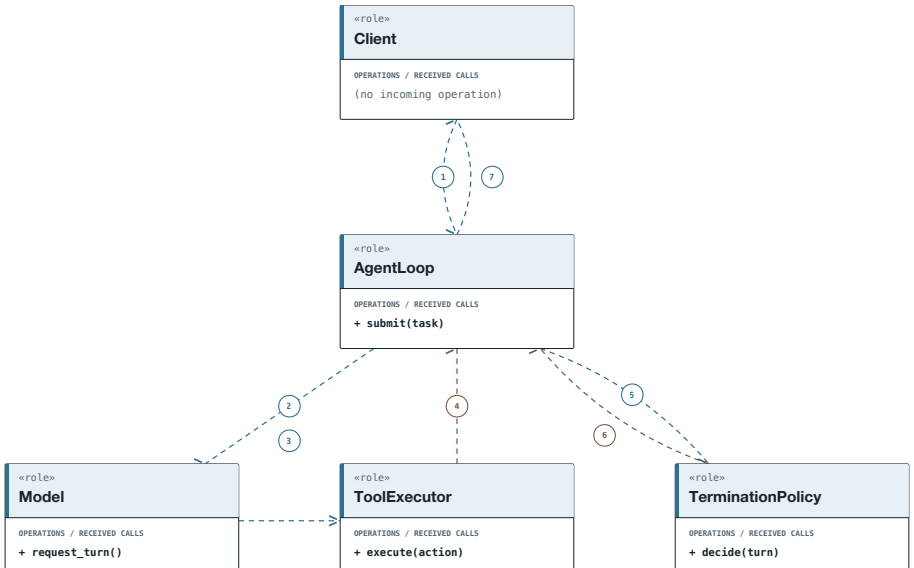
P01 Minimal linear loop

Primitive / UML CLASS VIEW / ANALYTICAL MODEL

Alternate model turns and action execution.

UML CLASS VIEW

dashed arrow: call dependency · brown: return/failure · analytical, not an observed trace



POINTCUT / PATTERN INTERFACE

CONTEXT	A harness executes an agent with at least one model or action turn.
TRIGGER	A model response requests tools or another turn.
STRUCTURE	Ordered turn/result records and an explicit repeat-or-terminate decision.
EFFECT	Every turn yields a terminal result, a tool action, or another legal turn.

CONTRACT / REQUIRED BEHAVIOR

REQUIRES	Model output, action dispatch, and a termination predicate are available.
ENSURES	Actions are correlated with their turn and a terminal outcome is returned.
INVARIANT	Each completed turn has one recorded decision and no unexplained action.
VIOLATION	Premature stop, malformed action, or repeated retry must terminate or surface an error.

RELATIONSHIPS / ANALYTICAL CALLS

number · caller → callee · message

1 Client → AgentLoop submit(task)
2 AgentLoop → Model request_turn()
3 Model → ToolExecutor execute(action)
4 ToolExecutor ↩ AgentLoop return(observation)
5 AgentLoop → TerminationPolicy decide(turn)
6 TerminationPolicy ↩ AgentLoop repeat_or_stop()
7 AgentLoop → Client return(result)

VARIATION / TEST / NEGATIVE CONTROL

VARIATION	Prompt, tool set, stopping predicate, and turn result encoding.
TEST_OBLIGATION	Test normal completion, immediate malformed output, and retry exhaustion.
NEGATIVE_CONTROL	A one-shot model call with no action cycle does not satisfy the pointcut.