Lesson 4 Demo 03
Define AI Agent Tasks

Objective: To demonstrate the process of assigning specific tasks to AI agents, ensuring a structured and efficient approach to trip planning

Each agent is given a distinct responsibility, allowing them to work collaboratively toward creating a well-organized travel itinerary.

To streamline the planning process, the following tasks are defined:

1. Identify city (city selection expert)
2. Gather city info (local tour guide)
3. Plan itinerary (expert travel agent)

Tools required: VSCode

Prerequisites: Complete the Lesson 4 Prerequisite Demo, Lesson 4 Demo 1, and Lesson 4 Demo 2

Steps to be followed:

1. Create a tasks.py file
2. Import dependencies
3. Define the TravelTasks class
4. Create the itinerary task
5. Create a task to identify the best city for the trip
6. Create a task to gather in-depth city information
7. Save the file

Step 1: Create a tasks.py file

Note: Refer to Lesson 4 Demo 1 to create a *.py* file

Step 2: Import dependencies

tasks.py

```
1   from crewai import Task
2   from textwrap import dedent
```

Step 3: Define the TravelTasks class

3.1 Define the TravelTasks class to manage and organize all travel-related tasks for the planning agent.

Step 4: Create the itinerary task

4.1 Create a task for the agent to build a 7-day travel itinerary

4.2 The task requires the agent to:

a) Create a detailed 7-day plan with daily schedules for the trip

b) Include suggestions for places to visit, restaurants, hotels, and activities

c) Provide packing tips, weather forecasts, and a budget breakdown

4.3 The task parameters are:

a) City: The destination city

b) Trip Dates: The dates of travel

c) Traveler Interests: The traveler's preferences and interests

4.4 This will return a fully defined task for itinerary creation.

```
class TravelTasks:
    def plan_itinerary(self, agent, city, travel_dates, interests):

        return Task(
                    description = dedent(f"""**Task**: Develop a 7-Day Travel Itinerary
                                **Description**: Expand the city guide into a full 7-day travel itinerary
                                with detailed per-day plans, including weather forecasts, places to eat, pac
                                and a budget breakdown. You MUST suggest actual places to visit, actual hote
                                and actual restaurants to go to. This itinerary should cover all aspects of
                                from arrival to departure, integrating the city guide information with pract
                                **Parameters**:
                                - City: {city}
                                - Trip Date: {travel_dates}
                                - Traveler Interests: {interests}"""),
                    agent=agent)
```

Step 5: Create a task to identify the best city for the trip

5.1 Determine the best city for a trip based on key travel factors

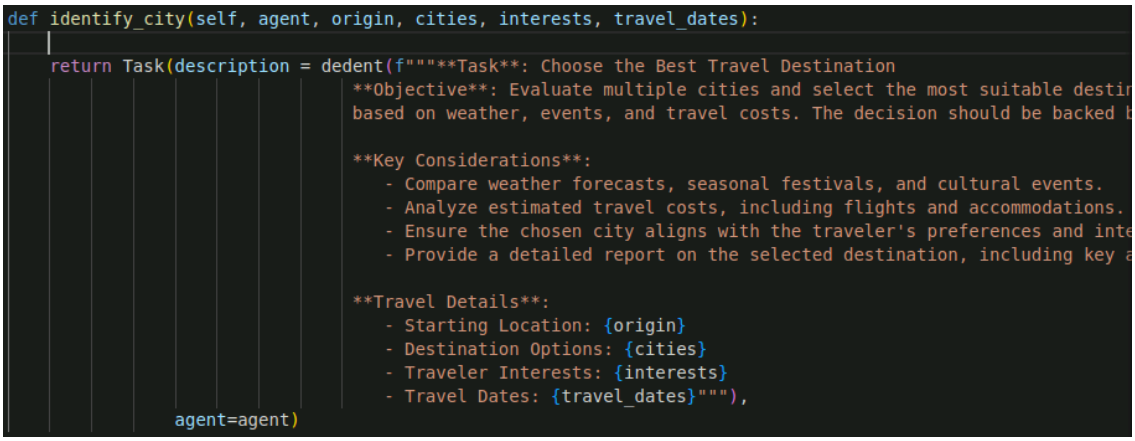
5.2 This task involves analyzing multiple potential destinations by evaluating weather conditions, seasonal events, and travel costs. The selected city should align with the traveler's interests and provide the best overall experience. The output should be a comprehensive report that includes:

a) Current weather conditions
b) Upcoming cultural or seasonal events
c) Estimated travel expenses, including flight costs
d) Popular attractions and points of interest

5.3 Parameters:

a) agent (Agent): The AI agent responsible for executing the task
b) origin (str): The starting location of the traveler
c) cities (list): A list of potential destination cities
d) interests (list): The traveler's preferences and interests
e) travel_dates (str): The planned dates for the trip

5.4 This will return a CrewAI task assigned to the agent for selecting a city.



Step 6: Create a task to gather in-depth city information

6.1 Collect detailed travel information about a specific city

6.2 This task involves compiling a comprehensive city guide that includes key attractions, cultural insights, local events, and travel logistics. The goal is to provide a well-rounded overview of the city's highlights to help travelers make informed decisions.

6.3 Parameters:

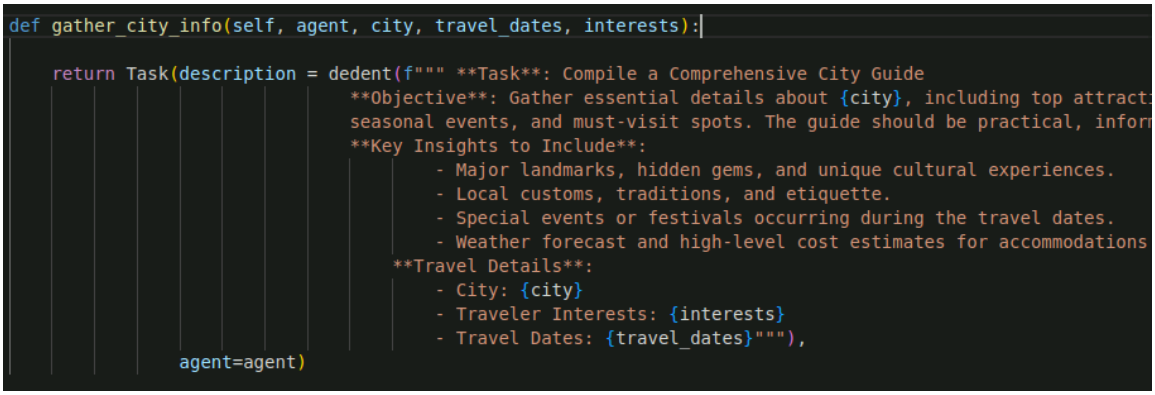
a) agent (Agent): The AI agent responsible for gathering and structuring the information

b) city (str): The selected city for which information is being collected

c) travel_dates (str): The planned dates of the trip

d) interests (list): The traveler's preferences and interests

6.4 This will return a CrewAI task assigned to the agent to collect city-specific travel insights.



```
def gather_city_info(self, agent, city, travel_dates, interests):

    return Task(description = dedent(f""" **Task**: Compile a Comprehensive City Guide
                                **Objective**: Gather essential details about {city}, including top attracti
                                seasonal events, and must-visit spots. The guide should be practical, inform
                                **Key Insights to Include**:
                                        - Major landmarks, hidden gems, and unique cultural experiences.
                                        - Local customs, traditions, and etiquette.
                                        - Special events or festivals occurring during the travel dates.
                                        - Weather forecast and high-level cost estimates for accommodations
                                    **Travel Details**:
                                        - City: {city}
                                        - Traveler Interests: {interests}
                                        - Travel Dates: {travel_dates}"""),
                agent=agent)
```

Step 7: Save the file