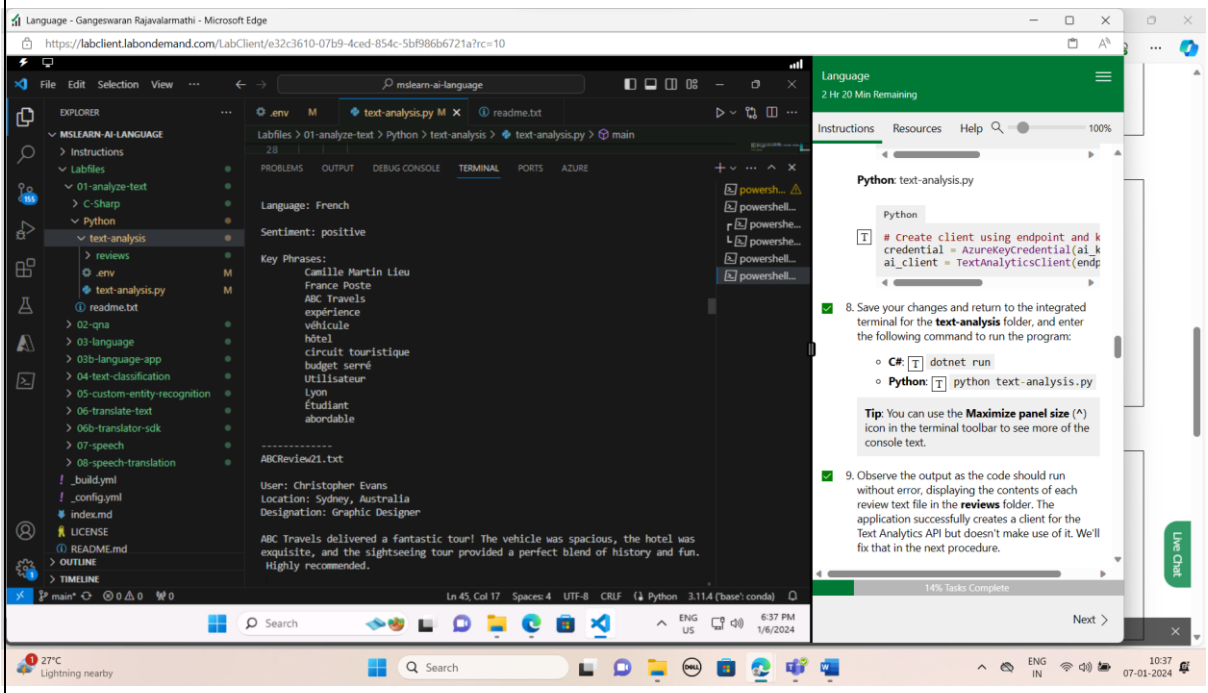
14% Tasks Complete
Next
Live Chat
ABCReview19.txt
Utilisateur: Marie Dufresne
Lieu: Geneva, Switzerland
Poste: Banquier
Service exceptionnel par ABC Travels ! Le véhicule était confortable, l'hôtel était élégant, et le circuit touristique était informatif. Un voyage vraiment agréable.
Language: French
Sentiment: positive
Key Phrases:
Marie Dufresne
Switzerland Poste
Service exceptionnel
ABC Travels
véhicule
hôtel
circuit touristique
Utilisateur
Geneva
Banquier
voyage
ABCReview2.txt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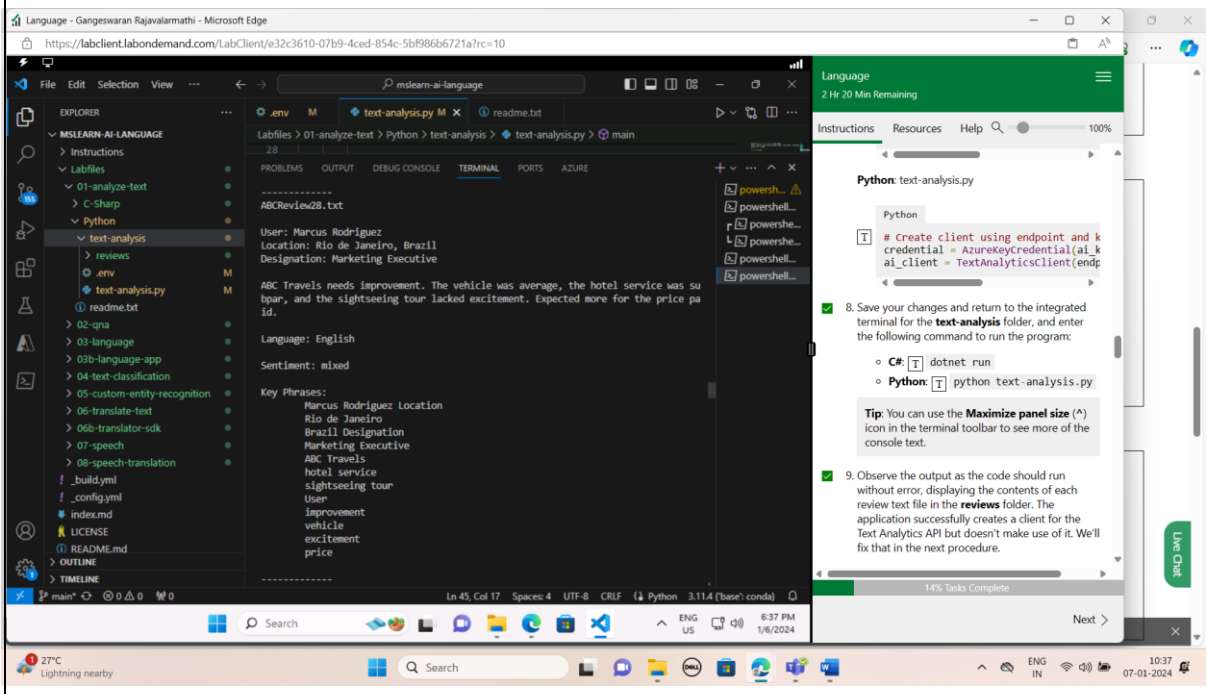
14% Tasks Complete
Next
Live Chat
Language: French
Sentiment: positive
Key Phrases:
Camille Martin Lieu
France Poste
ABC Travels
expérience
véhicule
hôtel
circuit touristique
budget serré
Utilisateur
Lyon
Étudiant
abordable
ABCReview21.txt
User: Christopher Evans
Location: Sydney, Australia
Designation: Graphic Designer
ABC Travels delivered a fantastic tour! The vehicle was spacious, the hotel was exquisite, and the sightseeing tour provided a perfect blend of history and fun. Highly recommended.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14% Tasks Complete
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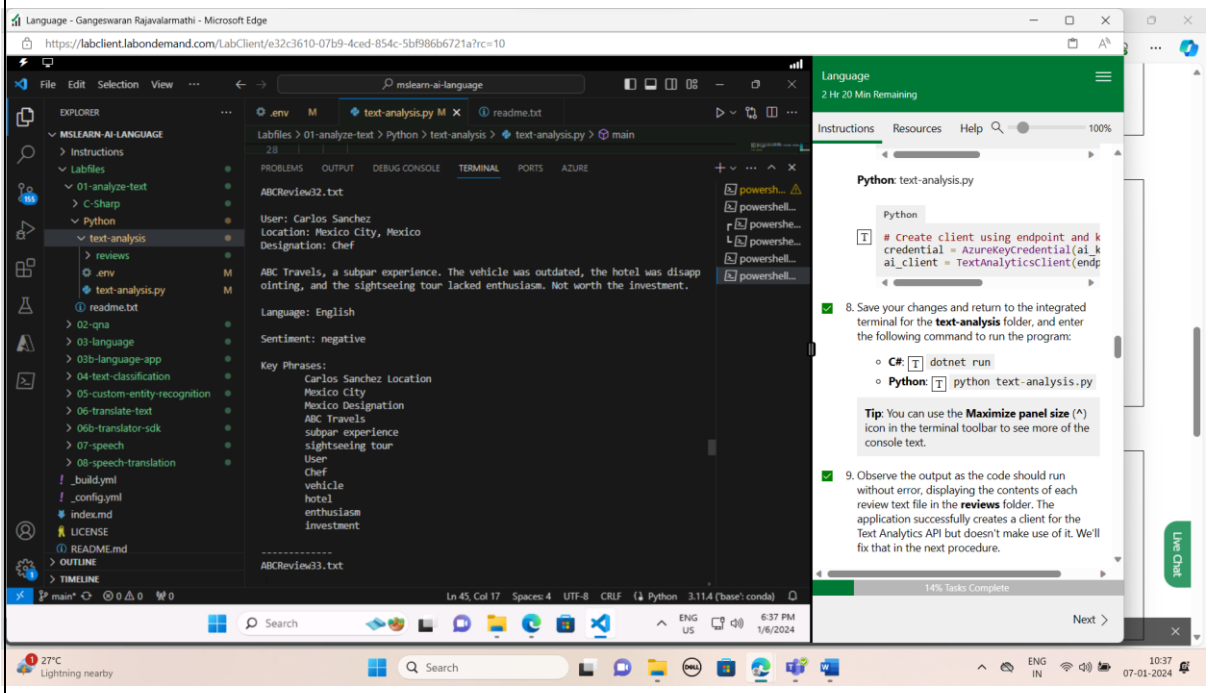
Live Chat
ABCReview28.txt
User: Marcus Rodriguez
Location: Rio de Janeiro, Brazil
Designation: Marketing Executive
ABC Travels needs improvement. The vehicle was average, the hotel service was subpar, and the sightseeing tour lacked excitement. Expected more for the price paid.
Language: English
Sentiment: mixed
Key Phrases:
Marcus Rodriguez Location
Rio de Janeiro
Brazil Designation
Marketing Executive
ABC Travels
hotel service
sightseeing tour
User
improvement
vehicle
excitement
price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Python: python text-analysis.py
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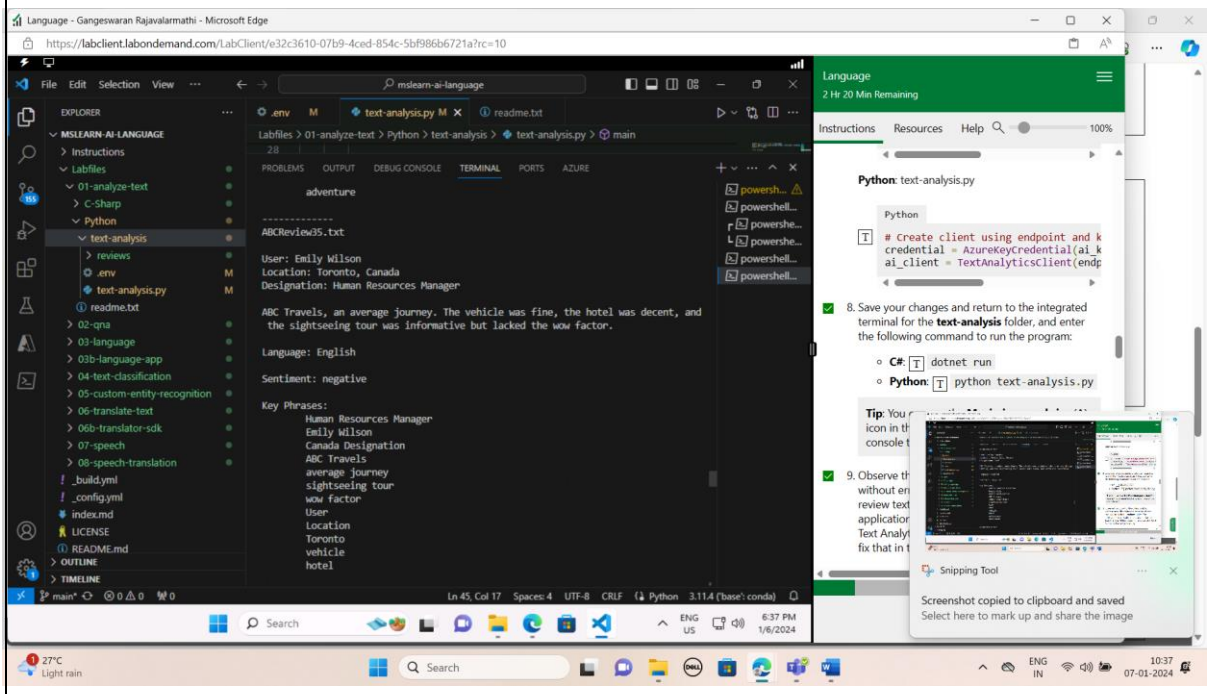
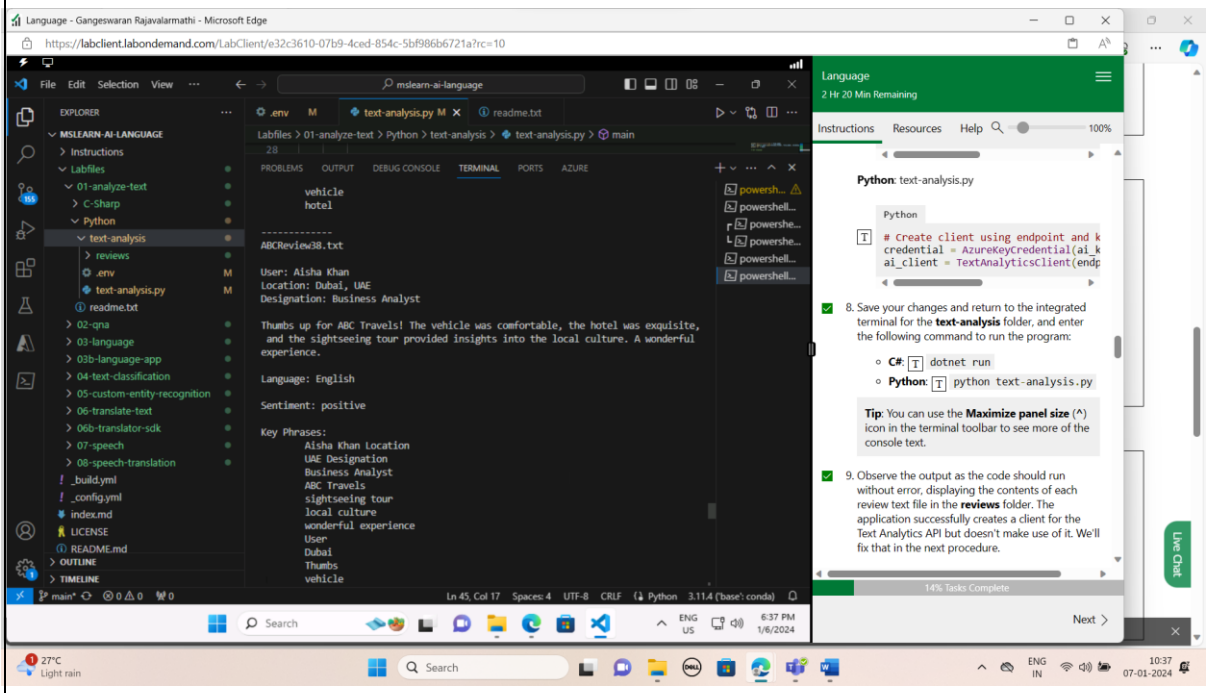
14% Tasks Complete
Next
Live Chat
ABCReview32.txt
User: Carlos Sanchez
Location: Mexico City, Mexico
Designation: Chef
ABC Travels, a subpar experience. The vehicle was outdated, the hotel was disappointing, and the sightseeing tour lacked enthusiasm. Not worth the investment.
Language: English
Sentiment: negative
Key Phrases:
Carlos Sanchez Location
Mexico City
Mexico Designation
ABC Travels
subpar experience
sightseeing tour
User
Chef
vehicle
hotel
enthusiasm
investment
ABCReview33.txt


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 20 Min Remaining
Instructions
Resources
Help
Python: text-analysis.py
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Snipping Tool
Screenshot copied to clipboard and saved
Select here to mark up and share the image
adventure
ABCReview35.txt
User: Emily Wilson
Location: Toronto, Canada
Designation: Human Resources Manager
ABC Travels, an average journey. The vehicle was fine, the hotel was decent, and the sightseeing tour was informative but lacked the wow factor.
Language: English
Sentiment: negative
Key Phrases:
Human Resources Manager
Emily Wilson
Canada Designation
ABC Travels
average journey
sightseeing tour
wow factor
User
Location
Toronto
vehicle
hotel


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 20 Min Remaining
Instructions
Resources
Help
Python: text-analysis.py
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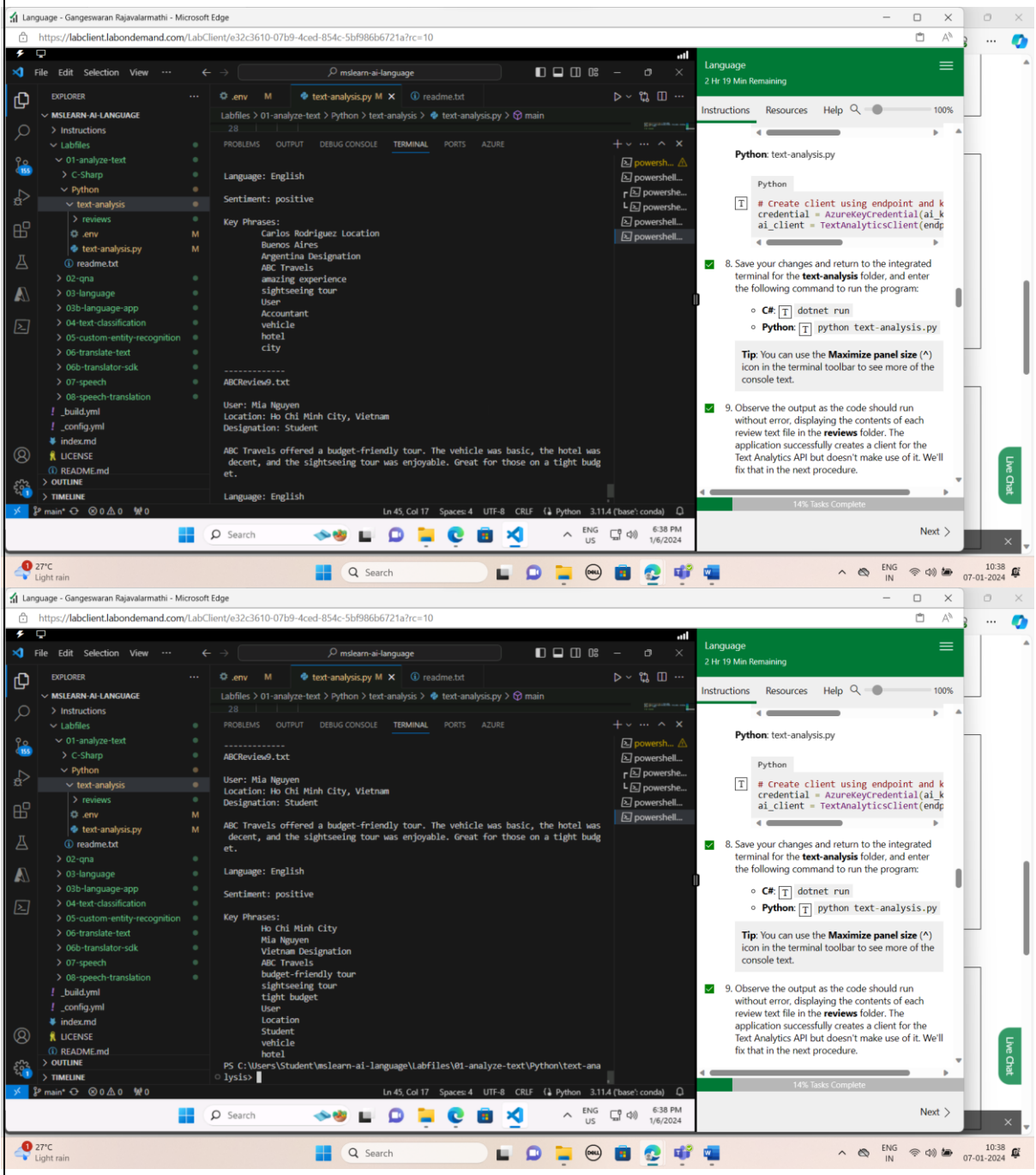
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
14% Tasks Complete
Next
Live Chat
vehicle
hotel
ABCReview38.txt
User: Aisha Khan
Location: Dubai, UAE
Designation: Business Analyst
Thumbs up for ABC Travels! The vehicle was comfortable, the hotel was exquisite, and the sightseeing tour provided insights into the local culture. A wonderful experience.
Language: English
Sentiment: positive
Key Phrases:
Aisha Khan Location
UAE Designation
Business Analyst
ABC Travels
sightseeing tour
local culture
wonderful experience
User
Dubai
Thumbs
vehicle


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 19 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
Python
# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
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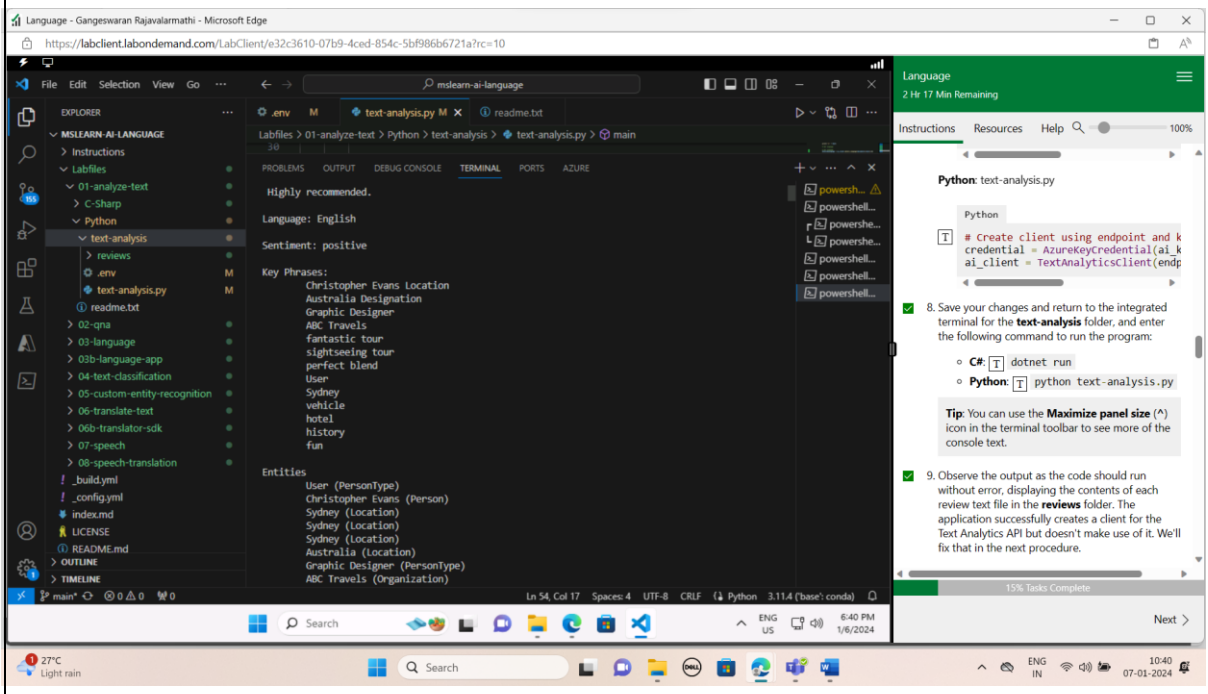
14% Tasks Complete
Next
Live Chat
Language: English
Sentiment: positive
Key Phrases:
Carlos Rodriguez Location
Buenos Aires
Argentina Designation
ABC Travels
amazing experience
sightseeing tour
User
Accountant
vehicle
hotel
city
ABCReview9.txt
User: Mia Nguyen
Location: Ho Chi Minh City, Vietnam
Designation: Student
ABC Travels offered a budget-friendly tour. The vehicle was basic, the hotel was decent, and the sightseeing tour was enjoyable. Great for those on a tight budget.
Ho Chi Minh City
Mia Nguyen
Vietnam Designation
budget-friendly tour
tight budget
Location
Student
PS C:\Users\Student\mslearn-ai-language\Labfiles\01-analyze-text\Python\text-analysis>

Entities:


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Highly recommended.
Language: English
Sentiment: positive
Key Phrases:
Christopher Evans Location
Australia Designation
Graphic Designer
ABC Travels
fantastic tour
sightseeing tour
perfect blend
User
Sydney
vehicle
hotel
history
fun
Entities
User (PersonType)
Christopher Evans (Person)
Sydney (Location)
Sydney (Location)
Sydney (Location)
Australia (Location)
Graphic Designer (PersonType)
ABC Travels (Organization)
Language
2 Hr 17 Min Remaining
Instructions
Resources
Help
Python: text-analysis.py
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
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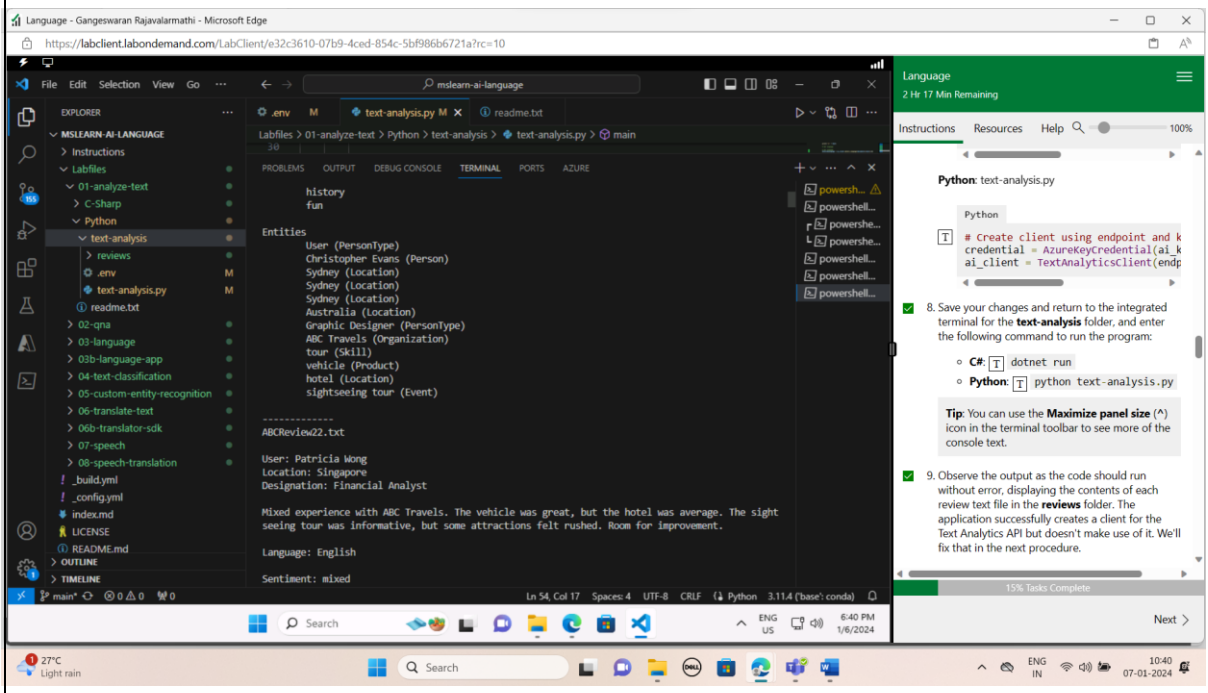
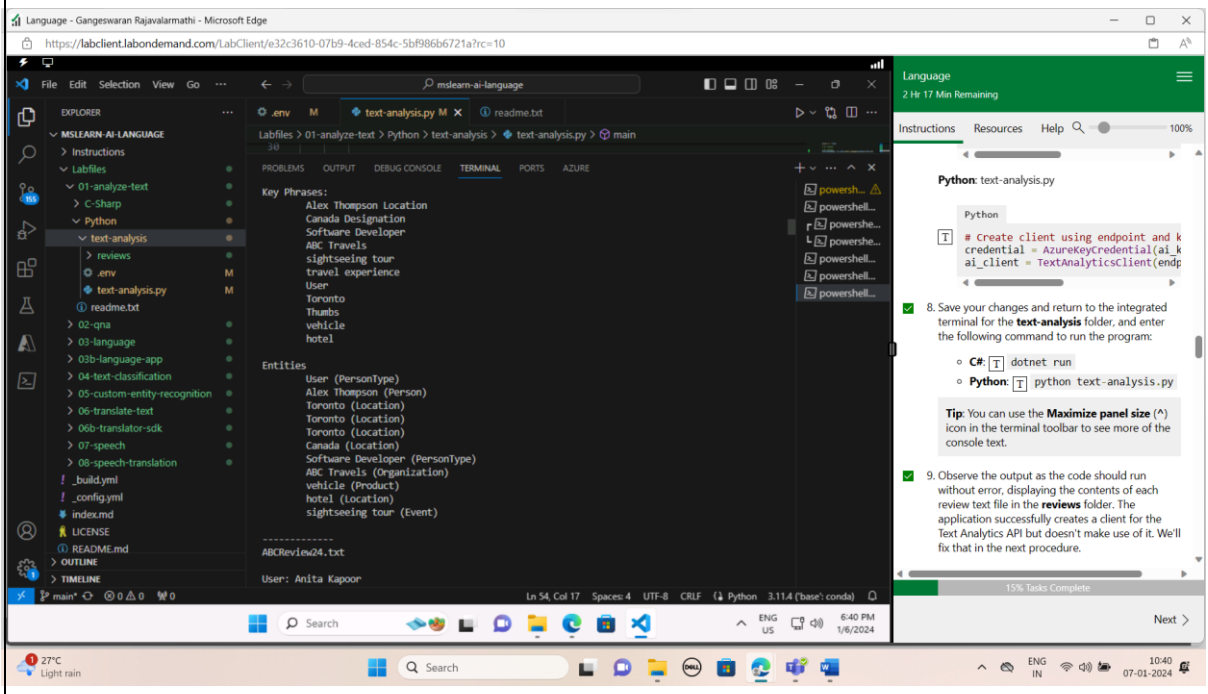
15% Tasks Complete
Next


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
history
fun
Entities
User (PersonType)
Christopher Evans (Person)
Sydney (Location)
Sydney (Location)
Sydney (Location)
Australia (Location)
Graphic Designer (PersonType)
ABC Travels (Organization)
tour (Skill)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
ABCReview22.txt
User: Patricia Wong
Location: Singapore
Designation: Financial Analyst
Mixed experience with ABC Travels. The vehicle was great, but the hotel was average. The sight seeing tour was informative, but some attractions felt rushed. Room for improvement.
Language: English
Sentiment: mixed
Language
2 Hr 17 Min Remaining
Instructions
Resources
Help
Python: text-analysis.py
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
15% Tasks Complete
Next


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 17 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
Python
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credential = AzureKeyCredential(ai_k
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C#: dotnet run
Python: python text-analysis.py
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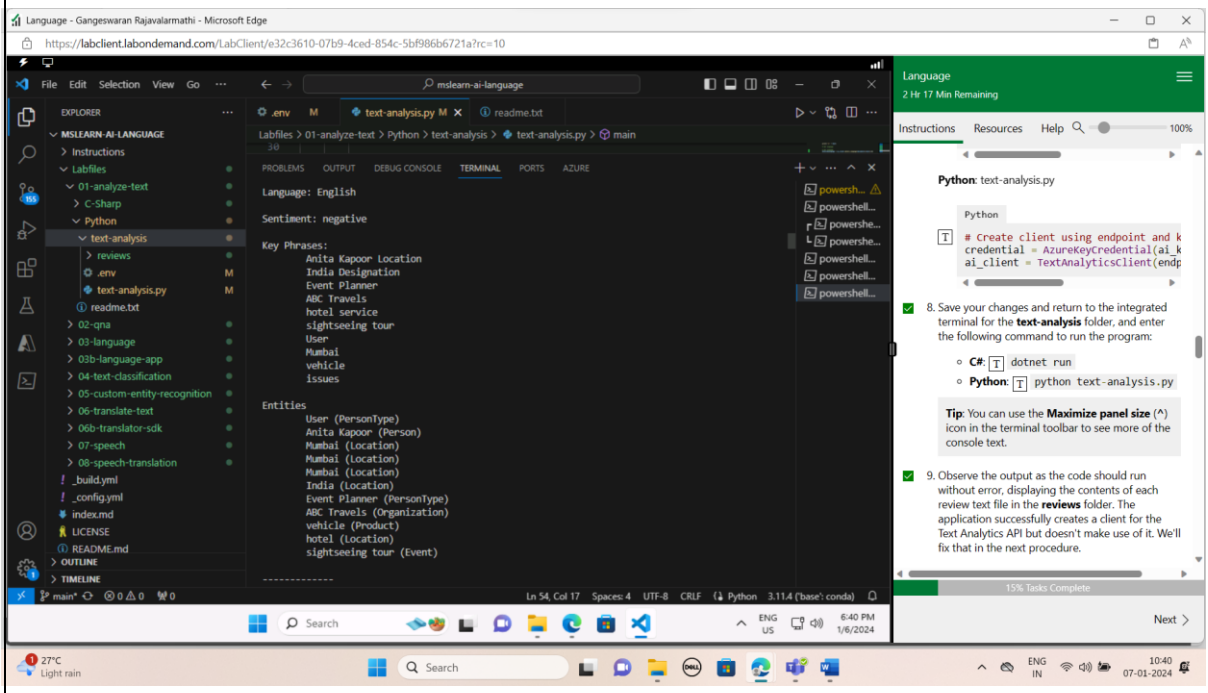
15% Tasks Complete
Next
Key Phrases:
Alex Thompson Location
Canada Designation
Software Developer
ABC Travels
sightseeing tour
travel experience
User
Toronto
Thumbs
vehicle
hotel
Entities
User (PersonType)
Alex Thompson (Person)
Toronto (Location)
Toronto (Location)
Toronto (Location)
Canada (Location)
Software Developer (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
ABCReview24.txt
User: Anita Kapoor


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 17 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
Python
# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
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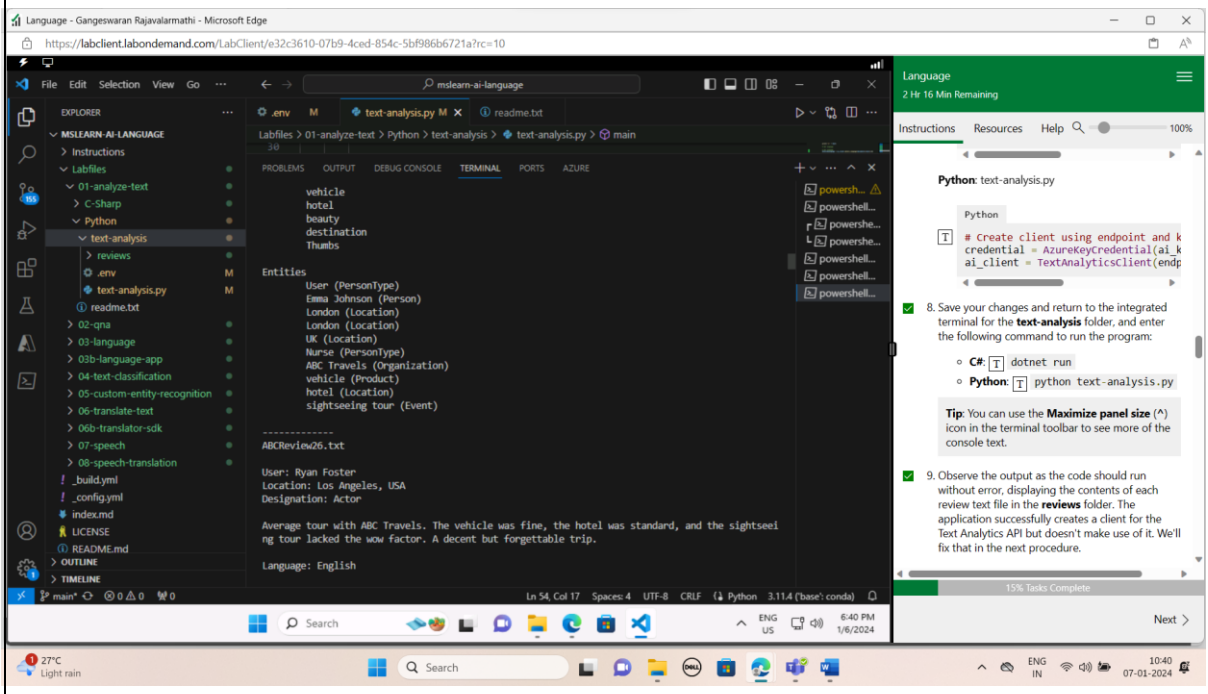
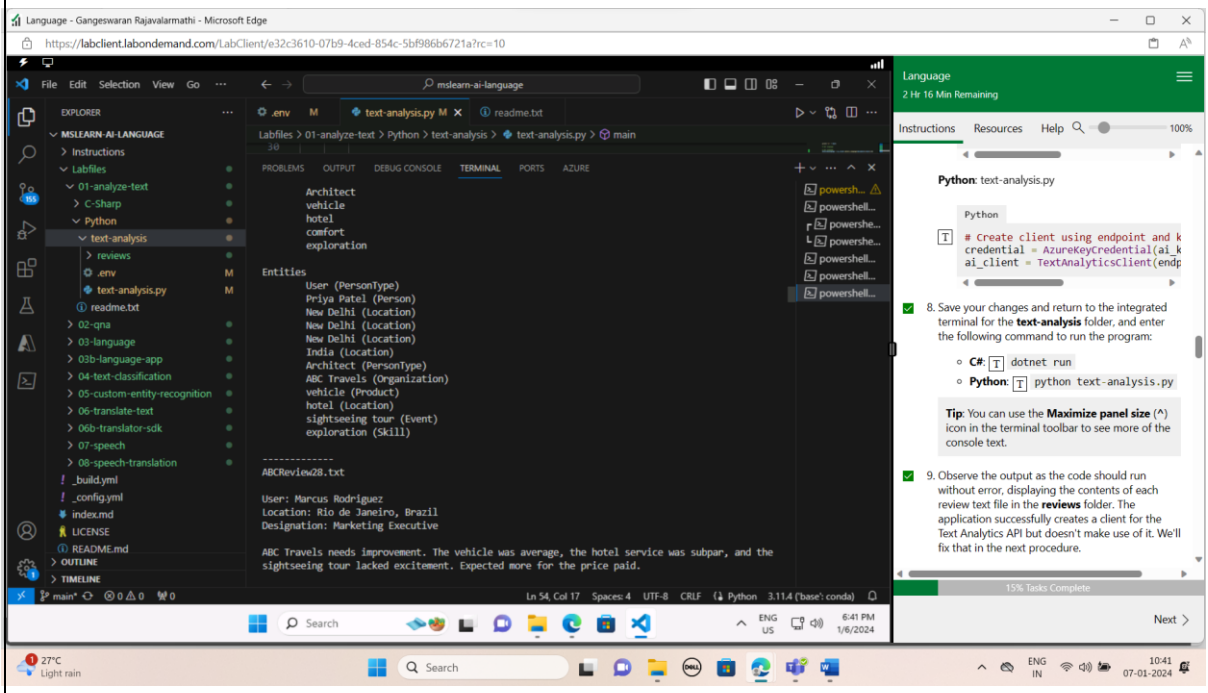
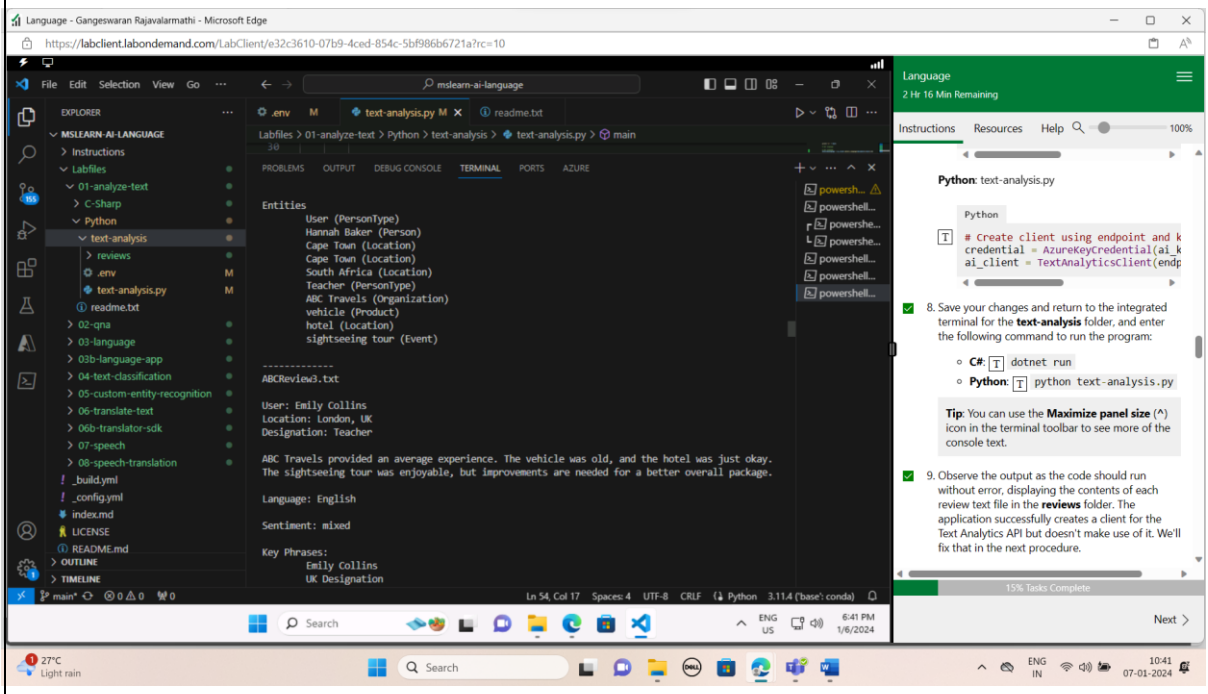
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
15% Tasks Complete
Next
Language: English
Sentiment: negative
Key Phrases:
Anita Kapoor Location
India Designation
Event Planner
ABC Travels
hotel service
sightseeing tour
User
Mumbai
vehicle
issues
Entities
User (PersonType)
Anita Kapoor (Person)
Mumbai (Location)
Mumbai (Location)
Mumbai (Location)
India (Location)
Event Planner (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
vehicle
hotel
beauty
destination
Thumbs
Entities
User (PersonType)
Emma Johnson (Person)
London (Location)
London (Location)
UK (Location)
Nurse (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
ABCReview26.txt
User: Ryan Foster
Location: Los Angeles, USA
Designation: Actor
Average tour with ABC Travels. The vehicle was fine, the hotel was standard, and the sightseei
ng tour lacked the wow factor. A decent but forgettable trip.
Language: English
Language
2 Hr 16 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
15% Tasks Complete
Next


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Architect
vehicle
hotel
comfort
exploration
Entities
User (PersonType)
Priya Patel (Person)
New Delhi (Location)
New Delhi (Location)
New Delhi (Location)
India (Location)
Architect (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
exploration (Skill)
ABCReview28.txt
User: Marcus Rodriguez
Location: Rio de Janeiro, Brazil
Designation: Marketing Executive
ABC Travels needs improvement. The vehicle was average, the hotel service was subpar, and the
sightseeing tour lacked excitement. Expected more for the price paid.
Language
2 Hr 16 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
15% Tasks Complete
Next


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Entities
User (PersonType)
Hannah Baker (Person)
Cape Town (Location)
Cape Town (Location)
South Africa (Location)
Teacher (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
ABCReview3.txt
User: Emily Collins
Location: London, UK
Designation: Teacher
ABC Travels provided an average experience. The vehicle was old, and the hotel was just okay.
The sightseeing tour was enjoyable, but improvements are needed for a better overall package.
Language: English
Sentiment: mixed
Key Phrases:
Emily Collins
UK Designation
Language
2 Hr 16 Min Remaining
Instructions
Resources
Help
Python: text-analysis.py
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
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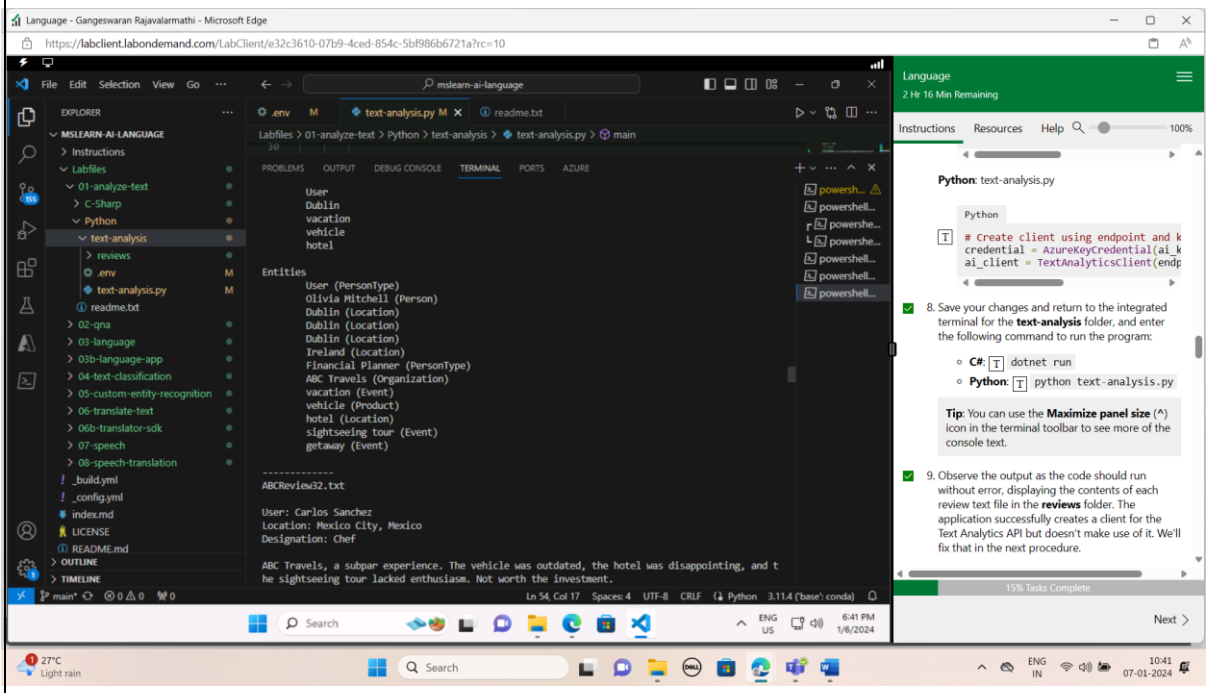
15% Tasks Complete
Next


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
User
Dublin
vacation
vehicle
hotel
Entities
User (PersonType)
Olivia Mitchell (Person)
Dublin (Location)
Dublin (Location)
Dublin (Location)
Ireland (Location)
Financial Planner (PersonType)
ABC Travels (Organization)
vacation (Event)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
getaway (Event)
ABCReview32.txt
User: Carlos Sanchez
Location: Mexico City, Mexico
Designation: Chef
ABC Travels, a subpar experience. The vehicle was outdated, the hotel was disappointing, and t
he sightseeing tour lacked enthusiasm. Not worth the investment.
Language
2 Hr 16 Min Remaining
Instructions
Resources
Help
Python: text-analysis.py
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
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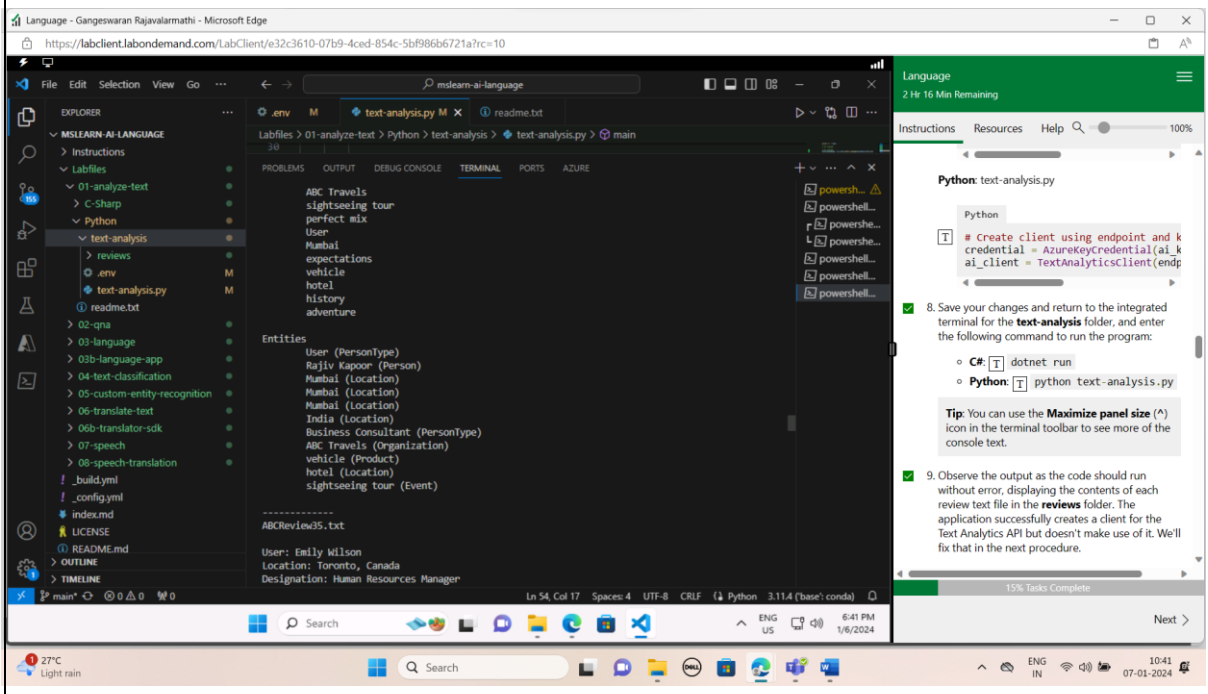
15% Tasks Complete
Next


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
mslearn-ai-language
EXPLORER
MSLEARN-AI-LANGUAGE
Instructions
Labfiles
01-analyze-text
C-Sharp
Python
text-analysis
reviews
.env
text-analysis.py
readme.txt
02-qna
03-language
03b-language-app
04-text-classification
05-custom-entity-recognition
06-translate-text
06b-translator-sdk
07-speech
08-speech-translation
_build.yml
_config.yml
index.md
LICENSE
README.md
OUTLINE
TIMELINE
text-analysis.py M
readme.txt
Labfiles > 01-analyze-text > Python > text-analysis > text-analysis.py > main
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
AZURE
ABC Travels
sightseeing tour
perfect mix
User
Mumbai
expectations
vehicle
hotel
history
adventure
Entities
User (PersonType)
Rajiv Kapoor (Person)
Mumbai (Location)
Mumbai (Location)
Mumbai (Location)
India (Location)
Business Consultant (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
ABCReview35.txt
User: Emily Wilson
Location: Toronto, Canada
Designation: Human Resources Manager
Ln 54, Col 17
Spaces: 4
UTF-8
CRLF
Python
3.11.4 ('base': conda)
Language
2 Hr 16 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
Python
# Create client using endpoint and k
credential = AzureKeyCredential(ai_k
ai_client = TextAnalyticsClient(endp
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
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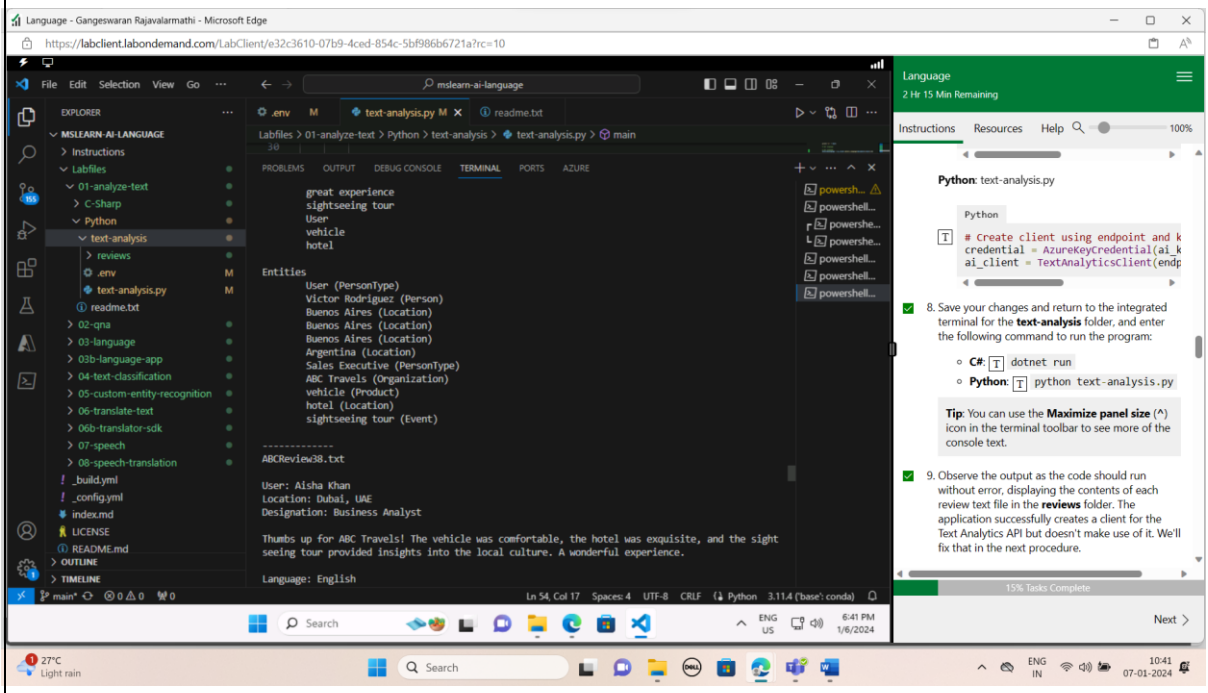
15% Tasks Complete
Next
Search
6:41 PM
1/6/2024
27°C
Light rain
10:41
07-01-2024


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
mslearn-ai-language
EXPLORER
MSLEARN-AI-LANGUAGE
Instructions
Labfiles
01-analyze-text
C-Sharp
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text-analysis
reviews
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text-analysis.py
readme.txt
02-qna
03-language
03b-language-app
04-text-classification
05-custom-entity-recognition
06-translate-text
06b-translator-sdk
07-speech
08-speech-translation
_build.yml
_config.yml
index.md
LICENSE
README.md
OUTLINE
TIMELINE
text-analysis.py M
readme.txt
Labfiles > 01-analyze-text > Python > text-analysis > text-analysis.py > main
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
AZURE
great experience
sightseeing tour
User
vehicle
hotel
Entities
User (PersonType)
Victor Rodriguez (Person)
Buenos Aires (Location)
Buenos Aires (Location)
Buenos Aires (Location)
Argentina (Location)
Sales Executive (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
ABCReview38.txt
User: Aisha Khan
Location: Dubai, UAE
Designation: Business Analyst
Thumbs up for ABC Travels! The vehicle was comfortable, the hotel was exquisite, and the sight seeing tour provided insights into the local culture. A wonderful experience.
Language: English
Ln 54, Col 17
Spaces: 4
UTF-8
CRLF
Python
3.11.4 ('base': conda)
Language
2 Hr 15 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
Python
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ai_client = TextAnalyticsClient(endp
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Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
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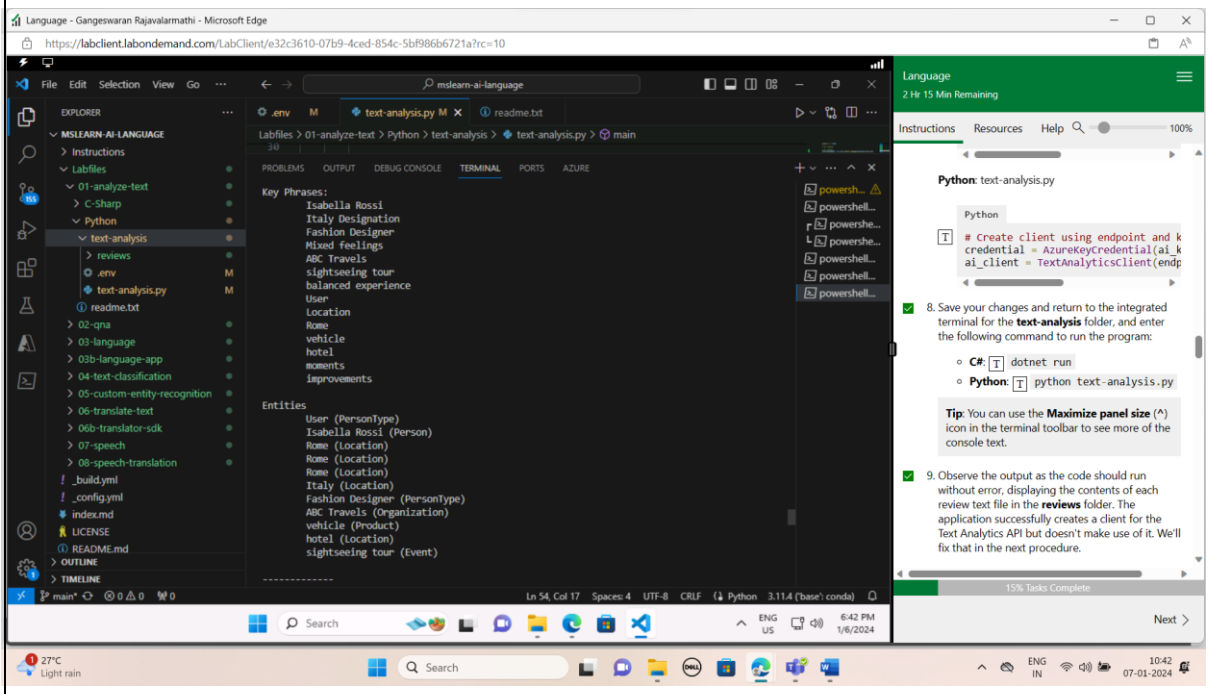
15% Tasks Complete
Next
Search
6:41 PM
1/6/2024
27°C
Light rain
10:41
07-01-2024


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Key Phrases:
Isabella Rossi
Italy Designation
Fashion Designer
Mixed feelings
ABC Travels
sightseeing tour
balanced experience
User
Location
Rome
vehicle
hotel
moments
improvements
Entities
User (PersonType)
Isabella Rossi (Person)
Rome (Location)
Rome (Location)
Rome (Location)
Italy (Location)
Fashion Designer (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
Language
2 Hr 15 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
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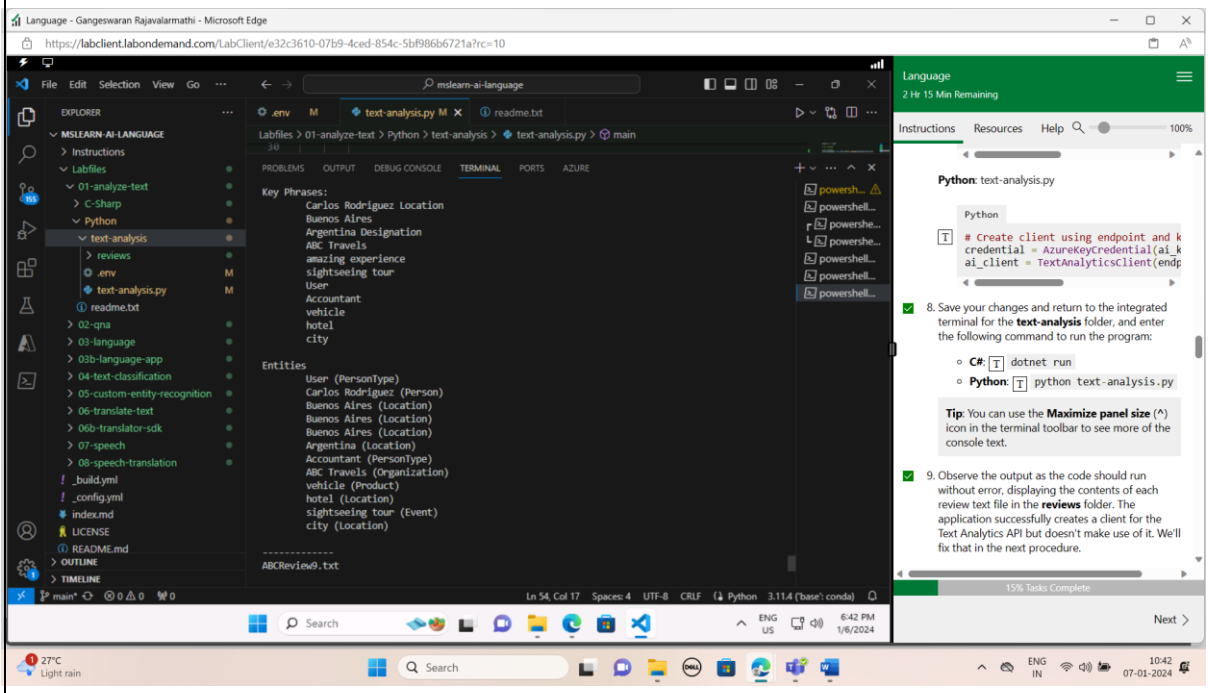
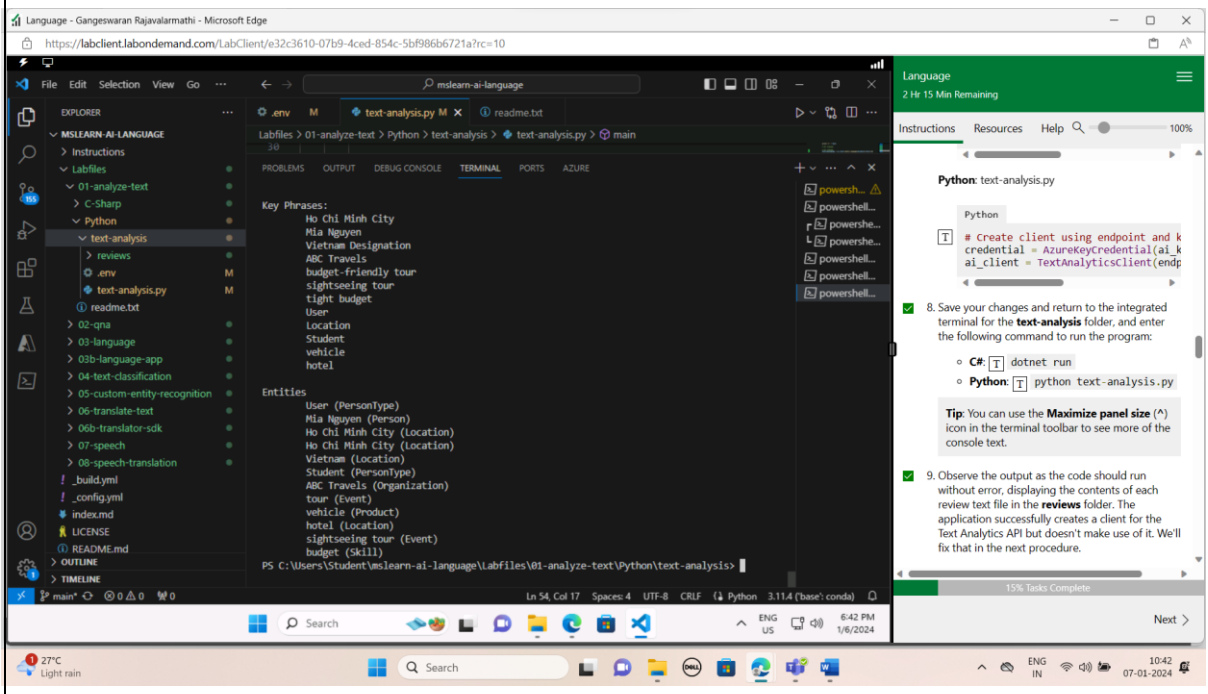
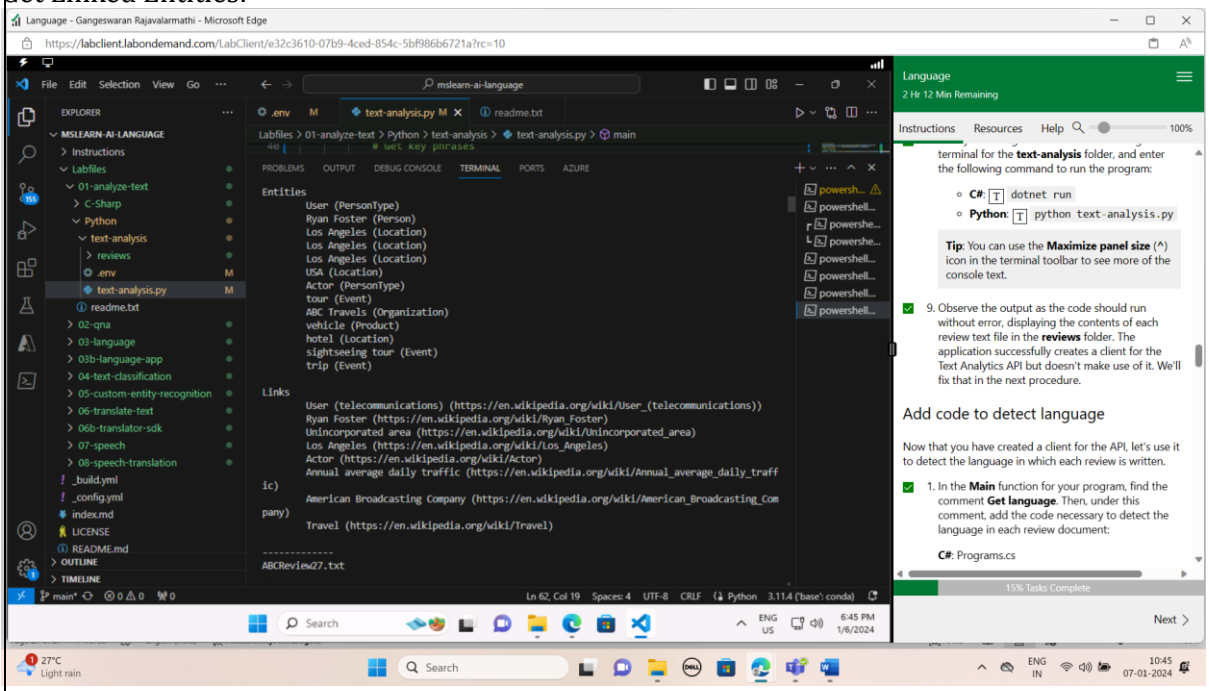
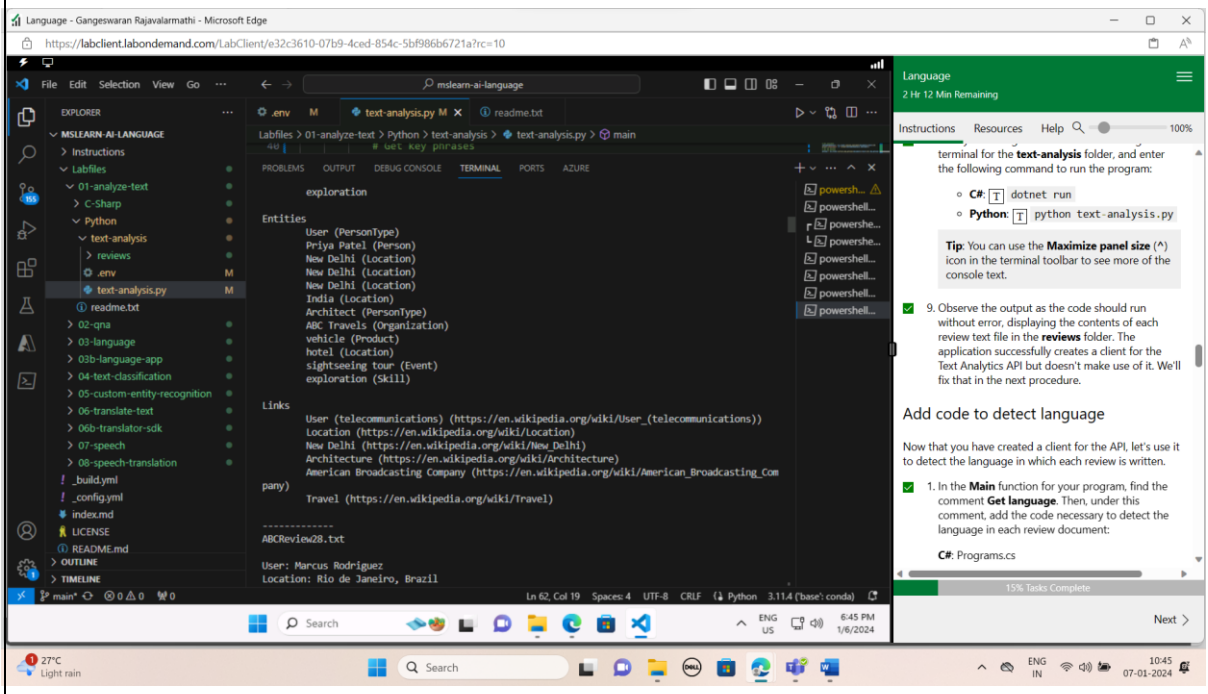
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
15% Tasks Complete
Next

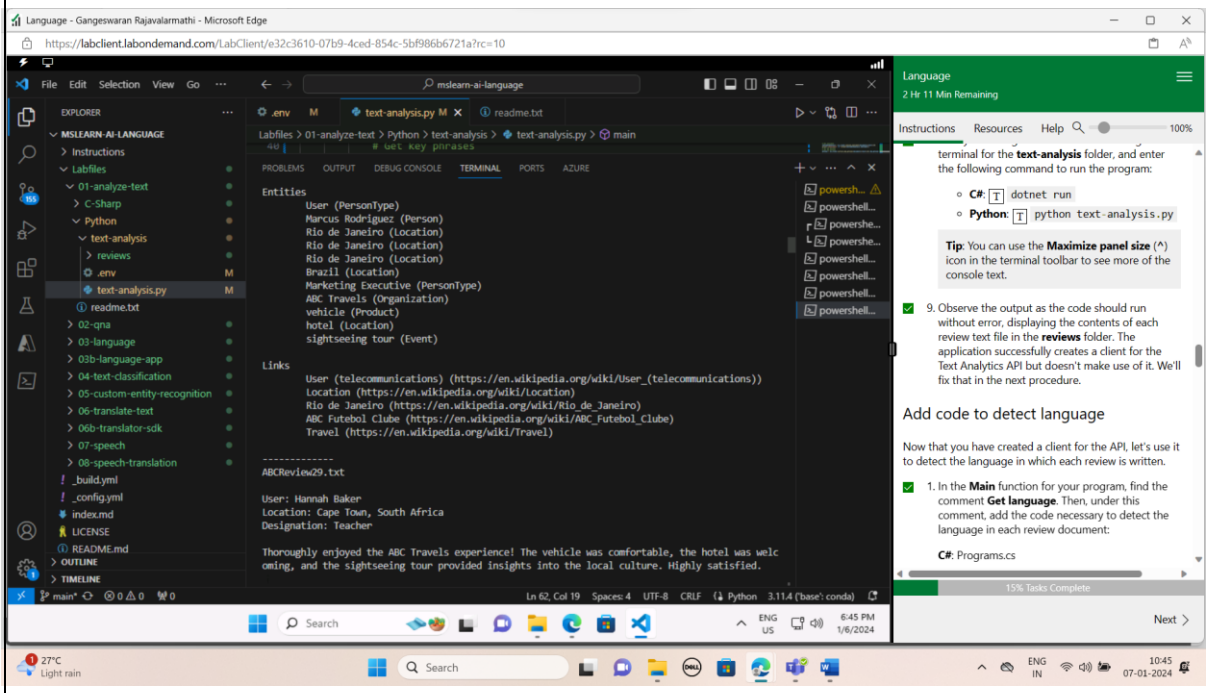

Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Key Phrases:
Carlos Rodriguez Location
Buenos Aires
Argentina Designation
ABC Travels
amazing experience
sightseeing tour
User
Accountant
vehicle
hotel
city
Entities
User (PersonType)
Carlos Rodriguez (Person)
Buenos Aires (Location)
Buenos Aires (Location)
Buenos Aires (Location)
Argentina (Location)
Accountant (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
city (Location)
ABCReview9.txt
Language
2 Hr 15 Min Remaining
Instructions
Resources
Help
100%
Python: text-analysis.py
8. Save your changes and return to the integrated terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
15% Tasks Complete
Next



Get Linked Entities:




Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 12 Min Remaining
Instructions
Resources
Help
100%
terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
Add code to detect language
Now that you have created a client for the API, let's use it to detect the language in which each review is written.
1. In the Main function for your program, find the comment Get language. Then, under this comment, add the code necessary to detect the language in each review document:
C#: Programs.cs
15% Tasks Complete
Next
Entities
User (PersonType)
Priya Patel (Person)
New Delhi (Location)
New Delhi (Location)
New Delhi (Location)
India (Location)
Architect (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
exploration (Skill)
Links
User (telecommunications) (https://en.wikipedia.org/wiki/User_(telecommunications))
Location (https://en.wikipedia.org/wiki/Location)
New Delhi (https://en.wikipedia.org/wiki/New_Delhi)
Architecture (https://en.wikipedia.org/wiki/Architecture)
American Broadcasting Company (https://en.wikipedia.org/wiki/American_Broadcasting_Company)
Travel (https://en.wikipedia.org/wiki/Travel)
ABCReview28.txt
User: Marcus Rodriguez
Location: Rio de Janeiro, Brazil


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 11 Min Remaining
Instructions
Resources
Help
100%
terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
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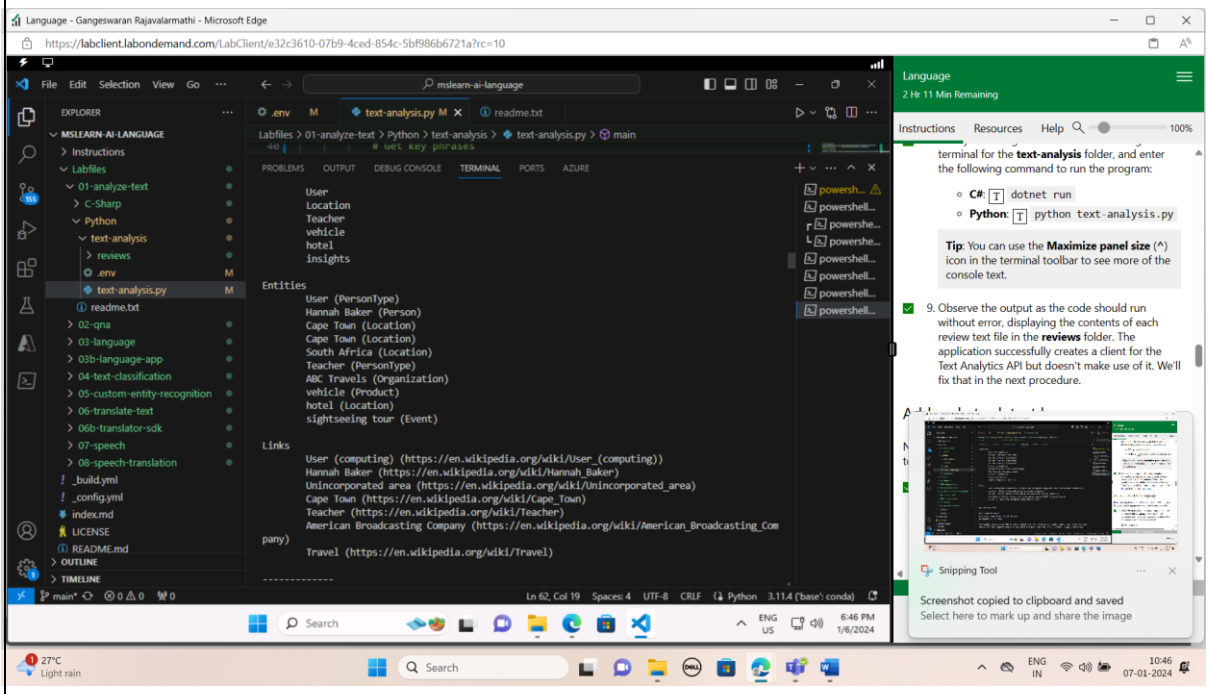
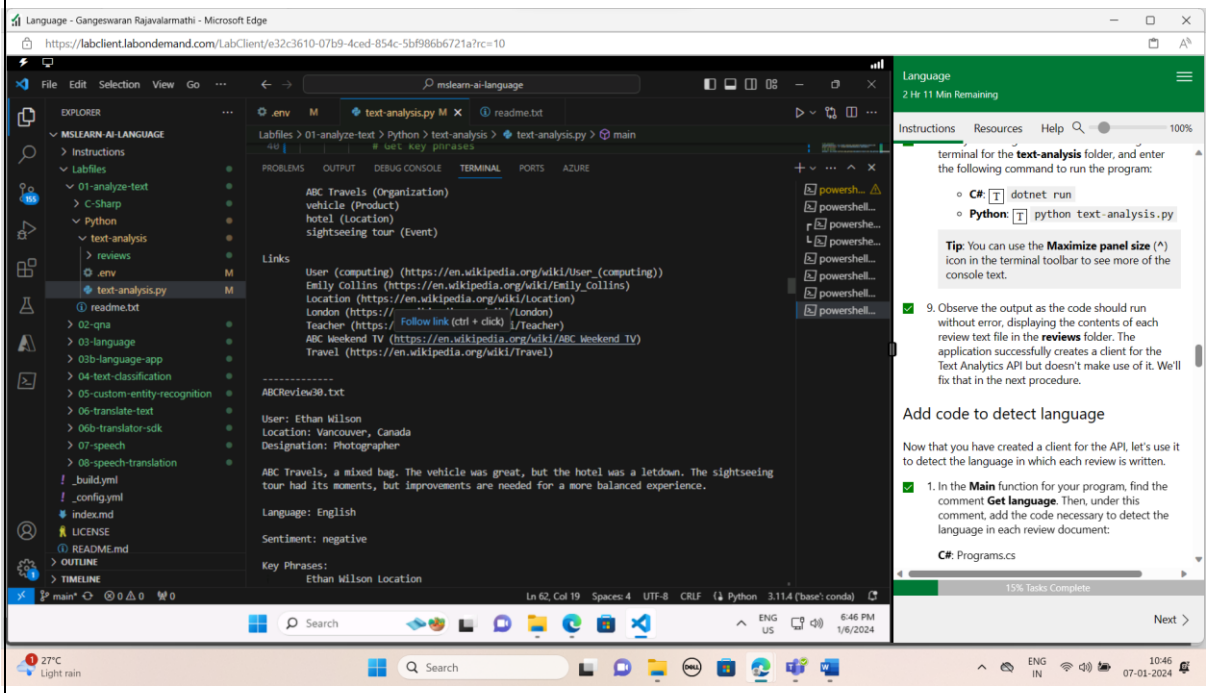
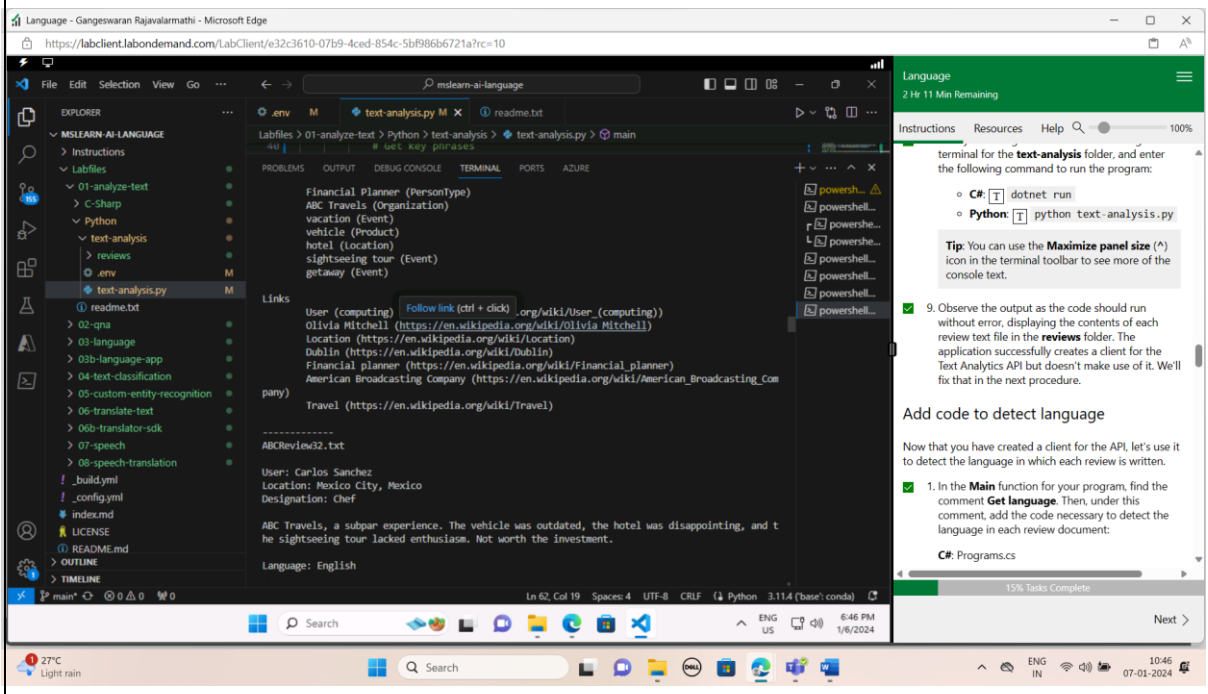
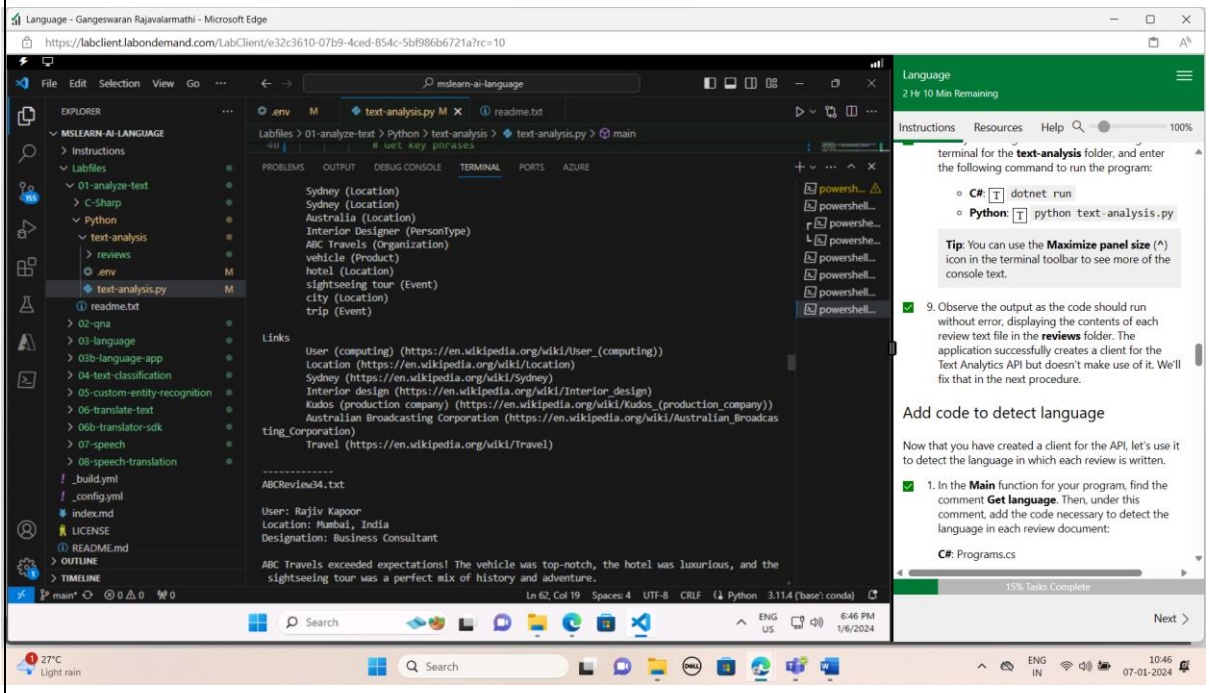
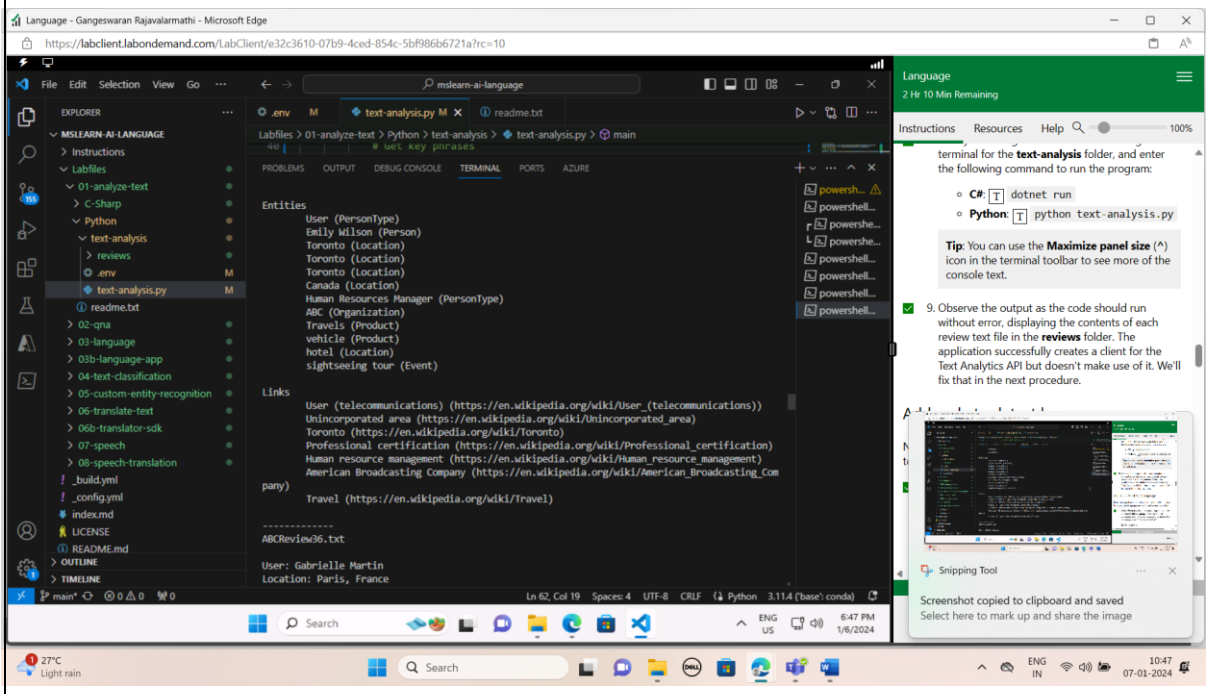
1. In the Main function for your program, find the comment Get language. Then, under this comment, add the code necessary to detect the language in each review document:
C#: Programs.cs
15% Tasks Complete
Next
Entities
User (PersonType)
Marcus Rodriguez (Person)
Rio de Janeiro (Location)
Rio de Janeiro (Location)
Rio de Janeiro (Location)
Brazil (Location)
Marketing Executive (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
Links
User (telecommunications) (https://en.wikipedia.org/wiki/User_(telecommunications))
Location (https://en.wikipedia.org/wiki/Location)
Rio de Janeiro (https://en.wikipedia.org/wiki/Rio_de_Janeiro)
ABC Futebol Clube (https://en.wikipedia.org/wiki/ABC_Futebol_Clube)
Travel (https://en.wikipedia.org/wiki/Travel)
ABCReview29.txt
User: Hannah Baker
Location: Cape Town, South Africa
Designation: Teacher
Thoroughly enjoyed the ABC Travels experience! The vehicle was comfortable, the hotel was welcoming, and the sightseeing tour provided insights into the local culture. Highly satisfied.

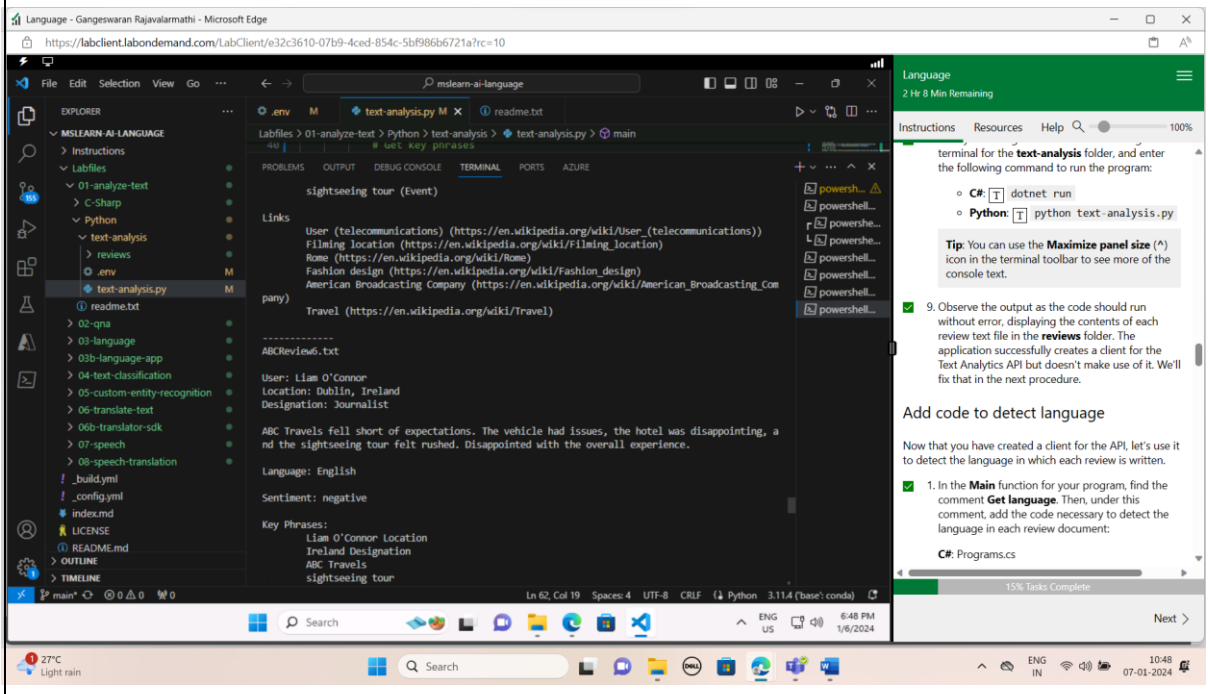

Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 11 Min Remaining
Instructions
Resources
Help
terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
Snipping Tool
Screenshot copied to clipboard and saved
Select here to mark up and share the image

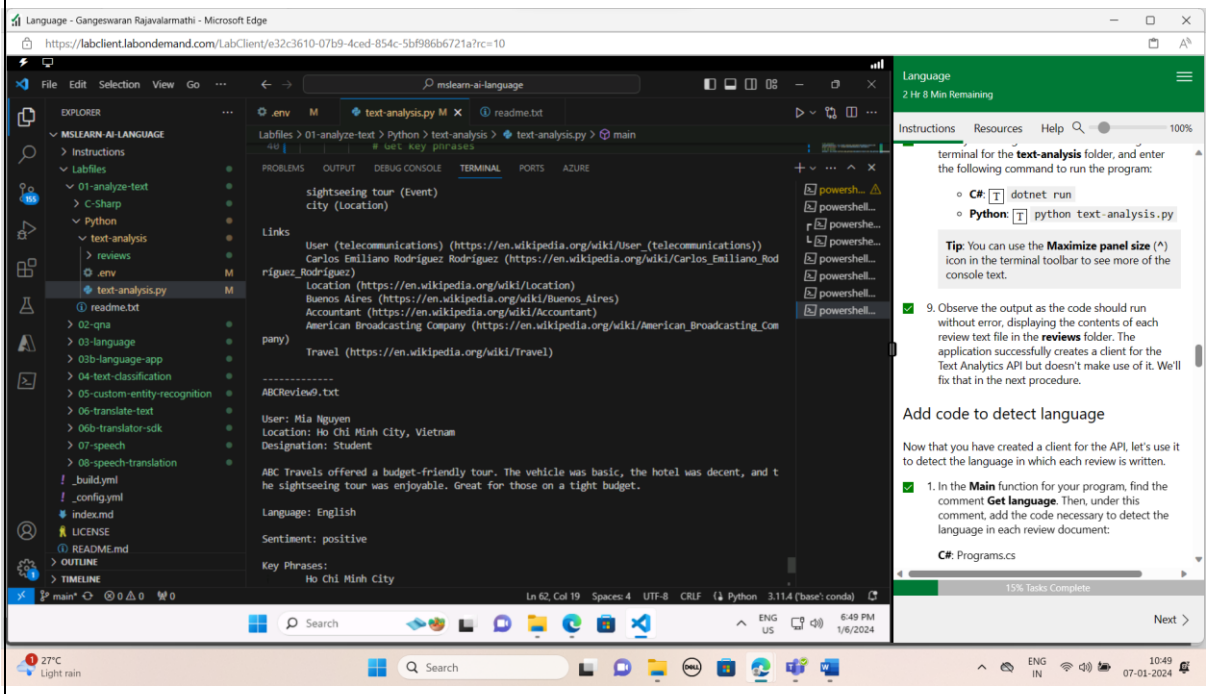

Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 11 Min Remaining
Instructions
Resources
Help
terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
Add code to detect language
Now that you have created a client for the API, let's use it to detect the language in which each review is written.
1. In the Main function for your program, find the comment Get language. Then, under this comment, add the code necessary to detect the language in each review document:
C#: Programs.cs
15% Tasks Complete
Next

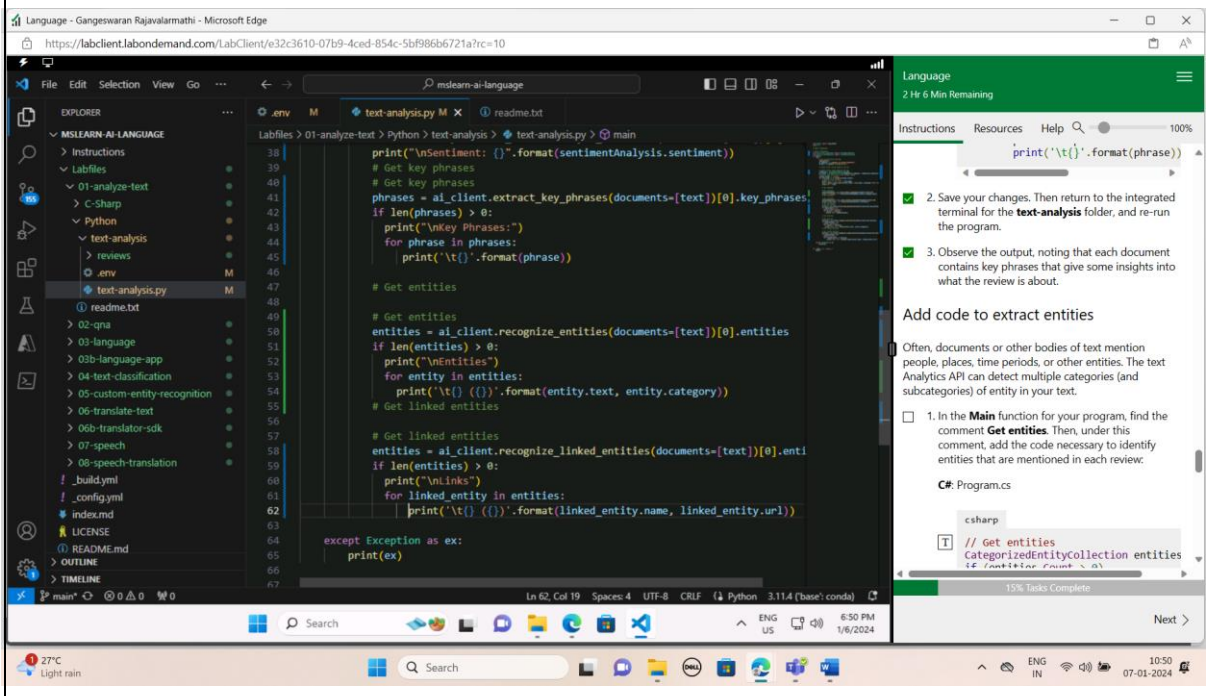

Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 11 Min Remaining
Instructions
Resources
Help
100%
terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
Add code to detect language
Now that you have created a client for the API, let's use it to detect the language in which each review is written.
1. In the Main function for your program, find the comment Get language. Then, under this comment, add the code necessary to detect the language in each review document:
C#: Programs.cs
15% Tasks Complete
Next
Financial Planner (PersonType)
ABC Travels (Organization)
vacation (Event)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
getaway (Event)
Links
User (computing)
Olivia Mitchell (https://en.wikipedia.org/wiki/Olivia_Mitchell)
Location (https://en.wikipedia.org/wiki/Location)
Dublin (https://en.wikipedia.org/wiki/Dublin)
Financial planner (https://en.wikipedia.org/wiki/Financial_planner)
American Broadcasting Company (https://en.wikipedia.org/wiki/American_Broadcasting_Company)
Travel (https://en.wikipedia.org/wiki/Travel)
ABCReview32.txt
User: Carlos Sanchez
Location: Mexico City, Mexico
Designation: Chef
ABC Travels, a subpar experience. The vehicle was outdated, the hotel was disappointing, and the sightseeing tour lacked enthusiasm. Not worth the investment.
Language: English


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 10 Min Remaining
Instructions
Resources
Help
100%
terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
Add code to detect language
Now that you have created a client for the API, let's use it to detect the language in which each review is written.
1. In the Main function for your program, find the comment Get language. Then, under this comment, add the code necessary to detect the language in each review document:
C#: Programs.cs
15% Tasks Complete
Next
Sydney (Location)
Sydney (Location)
Australia (Location)
Interior Designer (PersonType)
ABC Travels (Organization)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
city (Location)
trip (Event)
Links
User (computing) (https://en.wikipedia.org/wiki/User_(computing))
Location (https://en.wikipedia.org/wiki/Location)
Sydney (https://en.wikipedia.org/wiki/Sydney)
Interior design (https://en.wikipedia.org/wiki/Interior_design)
Kudos (production company) (https://en.wikipedia.org/wiki/Kudos_(production_company))
Australian Broadcasting Corporation (https://en.wikipedia.org/wiki/Australian_Broadcasting_Corporation)
Travel (https://en.wikipedia.org/wiki/Travel)
ABCReview34.txt
User: Rajiv Kapoor
Location: Mumbai, India
Designation: Business Consultant
ABC Travels exceeded expectations! The vehicle was top-notch, the hotel was luxurious, and the sightseeing tour was a perfect mix of history and adventure.


Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 10 Min Remaining
Instructions
Resources
Help
100%
terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
Snipping Tool
Screenshot copied to clipboard and saved
Select here to mark up and share the image
Entities
User (PersonType)
Emily Wilson (Person)
Toronto (Location)
Toronto (Location)
Toronto (Location)
Canada (Location)
Human Resources Manager (PersonType)
ABC (Organization)
Travels (Product)
vehicle (Product)
hotel (Location)
sightseeing tour (Event)
Links
User (telecommunications) (https://en.wikipedia.org/wiki/User_(telecommunications))
Unincorporated area (https://en.wikipedia.org/wiki/Unincorporated_area)
Toronto (https://en.wikipedia.org/wiki/Toronto)
Professional certification (https://en.wikipedia.org/wiki/Professional_certification)
Human resource management (https://en.wikipedia.org/wiki/Human_resource_management)
American Broadcasting Company (https://en.wikipedia.org/wiki/American_Broadcasting_Company)
Travel (https://en.wikipedia.org/wiki/Travel)
ABCReview36.txt
User: Gabrielle Martin
Location: Paris, France

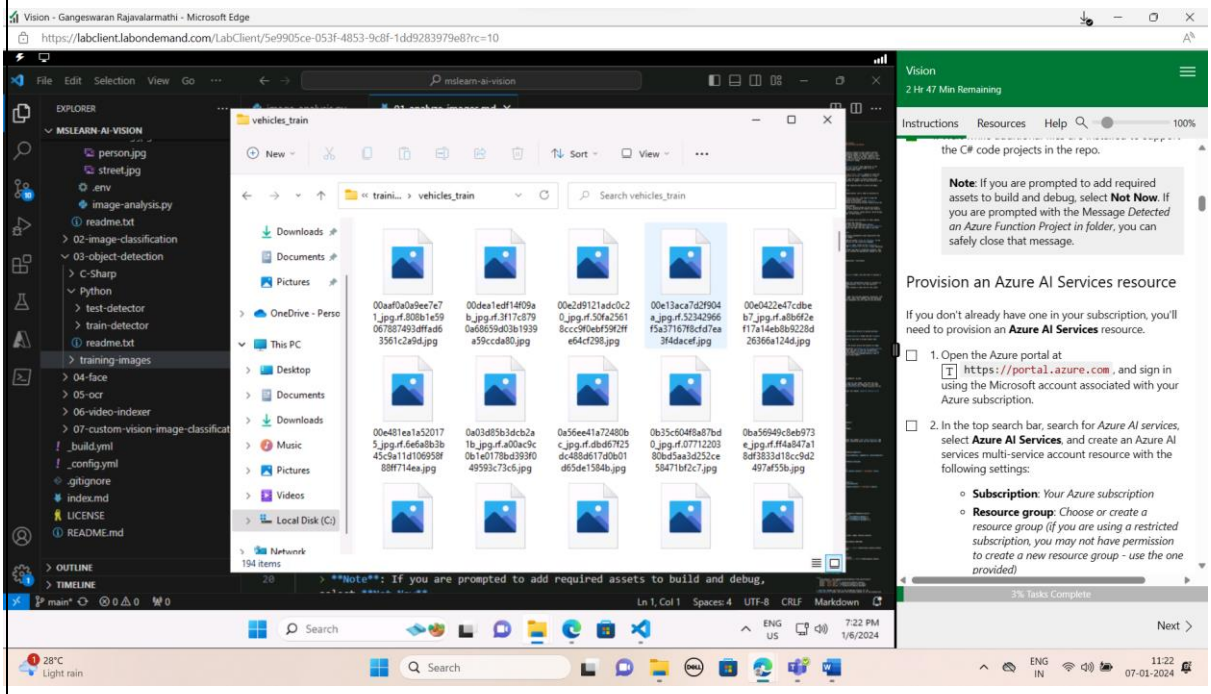

Language - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/e32c3610-07b9-4ced-854c-5bf986b6721a?rc=10
Language
2 Hr 8 Min Remaining
Instructions
Resources
Help
100%
terminal for the text-analysis folder, and enter the following command to run the program:
C#: dotnet run
Python: python text-analysis.py
Tip: You can use the Maximize panel size (^) icon in the terminal toolbar to see more of the console text.
9. Observe the output as the code should run without error, displaying the contents of each review text file in the reviews folder. The application successfully creates a client for the Text Analytics API but doesn't make use of it. We'll fix that in the next procedure.
Add code to detect language
Now that you have created a client for the API, let's use it to detect the language in which each review is written.
1. In the Main function for your program, find the comment Get language. Then, under this comment, add the code necessary to detect the language in each review document:
C#: Programs.cs
15% Tasks Complete
Next
sightseeing tour (Event)
Links
User (telecommunications) (https://en.wikipedia.org/wiki/User_(telecommunications))
Filming location (https://en.wikipedia.org/wiki/Filming_location)
Rome (https://en.wikipedia.org/wiki/Rome)
Fashion design (https://en.wikipedia.org/wiki/Fashion_design)
American Broadcasting Company (https://en.wikipedia.org/wiki/American_Broadcasting_Company)
Travel (https://en.wikipedia.org/wiki/Travel)
ABCReview6.txt
User: Liam O'Connor
Location: Dublin, Ireland
Designation: Journalist
ABC Travels fell short of expectations. The vehicle had issues, the hotel was disappointing, and the sightseeing tour felt rushed. Disappointed with the overall experience.
Language: English
Sentiment: negative
Key Phrases:
Liam O'Connor Location
Ireland Designation
ABC Travels
sightseeing tour

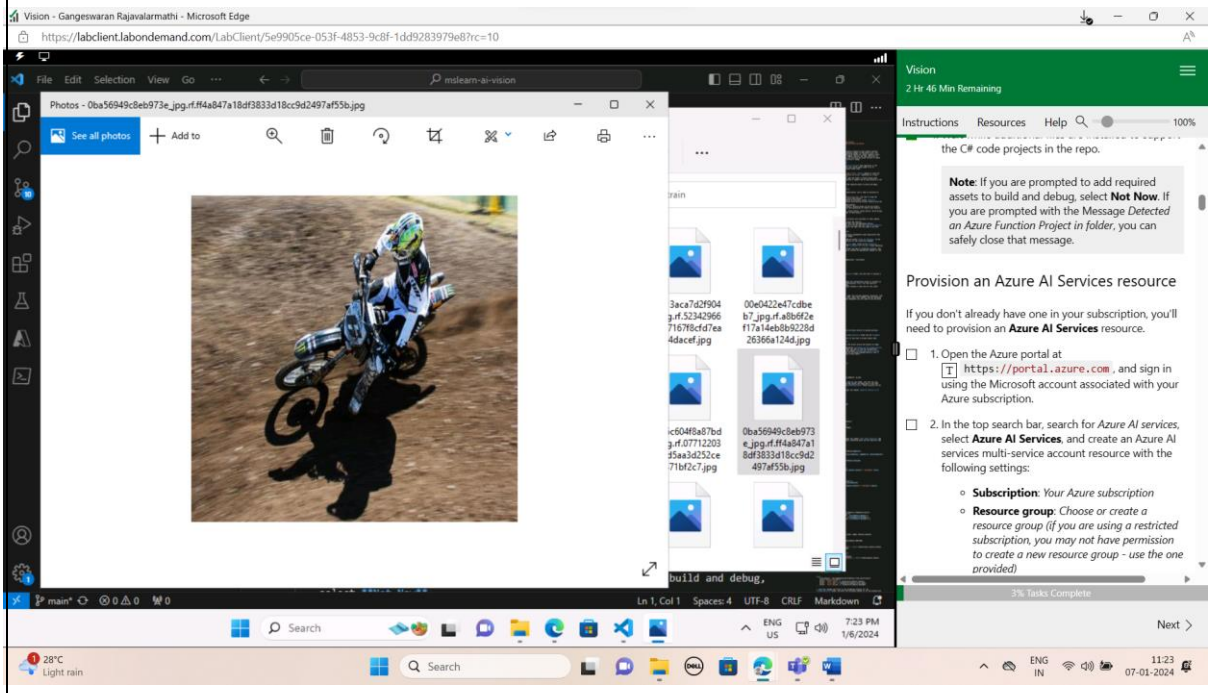




Activity 4: Data Collection and Azure Resource Provisioning for Object Detection Task 1: Collect and Assemble the Vehicle Dataset

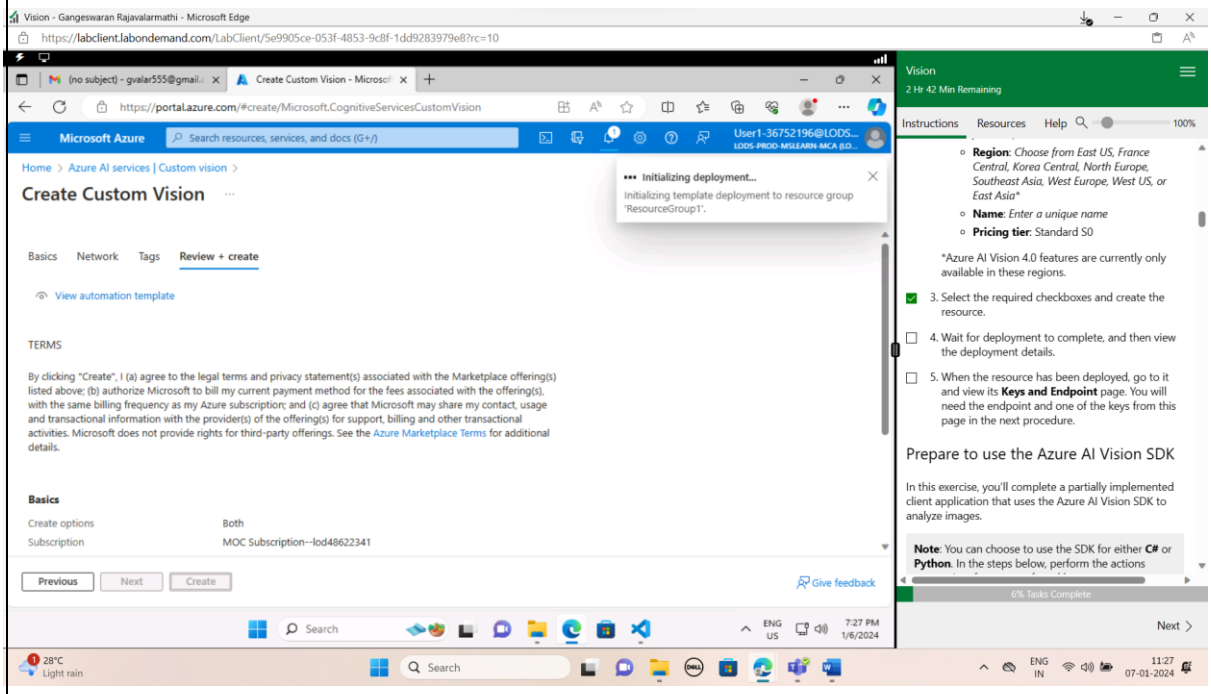
• Source and compile a diverse dataset of vehicle images, specifically focusing on cars, buses, motorcycles, ambulances, and trucks.

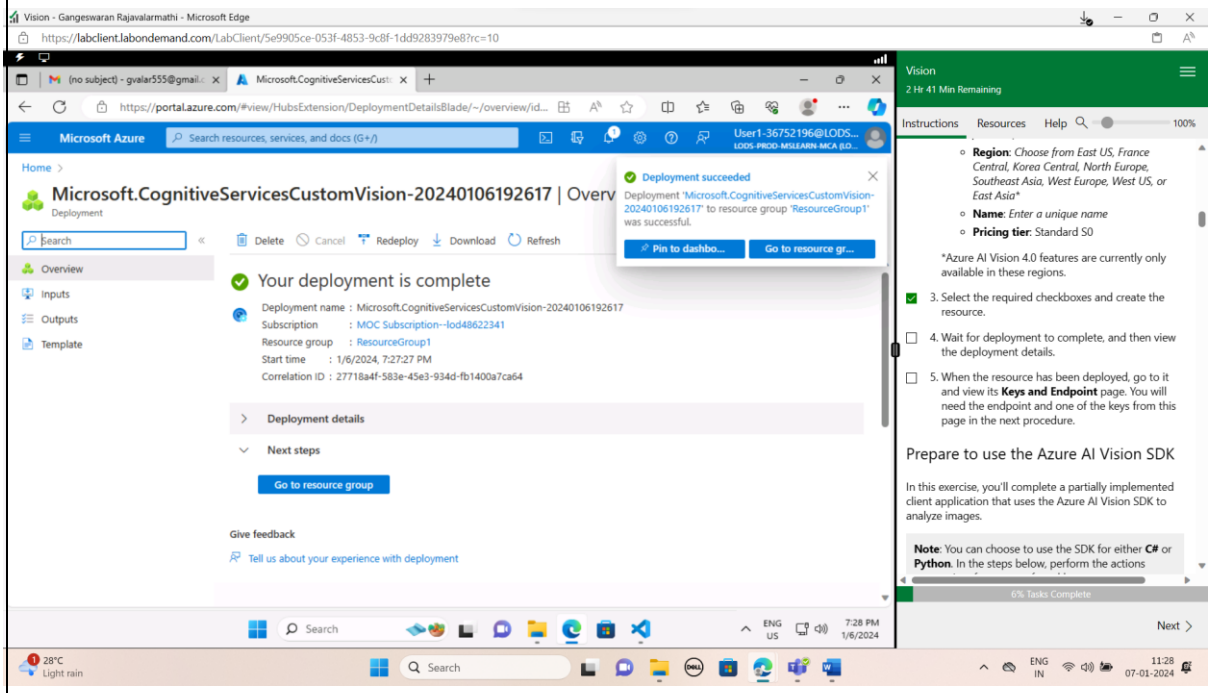




Task 2: Provision Azure Resources for Object Detection

• Set up and provision Azure resources required for object detection, including creating a Custom Vision project and obtaining necessary API keys.


Vision - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/5e9905ce-053f-4853-9c8f-1dd9283979e8?rc=10
Create Custom Vision - Microsoft Azure
https://portal.azure.com/#create/Microsoft.CognitiveServicesCustomVision
Microsoft Azure
Search resources, services, and docs (G+/)
Home > Azure AI services | Custom vision >
Create Custom Vision
Initializing deployment...
Initializing template deployment to resource group 'ResourceGroup1'.
Basics
Network
Tags
Review + create
View automation template
TERMS
By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.
Basics
Create options
Both
Subscription
MOC Subscription--lod48622341
Previous
Next
Create
Give feedback
Vision
2 Hr 42 Min Remaining
Instructions
Resources
Help
100%
Region: Choose from East US, France Central, Korea Central, North Europe, Southeast Asia, West Europe, West US, or East Asia*
Name: Enter a unique name
Pricing tier: Standard S0
*Azure AI Vision 4.0 features are currently only available in these regions.
3. Select the required checkboxes and create the resource.
4. Wait for deployment to complete, and then view the deployment details.
5. When the resource has been deployed, go to it and view its Keys and Endpoint page. You will need the endpoint and one of the keys from this page in the next procedure.
Prepare to use the Azure AI Vision SDK
In this exercise, you'll complete a partially implemented client application that uses the Azure AI Vision SDK to analyze images.
Note: You can choose to use the SDK for either C# or Python. In the steps below, perform the actions
6% Tasks Complete
Next


Vision - Gangeswaran Rajavalarmathi - Microsoft Edge
https://labclient.labondemand.com/LabClient/5e9905ce-053f-4853-9c8f-1dd9283979e8?rc=10
https://portal.azure.com/#view/HubsExtension/DeploymentDetailsBlade/~/overview/id...
Microsoft Azure
Search resources, services, and docs (G+/)
Home >
Microsoft.CognitiveServicesCustomVision-20240106192617 | Overv
Deployment
Deployment succeeded
Deployment 'Microsoft.CognitiveServicesCustomVision-20240106192617' to resource group 'ResourceGroup1' was successful.
Pin to dashbo...
Go to resource gr...
Search
Delete
Cancel
Redeploy
Download
Refresh
Overview
Inputs
Outputs
Template
Your deployment is complete
Deployment name : Microsoft.CognitiveServicesCustomVision-20240106192617
Subscription : MOC Subscription--lod48622341
Resource group : ResourceGroup1
Start time : 1/6/2024, 7:27:27 PM
Correlation ID : 27718a4f-583e-45e3-934d-fb1400a7ca64
Deployment details
Next steps
Go to resource group
Give feedback
Tell us about your experience with deployment
Vision
2 Hr 41 Min Remaining
Instructions
Resources
Help
100%
Region: Choose from East US, France Central, Korea Central, North Europe, Southeast Asia, West Europe, West US, or East Asia*
Name: Enter a unique name
Pricing tier: Standard S0
*Azure AI Vision 4.0 features are currently only available in these regions.
3. Select the required checkboxes and create the resource.
4. Wait for deployment to complete, and then view the deployment details.
5. When the resource has been deployed, go to it and view its Keys and Endpoint page. You will need the endpoint and one of the keys from this page in the next procedure.
Prepare to use the Azure AI Vision SDK
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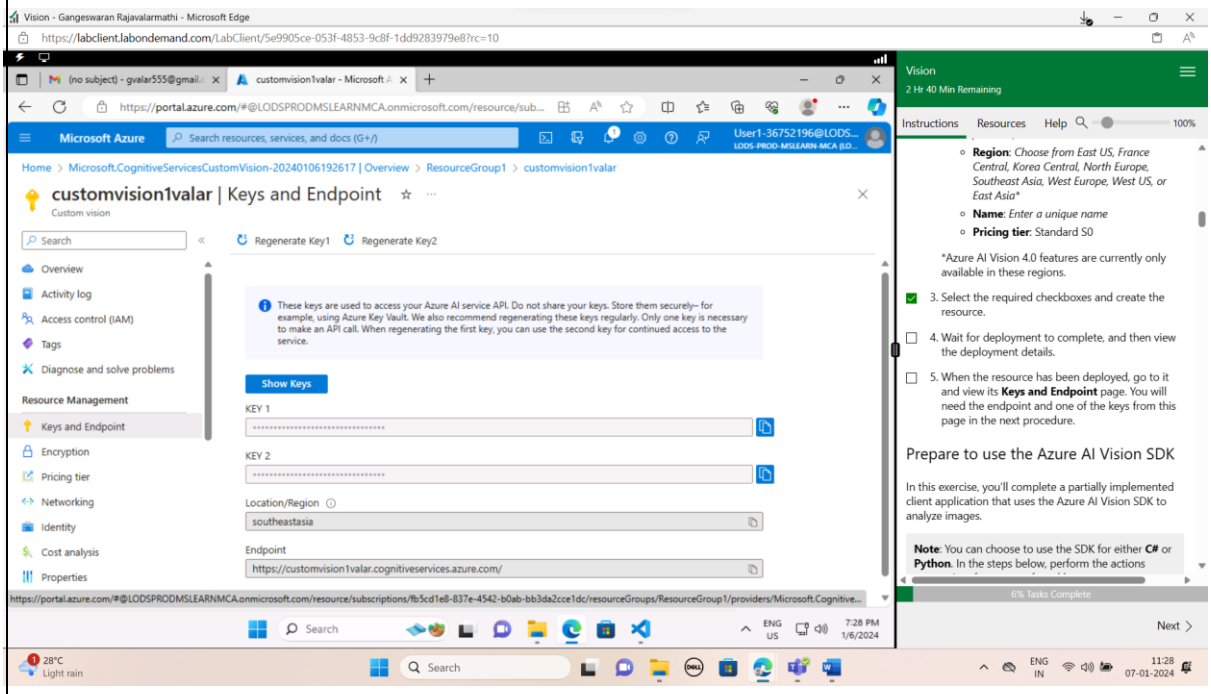
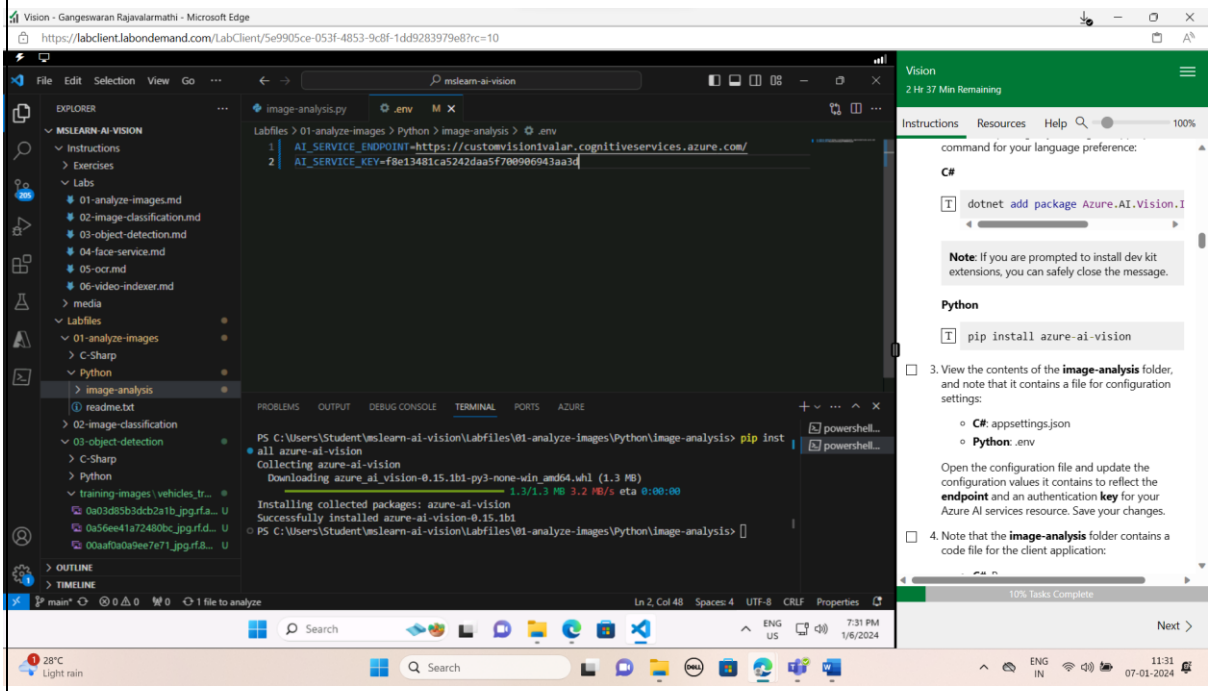
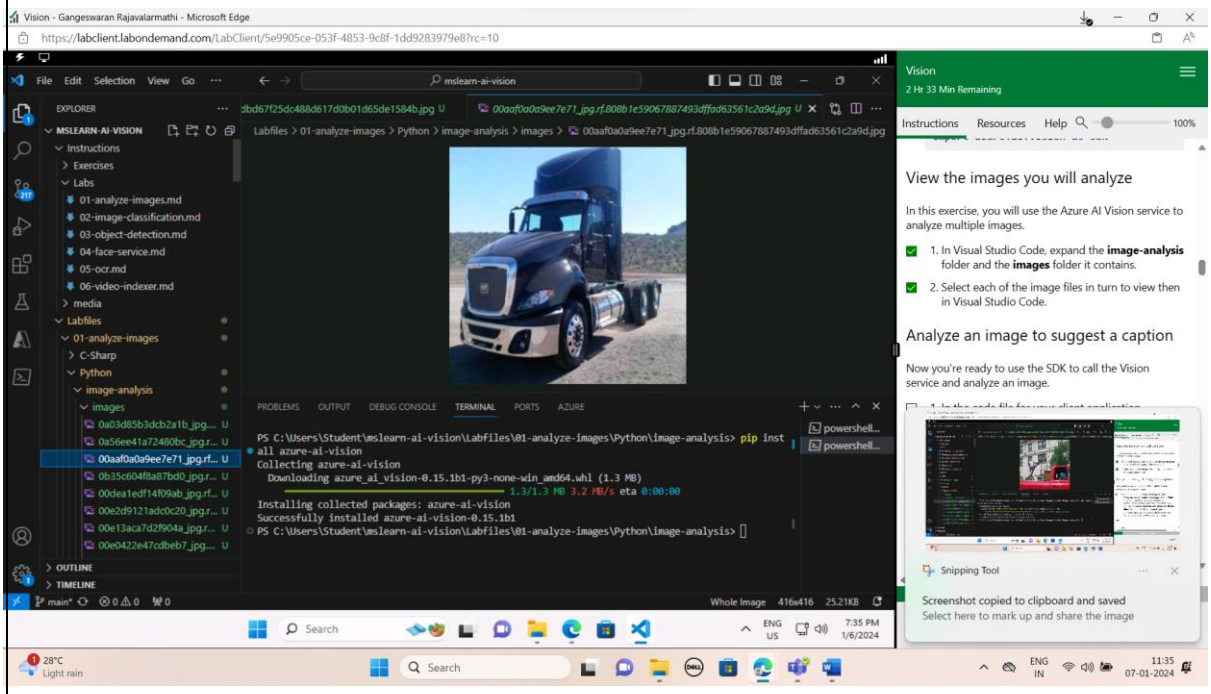
Note: You can choose to use the SDK for either C# or Python. In the steps below, perform the actions
6% Tasks Complete
Next

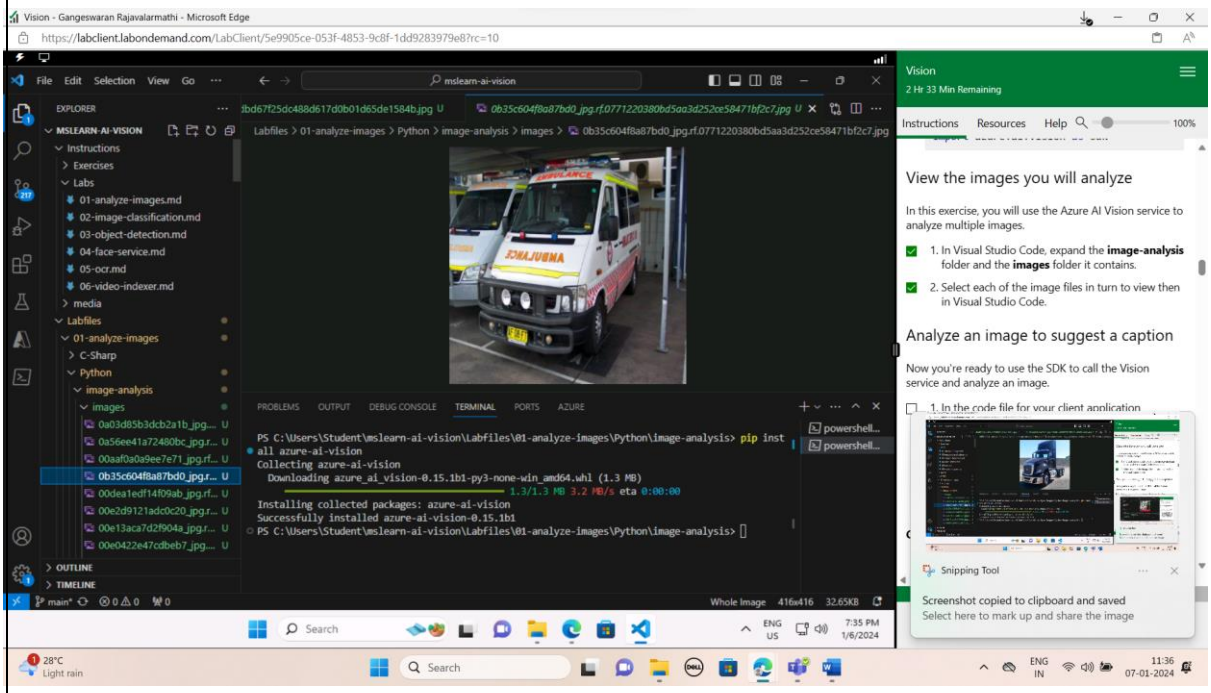


Activity 5: Labelling and Model Training Task 3: Labelling

• Label the vehicle images with bounding boxes around the vehicles using a tool compatible with Azure Custom Vision.



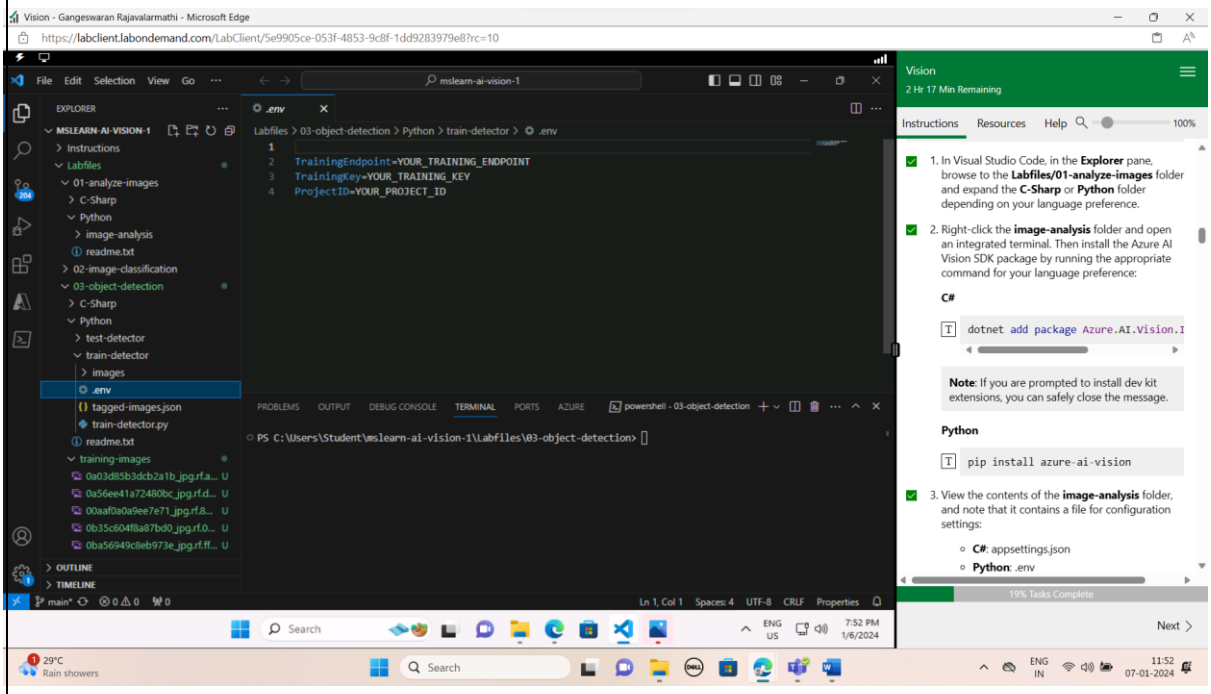




Task 4: Training

• Upload the labelled dataset to the Custom Vision project and train the object detection model.

Activity 5: Labelling and Model Training Task 3: Labelling

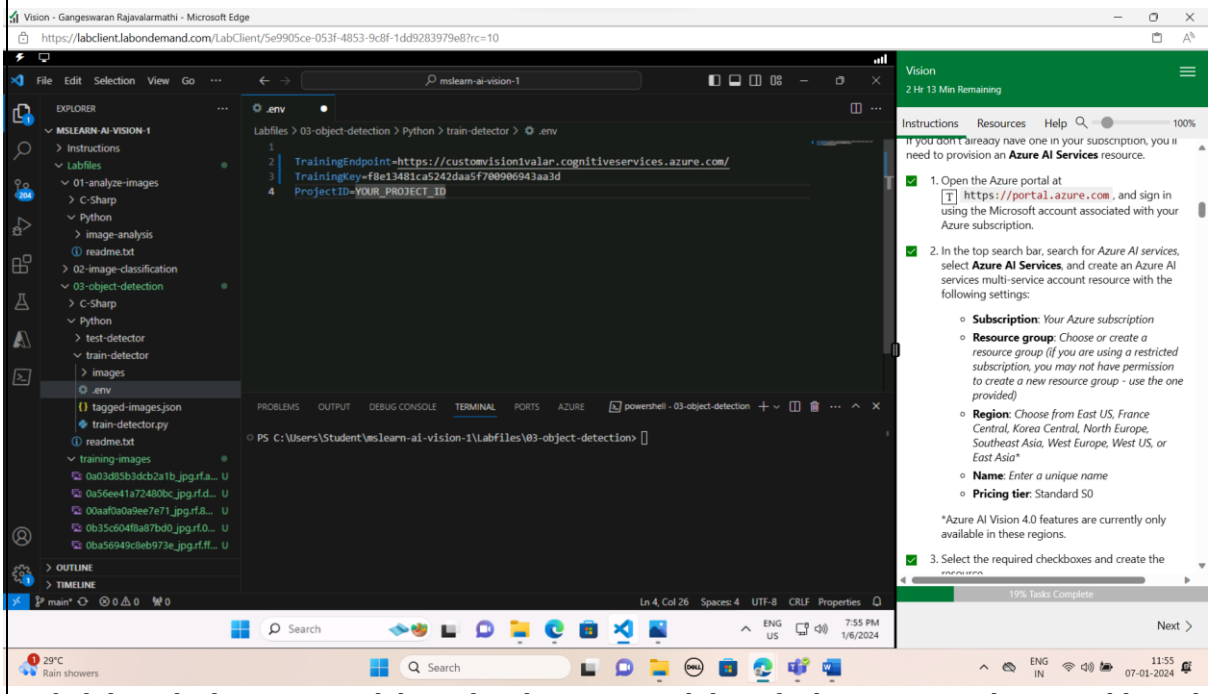


Task 3: Labelling

The purpose of this task is to label vehicle images with bounding boxes using a tool compatible with Azure Custom Vision. The script provided utilizes the Azure Custom Vision Python SDK to achieve this.

Explanation:

1. **Azure Custom Vision Project Setup**: The script assumes you've set up a project on Azure Custom Vision.
2. **Labeling Images**: You should have a set of vehicle images where you know the bounding box coordinates for each vehicle. The script creates a tag for the "vehicle" category and adds images with their respective bounding box coordinates as regions. These images are then uploaded to the Azure Custom Vision project using the `create_images_from_files()` method.



• Label the vehicle images with bounding boxes around the vehicles using a tool compatible with Azure Custom Vision.

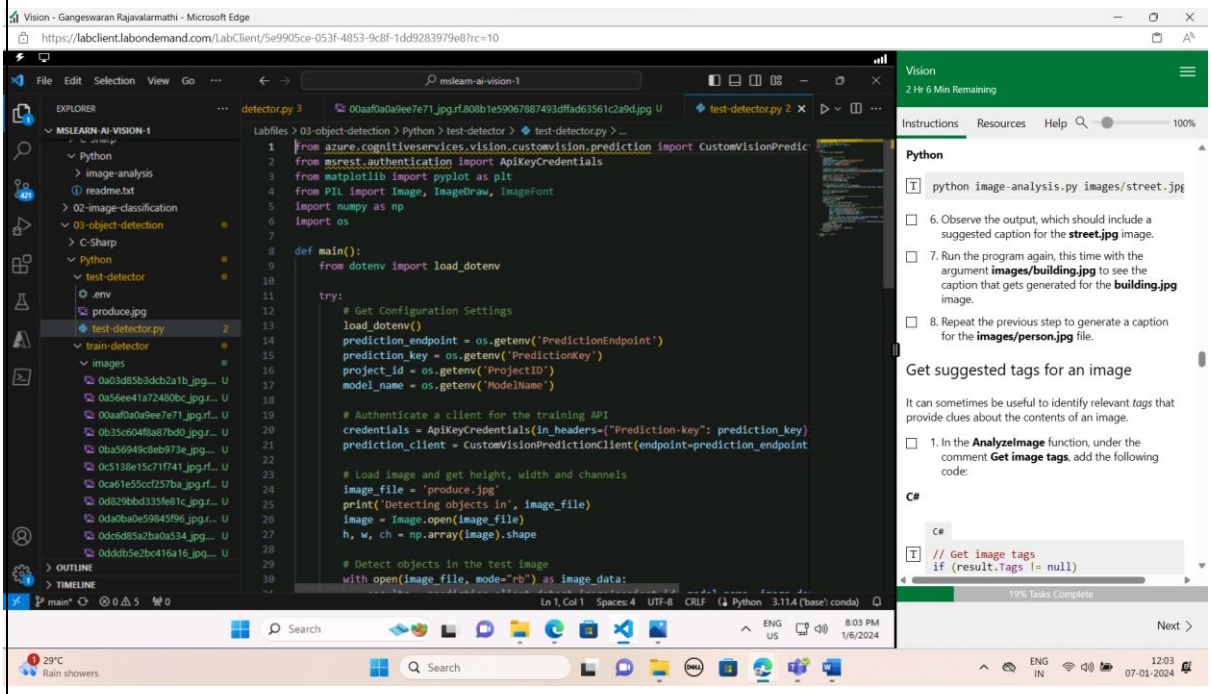
Task 4: Training • Upload the labelled dataset to the Custom Vision project and train the object detection model

Task 4: Training

This task involves uploading the labeled dataset to the Custom Vision project and training the object detection model.

Explanation:

1. **Preparing and Uploading Data**: Once the images are labeled with bounding boxes, the script uploads these images along with their bounding box information to the Custom Vision project using the `create_images_from_files()` method.
2. **Training the Model**: After the data is uploaded, the script triggers the training process using the `train_project()` method. It checks the training status periodically until the training is completed. Finally, it sets the trained iteration as the default for predictions using `update_iteration()`.

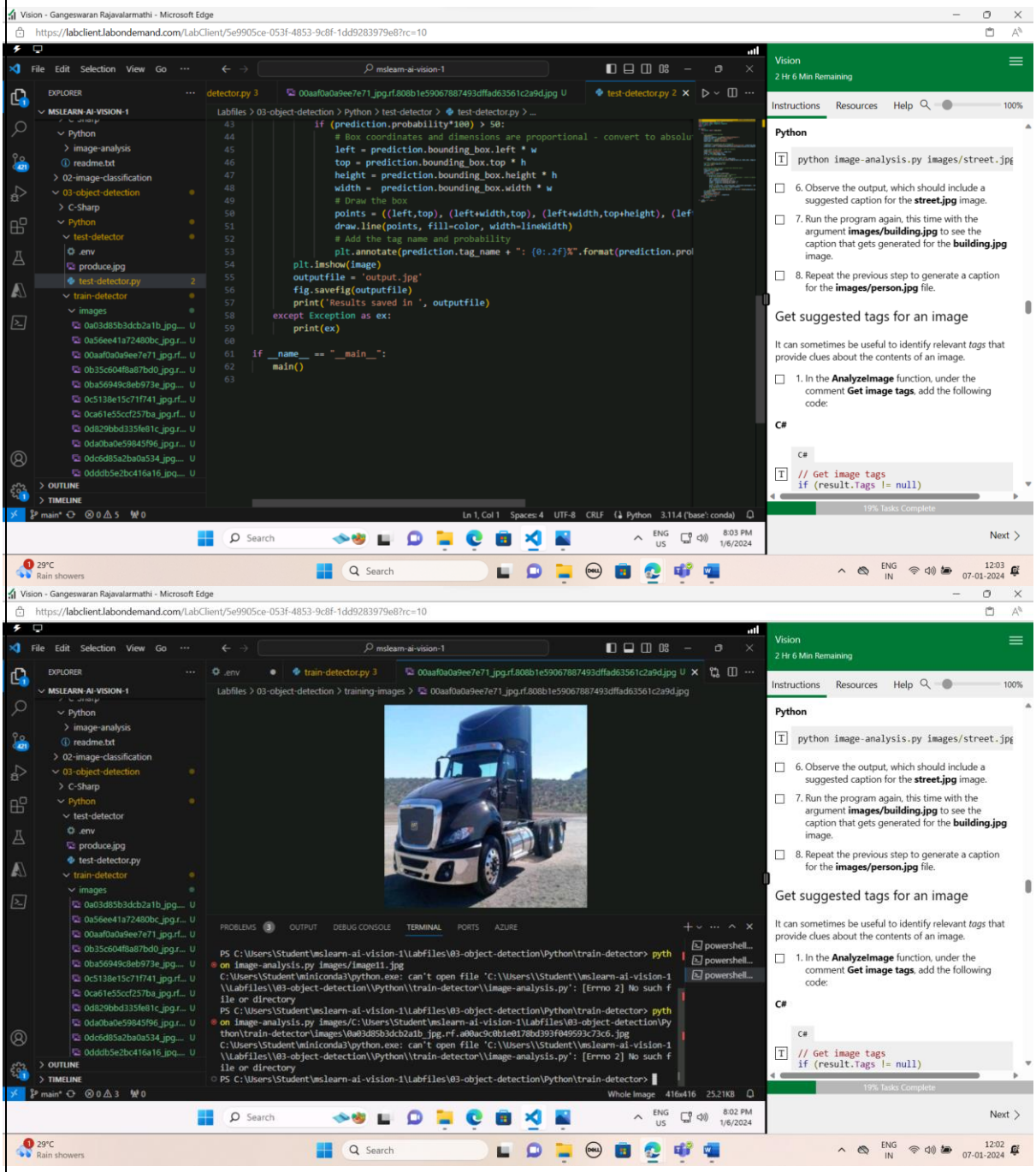


Task 5: Evaluation

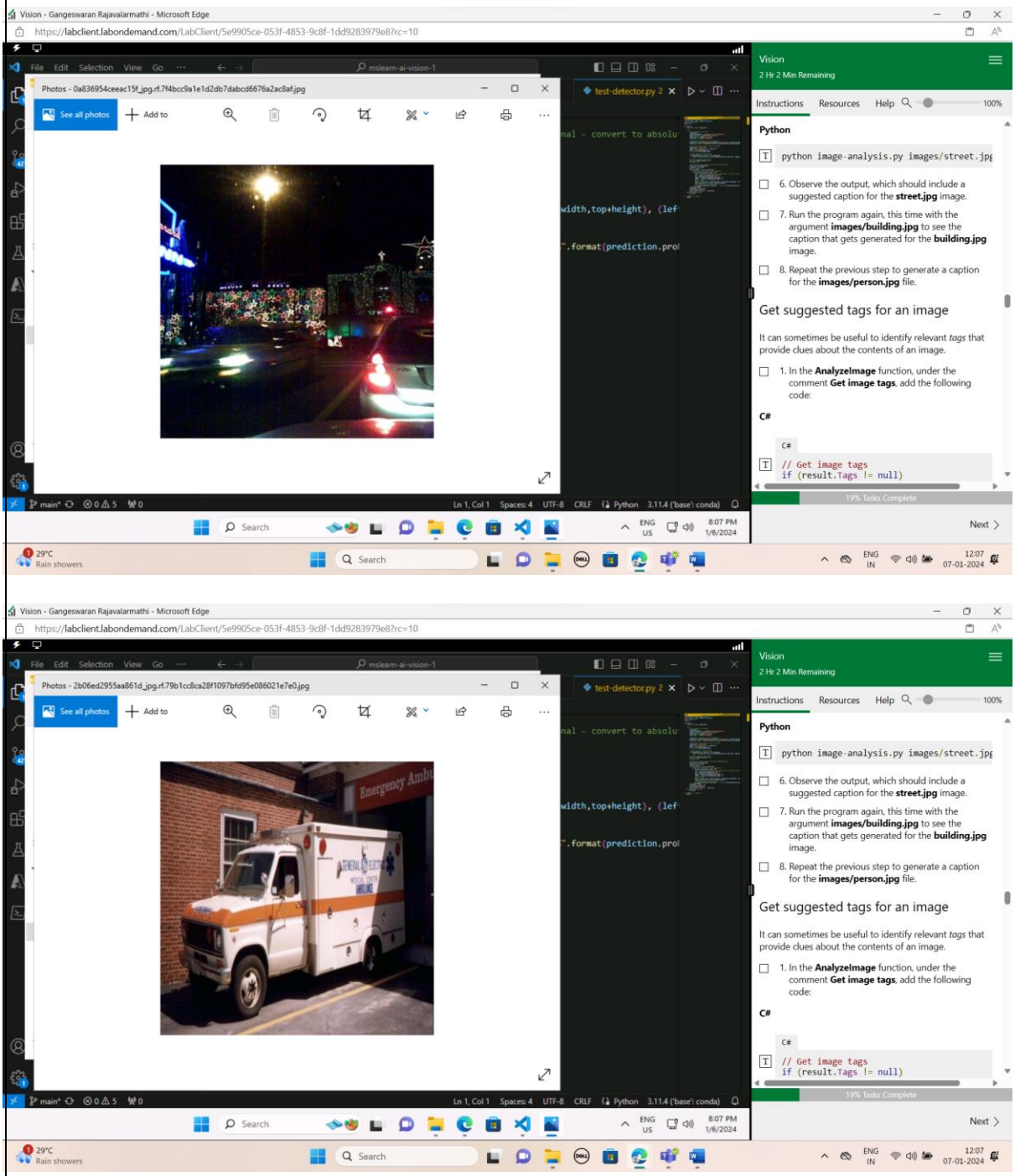
The purpose here is to evaluate the trained object detection model using a separate test dataset to ensure accuracy and performance.

Explanation:

1. **Testing with Test Dataset**: The script assumes you have a separate test dataset with images and their ground truth bounding box coordinates. It runs predictions on these test images using the trained iteration and compares the predicted bounding boxes with the ground truth to calculate accuracy. The accuracy is computed based on a comparison threshold, such as IoU (Intersection over Union).



Activity 6: Evaluation, Testing, and Deployment
Task 5: Evaluation • Evaluate the trained object detection model using a separate test dataset to ensure accuracy and performance.



Task 6: Testing and Deployment • Test the object detection model with real-world data and deploy it for use in the ABC Travels premises.

Task 6: Testing and Deployment

This task involves testing the object detection model with real-world data and deploying it for use in the ABC Travels premises.

Explanation:

1. **Real-world Testing**: You can use the trained model to make predictions on real-world data by providing the path to the real-world images. The script uses the Azure Custom Vision Prediction SDK to perform predictions on these images.

2. **Deployment**: The deployment process involves setting the published iteration of the model as the default for predictions. Additionally, this step might also include deploying the model in a way that allows it to be used within the ABC Travels premises for real-time object detection.