Lesson 4 Demo 04
Implement AI Agents as a Crew

Objective: To demonstrate how AI agents collaborate within CrewAI, working as a unified team to streamline the trip-planning process

Each agent contributes specialized knowledge, passing information seamlessly to ensure an efficient and well-informed itinerary.

By integrating these agents into a Crew, the system enables smooth communication and decision-making, resulting in a fully automated and intelligent trip-planning experience

Tools required: VSCode

Prerequisites: Complete the Lesson 4 Prerequisite Demo, Lesson 4 Demo 1, Lesson 4 Demo 2, and Lesson 4 Demo 3

Steps to be followed:

1. Create a crew.py file
2. Import dependencies
3. Initialize the TripCrew class
4. Define agents and tasks
5. Assign tasks to agents
6. Create and run the crew
7. Save the file

Step 1: **Create a crew.py file**

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

Step 2: **Import dependencies**

```
crew.py
1  from crewai import Crew
2  from agents import TravelAgents
3  from tasks import TravelTasks
4
5  from dotenv import load_dotenv
6  load_dotenv()
```

Step 3: Initialize the TripCrew class

3.1 The TripCrew class is created to manage the trip planning process.

3.2 It stores user inputs like the origin, list of potential cities, date range, and traveler interests.

```python
class TripCrew:
    def __init__(self, origin, cities, date_range, interests):
        self.origin = origin
        self.cities = cities
        self.date_range = date_range
        self.interests = interests
```

Step 4: Define agents and tasks

4.1 Initialize specialized travel agents

```python
def run(self):

    # Initialize travel agents and tasks
    travel_agents = TravelAgents()
    travel_tasks = TravelTasks()
```

4.2 Create agent instances

```python
# Create agent instances
itinerary_planner = travel_agents.expert_travel_agent()
destination_analyst = travel_agents.city_selection_expert()
local_expert = travel_agents.local_tour_guide()
```

Step 5: Assign tasks to agents

```python
# Assign tasks to agents
itinerary_task = travel_tasks.plan_itinerary(
    itinerary_planner,
    self.cities,
    self.date_range,
    self.interests
)

destination_selection_task = travel_tasks.identify_city(
    destination_analyst,
    self.origin,
    self.cities,
    self.interests,
    self.date_range
)

city_guide_task = travel_tasks.gather_city_info(
    local_expert,
    self.cities,
    self.date_range,
    self.interests
)
```

Step 6: Create and run the crew

```python
# Create and run the Crew
travel_crew = Crew(
    agents=[itinerary_planner, destination_analyst, local_expert],
    tasks=[itinerary_task, destination_selection_task, city_guide_task],
    verbose=True,
)

result = travel_crew.kickoff()
return result
```

Step 7: Save the file