

## Project Name:Agentic AI Run Tracker

Team Members:Kireeti Reddy P-PES1UG23CS307

K Sailakshmi Srinivas-PES1UG23CS271

## Triggers:

```
DELIMITER //
CREATE TRIGGER trg_run_parent_not_self
BEFORE INSERT ON Run
FOR EACH ROW
BEGIN
    IF NEW.Parent_RunID IS NOT NULL AND NEW.Parent_RunID = NEW.RunID THEN
        SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Run cannot parent itself';
    END IF;
END;
```

```
END IF;  
END//  
DELIMITER ;
```

```
AgenticAI_Run_Tracker-->DELIMITER //
AgenticAI_Run_Tracker-->CREATE TRIGGER trg_run_parent_not_self
    -> BEFORE INSERT ON Run
    -> FOR EACH ROW
    -> BEGIN
    ->     IF NEW.Parent_RunID IS NOT NULL AND NEW.Parent_RunID = NEW.RunID THEN
    ->         SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Run cannot parent itself'
;
    ->     END IF;
    -> END//
```

[AgenticAI\_Run\_Tracker-->DELIMITER ;  
AgenticAI\_Run\_Tracker-->

```
DELIMITER //
CREATE TRIGGER trg_artifact_checksum_default
BEFORE INSERT ON Artifact
FOR EACH ROW
BEGIN
    IF NEW.Checksum IS NULL THEN
        SET NEW.Checksum = SHA2(NEW.URI, 256);
    END IF;
END//
DELIMITER ;
```

```
AgenticAI_Run_Tracker-->DELIMITER //
AgenticAI_Run_Tracker-->CREATE TRIGGER trg_artifact_checksum_default
    --> BEFORE INSERT ON Artifact
    --> FOR EACH ROW
    --> BEGIN
    -->     IF NEW.Checksum IS NULL THEN
    -->         SET NEW.Checksum = SHA2(NEW.URI, 256);
    -->     END IF;
    --> END///
Query OK, 0 rows affected (0.005 sec)
```

AgenticAI\_Run\_Tracker-->DELIMITER ;  
AgenticAI\_Run\_Tracker-->█

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## Functions:

```
DELIMITER $$  
CREATE FUNCTION count_agents_in_project(p_project_id BIGINT UNSIGNED)  
RETURNS INT  
DETERMINISTIC  
READS SQL DATA  
BEGIN  
    DECLARE agent_count INT;  
    SELECT COUNT(*) INTO agent_count  
    FROM Agent  
    WHERE ProjectID = p_project_id;  
    RETURN agent_count;  
END $$  
DELIMITER ;
```

---

```
AgenticAI_Run_Tracker-->DELIMITER $$  
AgenticAI_Run_Tracker-->CREATE FUNCTION count_agents_in_project(p_project_id BIG  
INT UNSIGNED)  
    -> RETURNS INT  
    -> DETERMINISTIC  
    -> READS SQL DATA  
    -> BEGIN  
        ->     DECLARE agent_count INT;  
        ->     SELECT COUNT(*) INTO agent_count  
        ->     FROM Agent  
        ->     WHERE ProjectID = p_project_id;  
        ->     RETURN agent_count;  
    -> END $$  
Query OK, 0 rows affected (0.004 sec)  
  
AgenticAI_Run_Tracker-->DELIMITER ;  
AgenticAI_Run_Tracker-->■
```

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## Procedures:

```
DELIMITER &&
CREATE PROCEDURE GetRunsByAgent (
    IN p_agent_id BIGINT UNSIGNED
)
BEGIN
    SELECT * FROM Run WHERE AgentID = p_agent_id ORDER BY time DESC;
END &&
DELIMITER ;
```

```
AgenticAI_Run_Tracker-->DELIMITER &&
AgenticAI_Run_Tracker-->CREATE PROCEDURE GetRunsByAgent (
    ->     IN p_agent_id BIGINT UNSIGNED
    -> )
    -> BEGIN
    ->     SELECT * FROM Run WHERE AgentID = p_agent_id ORDER BY time DESC;
    -> END &&
Query OK, 0 rows affected (0.002 sec)
```

```
AgenticAI_Run_Tracker-->DELIMITER ;
AgenticAI_Run_Tracker-->■
DELIMITER &&
CREATE PROCEDURE GetRunMetrics (
    IN p_run_id BIGINT UNSIGNED
)
BEGIN
    SELECT Name, DataType, Value_Numeric, Value_Text
    FROM RunMetric
    WHERE RunID = p_run_id;
END &&
DELIMITER ;
```

```
AgenticAI_Run_Tracker-->DELIMITER &&
AgenticAI_Run_Tracker-->CREATE PROCEDURE GetRunMetrics (
    ->     IN p_run_id BIGINT UNSIGNED
    -> )
    -> BEGIN
    ->     SELECT Name, DataType, Value_Numeric, Value_Text
    ->     FROM RunMetric
    ->     WHERE RunID = p_run_id;
    -> END &&
Query OK, 0 rows affected (0.003 sec)
```

```
AgenticAI_Run_Tracker-->DELIMITER ;
AgenticAI_Run_Tracker-->■
```

```
DELIMITER &&
CREATE PROCEDURE GetArtifactsForRun (
```

Project Name:Agentic AI Run Tracker

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```
    IN p_run_id BIGINT UNSIGNED
)
BEGIN
    SELECT Type, URI, Checksum, Created_at
    FROM Artifact
    WHERE RunID = p_run_id;
END &&
DELIMITER ;
```

```
AgenticAI_Run_Tracker-->DELIMITER &&
AgenticAI_Run_Tracker-->CREATE PROCEDURE GetArtifactsForRun (
    ->    IN p_run_id BIGINT UNSIGNED
    -> )
    -> BEGIN
    ->     SELECT Type, URI, Checksum, Created_at
    ->     FROM Artifact
    ->     WHERE RunID = p_run_id;
    -> END &&
Query OK, 0 rows affected (0.003 sec)

AgenticAI_Run_Tracker-->DELIMITER ;
AgenticAI_Run_Tracker-->|
```

## Complex Queries:

Find Runs where the count of completed steps (Step\_Type = 'finalize' and Status = 'ok') is less than total steps

```
SELECT r.RunID, r.Status,
    (SELECT COUNT(*) FROM RunStep rs WHERE rs.RunID = r.RunID AND rs.Step_Type
= 'finalize' AND rs.Status = 'ok') AS Completed_Finalize_Steps,
    (SELECT COUNT(*) FROM RunStep rs WHERE rs.RunID = r.RunID) AS Total_Steps
FROM Run r
WHERE (SELECT COUNT(*) FROM RunStep rs WHERE rs.RunID = r.RunID AND
rs.Step_Type = 'finalize' AND rs.Status = 'ok')
    < (SELECT COUNT(*) FROM RunStep rs WHERE rs.RunID = r.RunID);
```

```
AgenticAI_Run_Tracker-->SELECT r.RunID, r.Status,
    -> (SELECT COUNT(*) FROM RunStep rs WHERE rs.RunID = r.RunID AND rs.Step_Type = 'finalize' AND rs.Status = 'ok') AS Completed_Finalize_Steps,
    -> (SELECT COUNT(*) FROM RunStep rs WHERE rs.RunID = r.RunID) AS Total_Steps
    -> FROM Run r
    -> WHERE (SELECT COUNT(*) FROM RunStep rs WHERE rs.RunID = r.RunID AND rs.Step_Type = 'finalize' AND rs.Status = 'ok')
    ->     < (SELECT COUNT(*) FROM RunStep rs WHERE rs.RunID = r.RunID);
+-----+-----+-----+-----+
| RunID | Status | Completed_Finalize_Steps | Total_Steps |
+-----+-----+-----+-----+
| 1 | queued | 0 | 3 |
| 2 | running | 0 | 4 |
| 3 | succeeded | 0 | 2 |
| 4 | failed | 0 | 1 |
+-----+-----+-----+-----+
4 rows in set (0.005 sec)

AgenticAI_Run_Tracker-->|
```

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List all Runs where the average latency metric is greater than the overall average latency of all runs

```
SELECT r.RunID, r.Status,
       (SELECT AVG(Value_Numeric) FROM RunMetric rm WHERE rm.RunID = r.RunID AND
        rm.Name = 'latency_ms') AS Run_Latency
    FROM Run r
   WHERE (SELECT AVG(Value_Numeric) FROM RunMetric rm WHERE rm.Name =
        'latency_ms') <
        (SELECT AVG(Value_Numeric) FROM RunMetric rm WHERE rm.RunID = r.RunID
        AND rm.Name = 'latency_ms');

AgenticAI_Run_Tracker-->SELECT r.RunID, r.Status,
->       (SELECT AVG(Value_Numeric) FROM RunMetric rm WHERE rm.RunID = r.RunID AND
ND rm.Name = 'latency_ms') AS Run_Latency
->       FROM Run r
->       WHERE (SELECT AVG(Value_Numeric) FROM RunMetric rm WHERE rm.Name = 'laten
cy_ms') <
->       (SELECT AVG(Value_Numeric) FROM RunMetric rm WHERE rm.RunID = r.Run
ID AND rm.Name = 'latency_ms');
+-----+
| RunID | Status | Run_Latency |
+-----+
|     1 | queued |      1200 |
+-----+
1 row in set (0.003 sec)

AgenticAI_Run_Tracker-->
```

List Projects for which no agent has run any run

```
SELECT p.ProjectID, p.Name
  FROM Project p
 WHERE NOT EXISTS (
   SELECT 1 FROM Agent a
   JOIN Run r ON a.AgentID = r.AgentID
  WHERE a.ProjectID = p.ProjectID
);

AgenticAI_Run_Tracker-->SELECT p.ProjectID, p.Name
->       FROM Project p
->       WHERE NOT EXISTS (
->           SELECT 1 FROM Agent a
->           JOIN Run r ON a.AgentID = r.AgentID
->           WHERE a.ProjectID = p.ProjectID
->       );
+-----+
| ProjectID | Name   |
+-----+
|      6 | Aquila |
|      7 | Lyra   |
|      8 | Vega   |
+-----+
3 rows in set (0.006 sec)

AgenticAI_Run_Tracker-->
```