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from crewai import Task
from agents import Gtraders

class TradingTasks:
    def __init__(self, gtraders: Gtraders):
        self.gtraders = gtraders

    def create_tasks(self):
        tasks = []

        # Manager Task
        tasks.append(Task(
            description="Oversee the entire trading operation. Analyze reports from all agents and make final investment decisions based on collective insights.",
            agent=self.gtraders.manager,
            expected_output="A comprehensive summary of the trading operation, including key decisions and overall strategy."
        ))

        # Portfolio Manager Task
        tasks.append(Task(
            description="Analyze current portfolio composition and suggest optimal asset allocation based on market conditions and risk tolerance. Use the PyPortfolioTools for analysis.",
            agent=self.gtraders.portfolio_manager,
            expected_output="A detailed portfolio analysis report with recommended asset allocations and risk assessment."
        ))

        # Fundamental Analyst Task
        tasks.append(Task(
            description="Conduct in-depth analysis of economic indicators, financial reports, and market trends. Provide insights for investment decisions based on fundamental analysis.",
            agent=self.gtraders.fundamental_analyst,
            expected_output="A comprehensive fundamental analysis report highlighting key economic indicators and their potential impact on investments."
        ))

        # Technical Analyst Task
        tasks.append(Task(
            description="Perform technical analysis on forex, indices, and commodities to identify potential trading opportunities and entry/exit points. Use the MathTool for calculations.",
            agent=self.gtraders.technical_analyst,
            expected_output="A technical analysis report with identified trading opportunities, including entry and exit points for various assets."
        ))

        # Researcher Task
        tasks.append(Task(
            description="Gather and analyze the latest financial news, economic data, and market trends. Use the ResearcherTools to collect and process information from various sources.",
            agent=self.gtraders.researcher,
            expected_output="A research summary highlighting key market trends, news, and data that could impact investment decisions."
        ))

        # Trader Task
        tasks.append(Task(

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        description="Execute trades based on the analysis and recommendations provided by other agents.  
Monitor market conditions in real-time and manage time-sensitive operations using MT5Tools and  
TimeAndDateTool.",  
        agent=self.gtraders.trader,  
        expected_output="A trading execution report detailing executed trades, current market conditions, and any  
time-sensitive operations performed."  
    ))  
  
    return tasks  
  
@staticmethod  
def get_agent_by_name(agent_name, agents):  
    return agents.get(agent_name)
```