

```
import subprocess
```

```
from typing import Any, Dict, List, Callable
```

```
from loguru import logger
```

```
from pydantic import BaseModel
```

```
# Setting up loguru logging
```

```
logger.add("agent_metadata.log", rotation="10 MB")
```

```
try:
```

```
    import pandas as pd
```

```
except ImportError:
```

```
    logger.error("Failed to import pandas")
```

```
    subprocess.run(["pip", "install", "pandas"])
```

```
    import pandas as pd
```

```
def display_agents_info(agents: List[Callable]) -> pd.DataFrame:
```

```
    """
```

```
    Displays information about all agents in a list using a DataFrame.
```

```
    :param agents: List of callable functions that return Agent instances.
```

```
    """
```

```
    # Extracting relevant information from each agent
```

```
    agent_data = []
```

```
    for agent_callable in agents:
```

try:

```
agent = agent_callable()
```

```
agent_info = {
```

```
    "ID": agent.id,
```

```
    "Name": agent.agent_name,
```

```
    "Description": agent.description,
```

```
    "max_loops": agent.max_loops,
```

```
    # "Docs": agent.docs,
```

```
    "System Prompt": agent.system_prompt,
```

```
    "LLM Model": agent.llm.model_name, # type: ignore
```

```
}
```

```
agent_data.append(agent_info)
```

except AttributeError as e:

```
    logger.error(
```

```
        f"Failed to extract information from agent: {e}"
```

```
    )
```

```
    continue
```

# Creating a DataFrame to display the data

try:

```
df = pd.DataFrame(agent_data)
```

except Exception as e:

```
    logger.error(f"Failed to create DataFrame: {e}")
```

```
    return
```

# Displaying the DataFrame

```
try:
```

```
    print(df)
```

```
    return df
```

```
except Exception as e:
```

```
    logger.error(f"Failed to print DataFrame: {e}")
```

```
def dict_to_dataframe(data: Dict[str, Any]) -> pd.DataFrame:
```

```
    """
```

```
    Converts a dictionary into a pandas DataFrame.
```

```
    :param data: Dictionary to convert.
```

```
    :return: A pandas DataFrame representation of the dictionary.
```

```
    """
```

```
    # Convert dictionary to DataFrame
```

```
    df = pd.json_normalize(data)
```

```
    return df
```

```
def pydantic_model_to_dataframe(model: BaseModel) -> pd.DataFrame:
```

```
    """
```

```
    Converts a Pydantic Base Model into a pandas DataFrame.
```

```
    :param model: Pydantic Base Model to convert.
```

```
    :return: A pandas DataFrame representation of the Pydantic model.
```

```
"""
```

```
# Convert Pydantic model to dictionary
```

```
model_dict = model.dict()
```

```
# Convert dictionary to DataFrame
```

```
df = dict_to_dataframe(model_dict)
```

```
return df
```