# -- Add Modern Macro Event Nodes (Full Top 10) to KG --

def add\_modern\_macro\_event\_nodes(kg):

events = [

("COVID Economic Shock (2020)", "Global pandemic triggered synchronized demand/supply collapse, lockdowns, stimulus, and extreme volatility.", "Historical Layer"),

("Eurozone Sovereign Crisis (2011)", "European debt spiral driven by Greece, Italy, Spain and austerity-led ECB regime tension.", "Historical Layer"),

("BRICS Reserve Strategy (2023)", "New reserve currency initiatives from BRICS nations challenge dollar hegemony and shift commodity settlement norms.", "Macro Regime Layer"),

("QT to Recession Regime (2022–24)", "Post-COVID quantitative tightening regime triggered liquidity withdrawal and reintroduced hard landing risk.", "Macro Regime Layer"),

("Debt Ceiling Panic (2023)", "U.S. Treasury market dysfunction triggered by political gridlock and bill liquidity stress.", "Policy Constraint Layer"),

("AI Infrastructure Bubble (2023)", "Speculative surge in semiconductors and LLM infrastructure driven by AI hype, GPU shortages, and valuation overshoot.", "Behavioral Layer"),

("Energy Security Repricing (2022)", "Russia/Ukraine war repriced oil, gas, and electricity risks and catalyzed a global energy sovereignty rethink.", "Commodity Macro Layer"),

("Meme Stock Mania (2021)", "Retail-driven speculative frenzy in low-float names driven by social media and options gamma dynamics.", "Behavioral Layer"),

("Meta Tech Drawdown (2022)", "Collapse in Meta Platforms valuation post-earnings guided market to recognize valuation fragility in mega-cap growth.", "Tech Cycle Layer"),

("Japan YCC Exit (2023)", "BoJ stealth tightening breaks global yield carry assumptions, triggering cross-asset volatility.", "FX/Rate Layer")

]

for name, desc, layer in events:

kg.create\_node("MacroEvent", {"name": name, "description": desc, "layer": layer})

kg.create\_relationship(name, layer, "BELONGS\_TO")

links = [

("COVID Economic Shock (2020)", "ReasoningPath\_017", "TRIGGERS", ["global freeze", "liquidity panic"]),

("COVID Economic Shock (2020)", "ReasoningPath\_019", "AMPLIFIES", ["policy reflex", "inflation rebound"]),

("Eurozone Sovereign Crisis (2011)", "ReasoningPath\_028", "REINFORCES", ["sovereign default", "currency stress"]),

("Eurozone Sovereign Crisis (2011)", "ReasoningPath\_026", "ANCHORS", ["bond divergence", "risk spread"]),

("BRICS Reserve Strategy (2023)", "ReasoningPath\_032", "FUNDAMENTAL\_SHIFT", ["de-dollarization", "multi-polar capital"]),

("BRICS Reserve Strategy (2023)", "ReasoningPath\_026", "GEOPOLITICALLY\_LINKED", ["FX fragmentation", "commodity settlement realignment"]),

("QT to Recession Regime (2022–24)", "ReasoningPath\_030", "REINFORCES", ["liquidity unwind", "multiple compression"]),

("QT to Recession Regime (2022–24)", "ReasoningPath\_027\_v2", "DRIVES", ["credit repricing", "funding stress"]),

("Debt Ceiling Panic (2023)", "ReasoningPath\_028", "CONDITIONS", ["bond market dislocation", "T-bill distortion"]),

("AI Infrastructure Bubble (2023)", "ReasoningPath\_030", "AMPLIFIES", ["valuation euphoria", "infra capex boom"]),

("AI Infrastructure Bubble (2023)", "ReasoningPath\_021", "REPEATS", ["tech cycle mimic", "FOMO contagion"]),

("Energy Security Repricing (2022)", "ReasoningPath\_019", "TRIGGERS", ["commodity squeeze", "inflation panic"]),

("Energy Security Repricing (2022)", "ReasoningPath\_014", "REVALIDATES", ["energy dominance", "OPEC influence"]),

("Meme Stock Mania (2021)", "ReasoningPath\_021", "TRIGGERS", ["retail gamma spiral", "behavioral surge"]),

("Meme Stock Mania (2021)", "ReasoningPath\_033", "REINFORCES", ["short squeeze reflex", "volatility feedback"]),

("Meta Tech Drawdown (2022)", "ReasoningPath\_030", "CONFIRMS", ["valuation compression", "tech fragility"]),

("Meta Tech Drawdown (2022)", "ReasoningPath\_029", "REPEATS", ["multiple reset", "guidance gap"]),

("Japan YCC Exit (2023)", "ReasoningPath\_033", "VOL\_EXPANSION\_TRIGGER", ["cross-asset vol regime", "carry unwind"]),

("Japan YCC Exit (2023)", "ReasoningPath\_027\_v2", "ALIGNS\_WITH", ["global bond fragility", "FX spread spike"])

]

for source, target, rel, tags in links:

kg.create\_relationship(source, target, rel)

for tag in tags:

kg.create\_node("Tag", {"name": tag})

kg.create\_relationship(source, tag, "TAGGED\_WITH")

kg.create\_relationship(target, tag, "THEMATICALLY\_LINKED")

# Usage:

# kg = FinancialKnowledgeGraph("bolt://localhost:7687", "neo4j", "password")

# add\_modern\_macro\_event\_nodes(kg)

# kg.close()