MySQL Select Statements

★ 1: Active Astronauts

SELECT astronautID, name, healthStatus, nationality, missionID, role
FROM astronaut
WHERE healthStatus = 'active';

π astronautID, name, healthStatus, nationality, missionID, role
(σ healthStatus= "active"' (astronaut))

★ View 2: Active Astronauts with Missions

SELECT astronaut.name, astronaut.role, mission.name AS mission_name,
mission.launchDate
FROM astronaut
JOIN mission ON astronaut.missionID = mission.missionID
WHERE mission.status = 'on going';

π name, role, mission_name, launchDate (σ status="on going" (Astronaut ⋈
Mission))

★ View 3: Upcoming Missions

```
SELECT name AS mission_name, objective, launchDate
FROM mission
WHERE status = 'planned'
ORDER BY launchDate ASC;
```

π mission_name, objective, launchDate (σ status="planned" (Mission))

★ View 4: Mission Experiment Details

```
SELECT mission.name AS mission_name, experiment.name AS
experiment_name, experiment.result
FROM mission
JOIN missionexperiment ON mission.missionID =
missionexperiment.missionID
JOIN experiment ON missionexperiment.experimentID =
experiment.experimentID;
```

★ View 5: Resource Usage Per Spacecraft

```
SELECT spacecraft.name AS spacecraft_name,
    SUM(transaction.quantity) AS total_usage,
    resource.type AS resource_type
FROM transaction
JOIN spacecraft ON transaction.spacecraftID = spacecraft.spaceCraftID
JOIN resource ON transaction.resourceID = resource.resourceID
WHERE transaction.type = 'Delivered to Spacecraft'
GROUP BY spacecraft.spaceCraftID, resource.type;
```

★ View 6: Spacecraft Resources Status

```sql
SELECT spaceCraftID, name, status, oxygen, food, power, water,
    CASE WHEN oxygen < 50 THEN 'Oxygen' END AS low_oxygen,
    CASE WHEN food < 50 THEN 'Food' END AS low_food,
    CASE WHEN power < 50 THEN 'Power' END AS low_power,
    CASE WHEN water < 50 THEN 'Water' END AS low_water
FROM spacecraft
WHERE status = 'In Progress';
```

★ View 7: Waste Per Spacecraft

```sql
SELECT spacecraftID,
    SUM(CASE WHEN type = 'Delivered to Spacecraft' THEN quantity ELSE 0 END) AS total_delivered,
    SUM(CASE WHEN type = 'Returned to Storage' THEN quantity ELSE 0 END) AS total_returned,
    SUM(CASE WHEN type = 'Delivered to Spacecraft' THEN quantity ELSE 0 END) -
    SUM(CASE WHEN type = 'Returned to Storage' THEN quantity ELSE 0 END) AS total_wasted
FROM transaction
GROUP BY spacecraftID;
```