LAS VEGAS

regoUniversity 2025

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SQL Advanced Topics

Your Guides:
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Introductions

- Take 5 Minutes
- Turn to a Person Near You
- Introduce Yourself

Agenda

- Introduction
- Inline Views
- Common Table Expressions (CTEs)
- Analytic Functions
- Hierarchical Queries

Introduction

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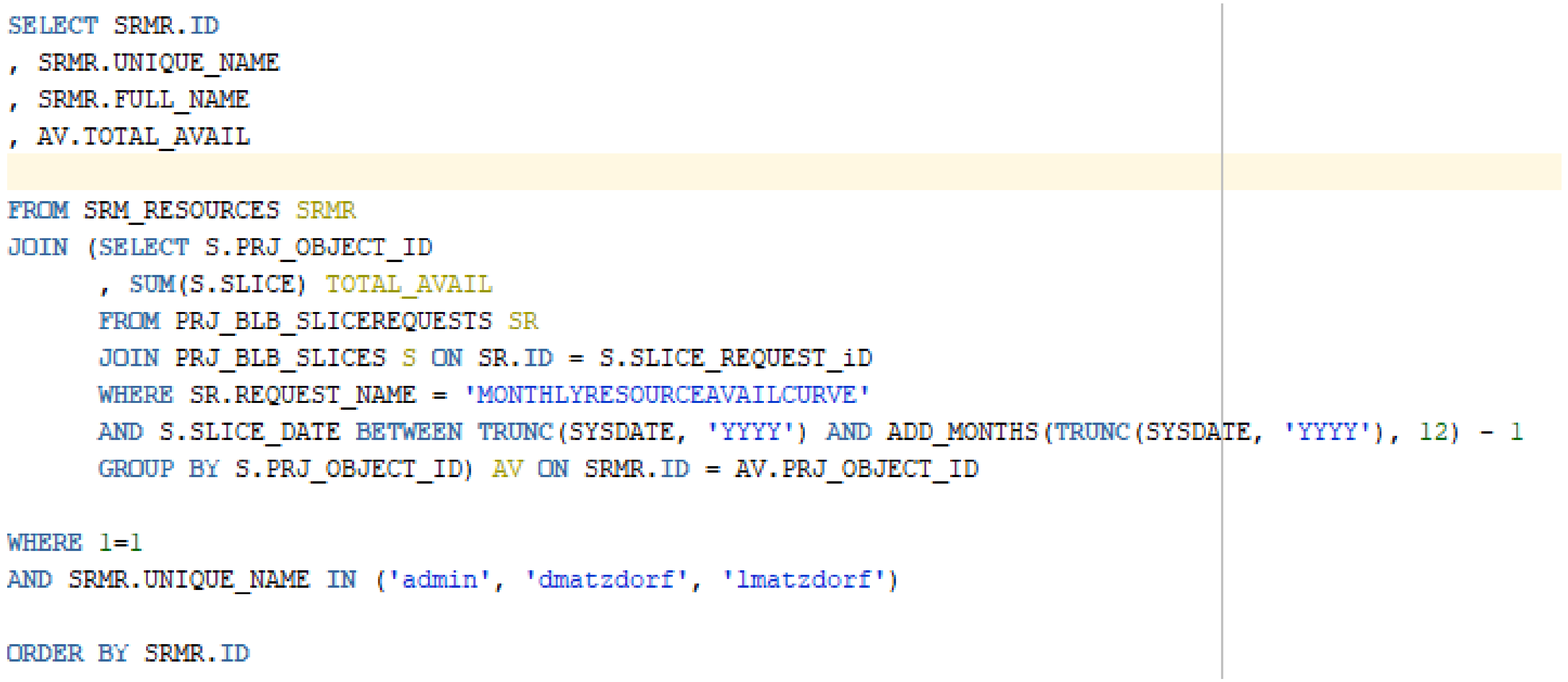
Inline Views

What is an Inline View

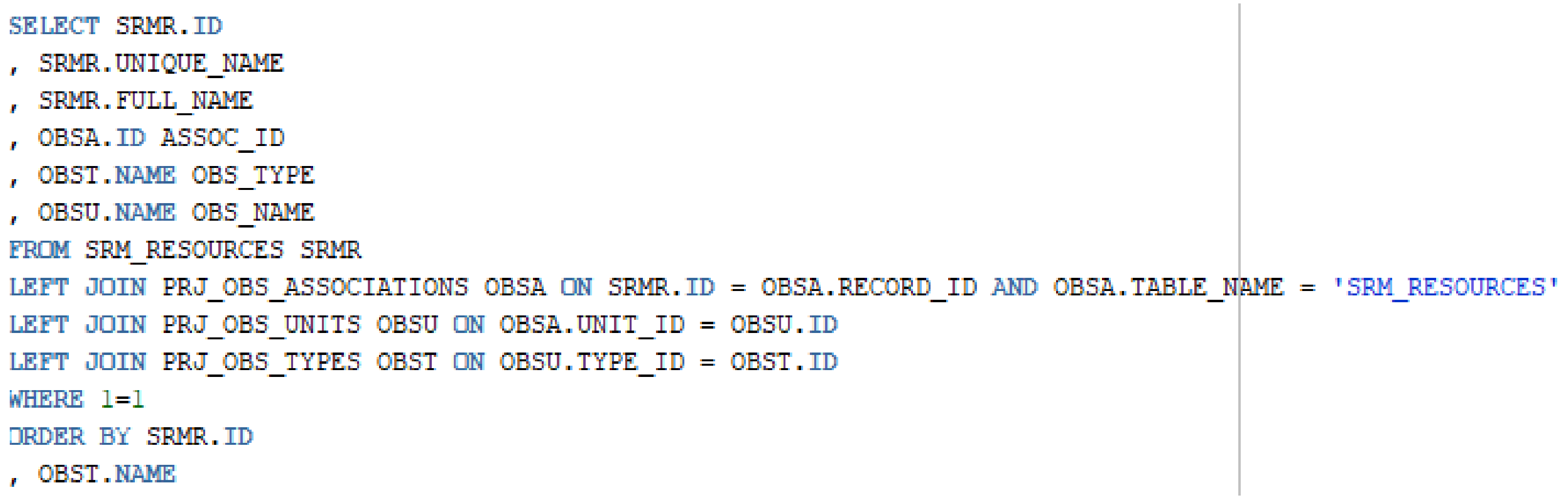
- Subquery written in the FROM clause
- Acts like a temp table that exists only while the query runs
- Not stored within the database like a traditional view
  - Pre-aggregating data
  - Filtering before joining
  - Avoiding Repetitive Subqueries

Pre-aggregating data

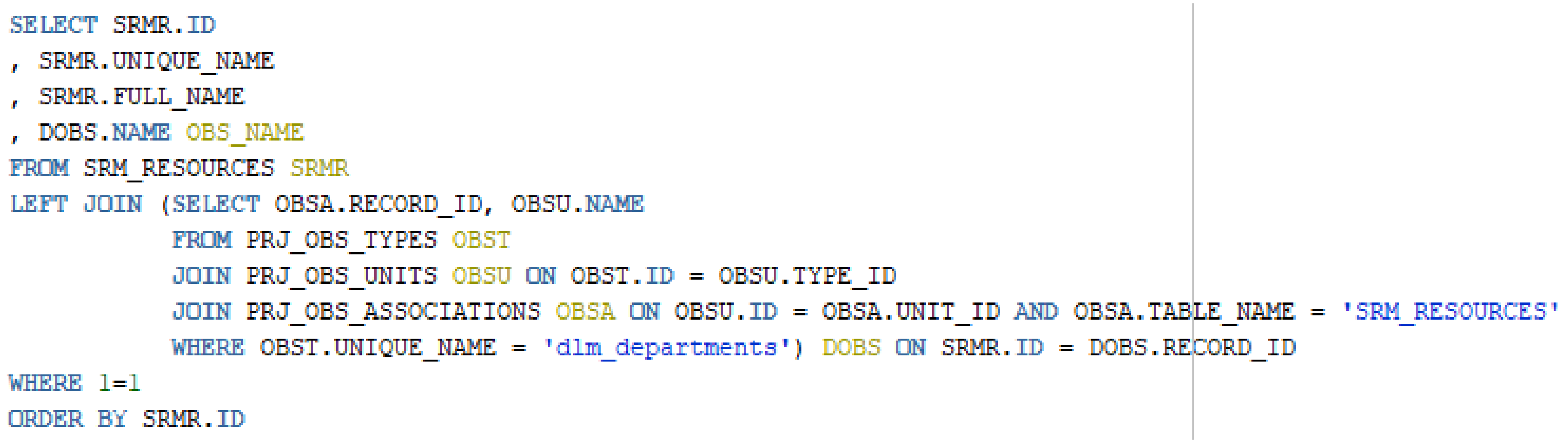


```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, AV.TOTAL_AVAIL

FROM SRM_RESOURCES SRMR
JOIN (SELECT S.PRJ_OBJECT_ID
      , SUM(S.SLICE) TOTAL_AVAIL
      FROM PRJ_BLB_SLICEREQUESTS SR
      JOIN PRJ_BLB_SLICES S ON SR.ID = S.SLICE_REQUEST_iD
      WHERE SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
      AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
      GROUP BY S.PRJ_OBJECT_ID) AV ON SRMR.ID = AV.PRJ_OBJECT_ID

WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')

ORDER BY SRMR.ID
```

Filtering Before Joining



```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, OBSA.ID ASSOC_ID
, OBST.NAME OBS_TYPE
, OBSU.NAME OBS_NAME
FROM SRM_RESOURCES SRMR
LEFT JOIN PRJ_OBS_ASSOCIATIONS OBSA ON SRMR.ID = OBSA.RECORD_ID AND OBSA.TABLE_NAME = 'SRM_RESOURCES'
LEFT JOIN PRJ_OBS_UNITS OBSU ON OBSA.UNIT_ID = OBSU.ID
LEFT JOIN PRJ_OBS_TYPES OBST ON OBSU.TYPE_ID = OBST.ID
WHERE 1=1
ORDER BY SRMR.ID
, OBST.NAME
```



```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, DOBS.NAME OBS_NAME
FROM SRM_RESOURCES SRMR
LEFT JOIN (SELECT OBSA.RECORD_ID, OBSU.NAME
           FROM PRJ_OBS_TYPES OBST
           JOIN PRJ_OBS_UNITS OBSU ON OBST.ID = OBSU.TYPE_ID
           JOIN PRJ_OBS_ASSOCIATIONS OBSA ON OBSU.ID = OBSA.UNIT_ID AND OBSA.TABLE_NAME = 'SRM_RESOURCES'
           WHERE OBST.UNIQUE_NAME = 'dlm_departments') DOBS ON SRMR.ID = DOBS.RECORD_ID
WHERE 1=1
ORDER BY SRMR.ID
```

Avoiding Repetitive Subqueries

Without Inline View

```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, (SELECT SUM(A.PRESTSUM)
   FROM PRASSIGNMENT A
   WHERE A.PRRESOURCEID = SRMR.ID) / 3600 TOTAL_ETCS
, (SELECT SUM(A.PRACTSUM)
   FROM PRASSIGNMENT A
   WHERE A.PRRESOURCEID = SRMR.ID) / 3600 TOTAL_ACT
FROM SRM_RESOURCES SRMR
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
ORDER BY SRMR.ID
```

With Inline View

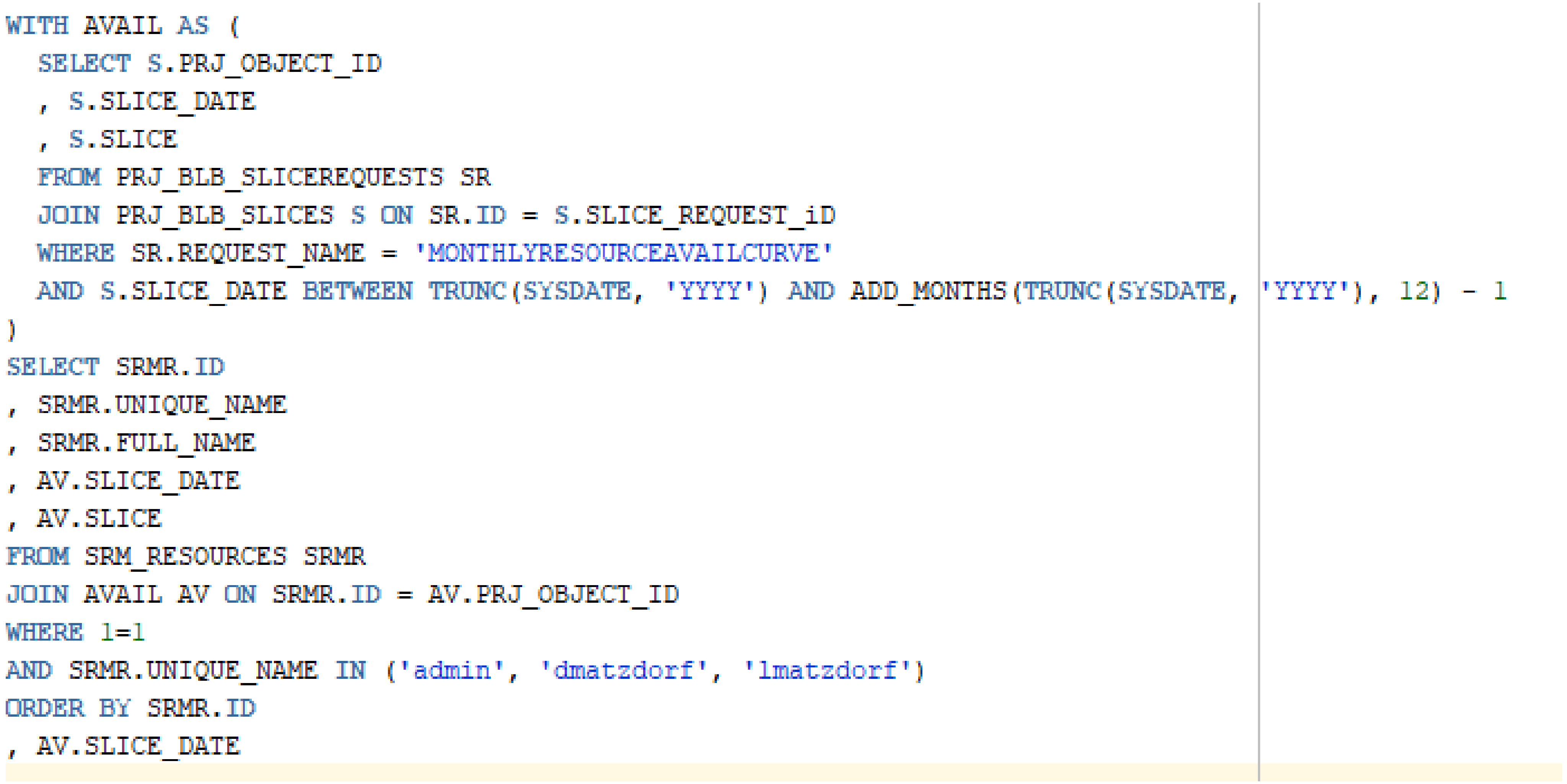
```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, A.TOTAL_ETCS
, A.TOTAL_ACT
FROM SRM_RESOURCES SRMR
LEFT JOIN (SELECT A.PRRESOURCEID
           , SUM(A.PRESTSUM) / 3600 TOTAL_ETCS
           , SUM(A.PRACTSUM) / 3600 TOTAL_ACT
           FROM PRASSIGNMENT A
           WHERE 1=1
           GROUP BY A.PRRESOURCEID) A ON SRMR.ID = A.PRRESOURCEID
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
ORDER BY SRMR.ID
```

Common Table Expressions (CTEs)

What is a CTE

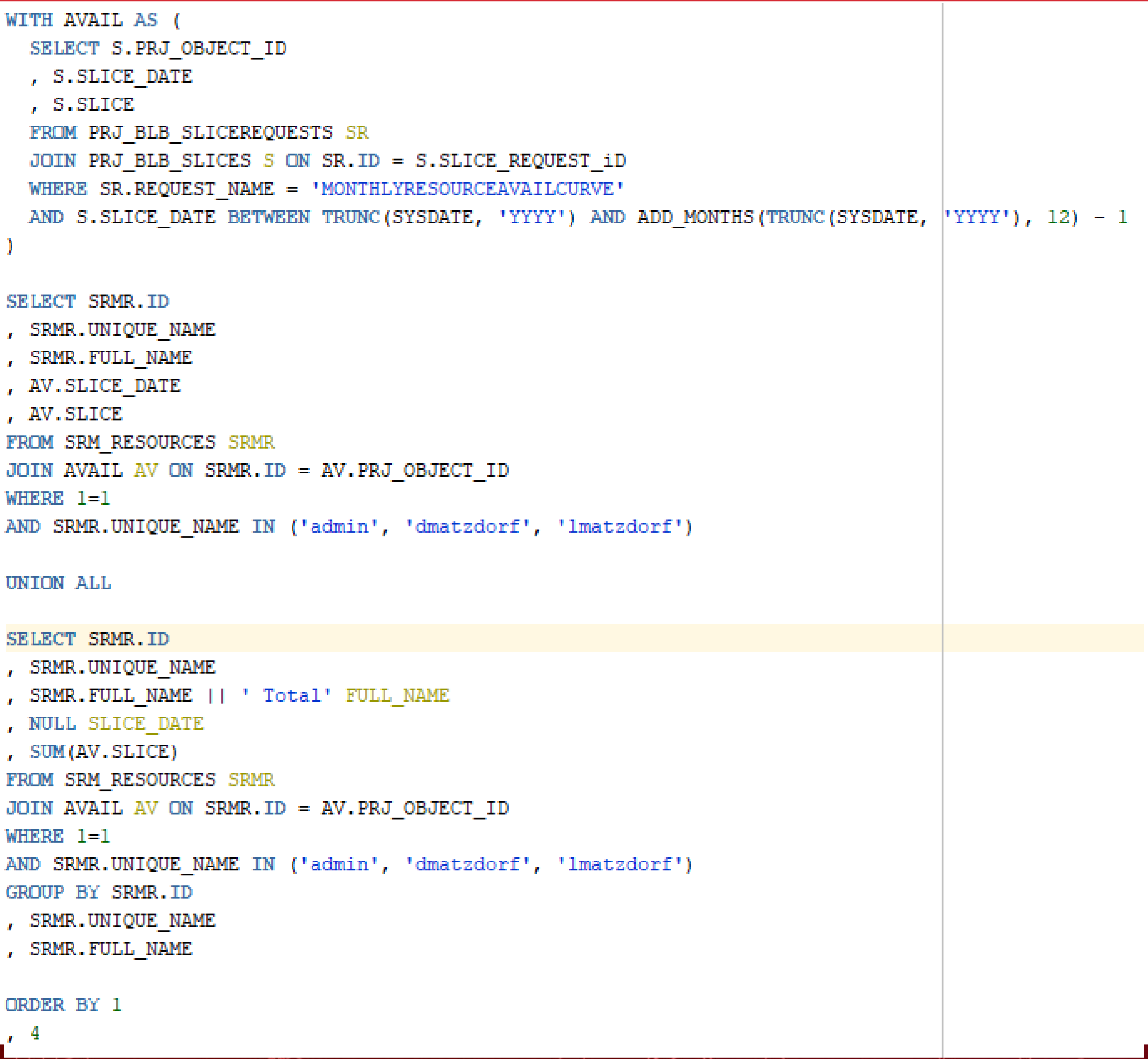
- Named temporary result (temporary view)
- Only exist for the duration of the query in which they are defined
- Begins with the keyword WITH
- Can be referenced multiple times with the same query
- Advantages
  - Makes complex queries easier to read and organize
  - Allows you to break down queries into logical steps
  - Aids in performance for queries that access the same data multiple times

CTE Example



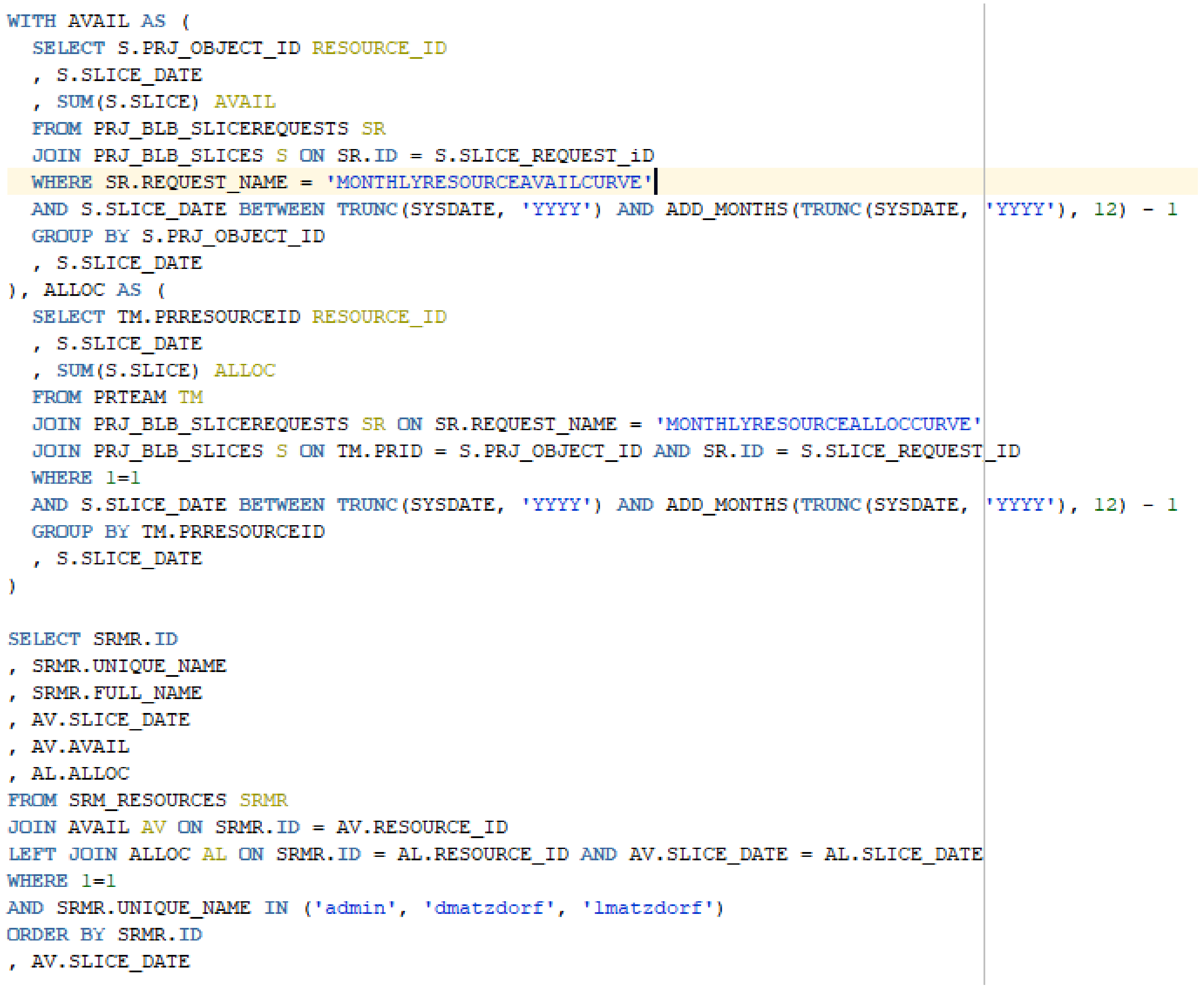
```
WITH AVAIL AS (
  SELECT S.PRJ_OBJECT_ID
  , S.SLICE_DATE
  , S.SLICE
  FROM PRJ_BLB_SLICEREQUESTS SR
  JOIN PRJ_BLB_SLICES S ON SR.ID = S.SLICE_REQUEST_iD
  WHERE SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
  AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
)
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, AV.SLICE_DATE
, AV.SLICE
FROM SRM_RESOURCES SRMR
JOIN AVAIL AV ON SRMR.ID = AV.PRJ_OBJECT_ID
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
ORDER BY SRMR.ID
, AV.SLICE_DATE
```

CTE - Reuse



```
WITH AVAIL AS (
  SELECT S.PRJ_OBJECT_ID
  , S.SLICE_DATE
  , S.SLICE
  FROM PRJ_BLB_SLICEREQUESTS SR
  JOIN PRJ_BLB_SLICES S ON SR.ID = S.SLICE_REQUEST_iD
  WHERE SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
  AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
)

SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, AV.SLICE_DATE
, AV.SLICE
FROM SRM_RESOURCES SRMR
JOIN AVAIL AV ON SRMR.ID = AV.PRJ_OBJECT_ID
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')

UNION ALL

SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME || ' Total' FULL_NAME
, NULL SLICE_DATE
, SUM(AV.SLICE)
FROM SRM_RESOURCES SRMR
JOIN AVAIL AV ON SRMR.ID = AV.PRJ_OBJECT_ID
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
GROUP BY SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME

ORDER BY 1
, 4
```

Multiple CTEs



```sql
WITH AVAIL AS (
  SELECT S.PRJ_OBJECT_ID RESOURCE_ID
  , S.SLICE_DATE
  , SUM(S.SLICE) AVAIL
  FROM PRJ_BLB_SLICEREQUESTS SR
  JOIN PRJ_BLB_SLICES S ON SR.ID = S.SLICE_REQUEST_iD
  WHERE SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
  AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
  GROUP BY S.PRJ_OBJECT_ID
  , S.SLICE_DATE
), ALLOC AS (
  SELECT TM.PRRESOURCEID RESOURCE_ID
  , S.SLICE_DATE
  , SUM(S.SLICE) ALLOC
  FROM PRTEAM TM
  JOIN PRJ_BLB_SLICEREQUESTS SR ON SR.REQUEST_NAME = 'MONTHLYRESOURCEALLOCCURVE'
  JOIN PRJ_BLB_SLICES S ON TM.PRID = S.PRJ_OBJECT_ID AND SR.ID = S.SLICE_REQUEST_ID
  WHERE 1=1
  AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
  GROUP BY TM.PRRESOURCEID
  , S.SLICE_DATE
)

SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, AV.SLICE_DATE
, AV.AVAIL
, AL.ALLOC
FROM SRM_RESOURCES SRMR
JOIN AVAIL AV ON SRMR.ID = AV.RESOURCE_ID
LEFT JOIN ALLOC AL ON SRMR.ID = AL.RESOURCE_ID AND AV.SLICE_DATE = AL.SLICE_DATE
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
ORDER BY SRMR.ID
, AV.SLICE_DATE
```

Analytic Functions

What Are Analytic Functions

- SQL functions that perform calculations across a set of rows that are related to the current row
- Unlike aggregate functions they return a value for each row while still considering other rows in the calculation
- In other words, they do not collapse rows into a single result
- Often involve ranking, cumulative, or moving calculations
- Allow advanced calculations without losing row-level detail
  - i.e.: ranking, running totals, moving averages, comparisons to other rows
- Can only appear in the SELECT or ORDER BY clause

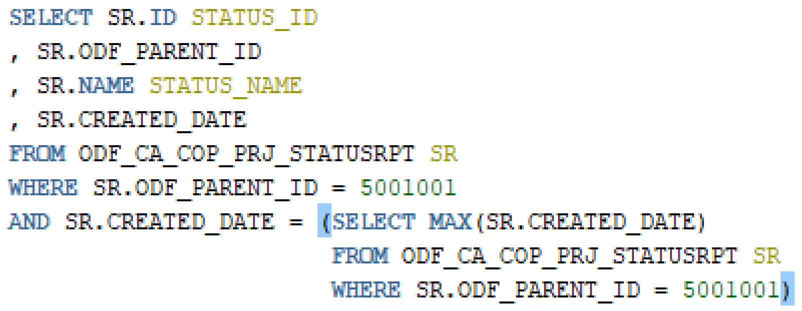
Available Functions

- AVG
- CORR
- COUNT
- COVAR_POP
- COVAR_SAMP
- CUME_DIST
- DENSE_RANK
- FIRST
- FIRST_VALUE
- LAG
- LAST
- LAST_VALUE
- LEAD
- LISTAGG
- MAX
- MEDIAN
- MIN
- NTH_VALUE
- NTILE
- PERCENT_RANK
- PERCENTILE_CONT
- PERCENTILE_DISC
- RANK
- RATIO_TO_REPORT
- REGR_
- ROW_NUMBER
- STDDEV
- STDDEV_POP
- STDDEV_SAMP
- SUM
- VAR_POP
- VAR_SAMP
- VARIANCE

Why Use Analytic Functions

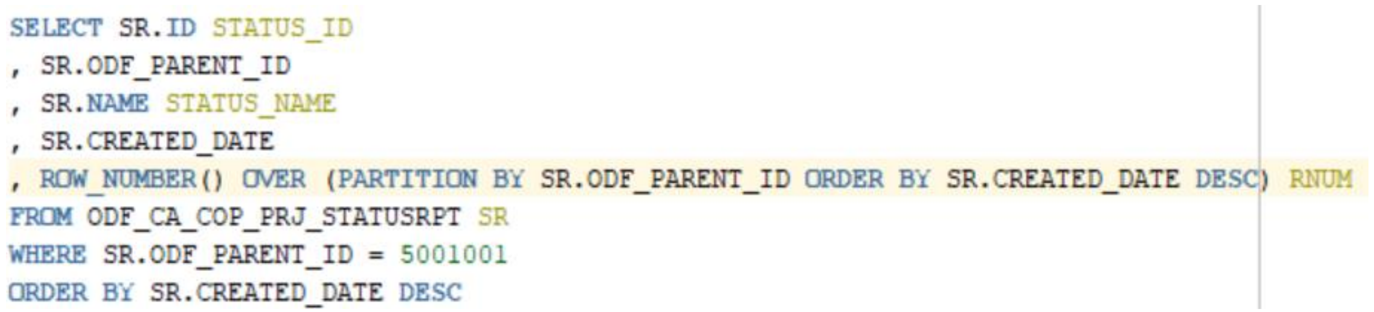
- Can be done with native SQL
- Odd syntax
- Analytic functions are faster and more accurate
- Get the latest status report
  - Get the max updated date for each project and join to it
  - Not accurate if there are multiple reports updated at the same time
  - Not efficient

Traditional Approach



```sql
SELECT SR.ID STATUS_ID
, SR.ODF_PARENT_ID
, SR.NAME STATUS_NAME
, SR.CREATED_DATE
FROM ODF_CA_COP_PRJ_STATUSRPT SR
WHERE SR.ODF_PARENT_ID = 5001001
AND SR.CREATED_DATE = (SELECT MAX(SR.CREATED_DATE)
                       FROM ODF_CA_COP_PRJ_STATUSRPT SR
                       WHERE SR.ODF_PARENT_ID = 5001001)
```

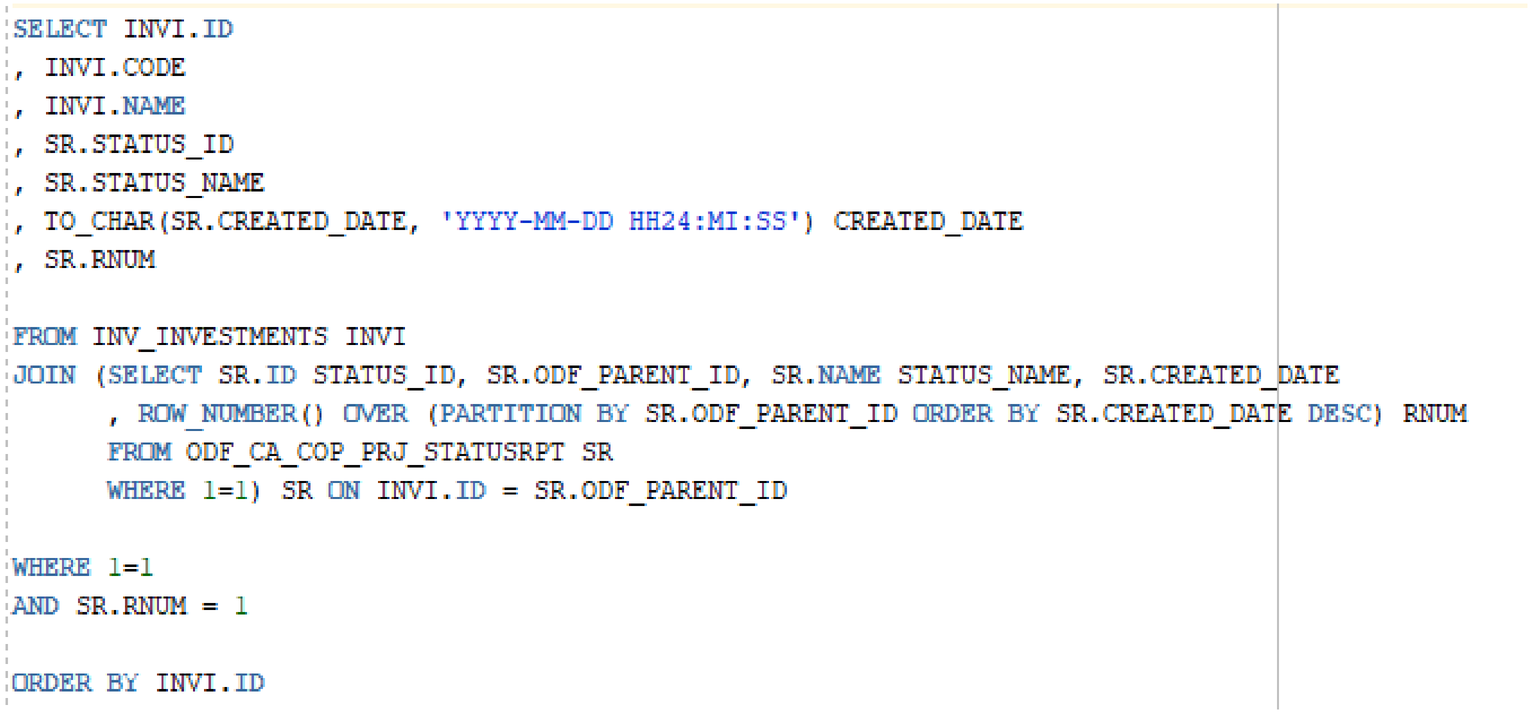
Analytic Function Approach



```sql
SELECT SR.ID STATUS_ID
, SR.ODF_PARENT_ID
, SR.NAME STATUS_NAME
, SR.CREATED_DATE
, ROW_NUMBER() OVER (PARTITION BY SR.ODF_PARENT_ID ORDER BY SR.CREATED_DATE DESC) RNUM
FROM ODF_CA_COP_PRJ_STATUSRPT SR
WHERE SR.ODF_PARENT_ID = 5001001
ORDER BY SR.CREATED_DATE DESC
```

Latest Status Report

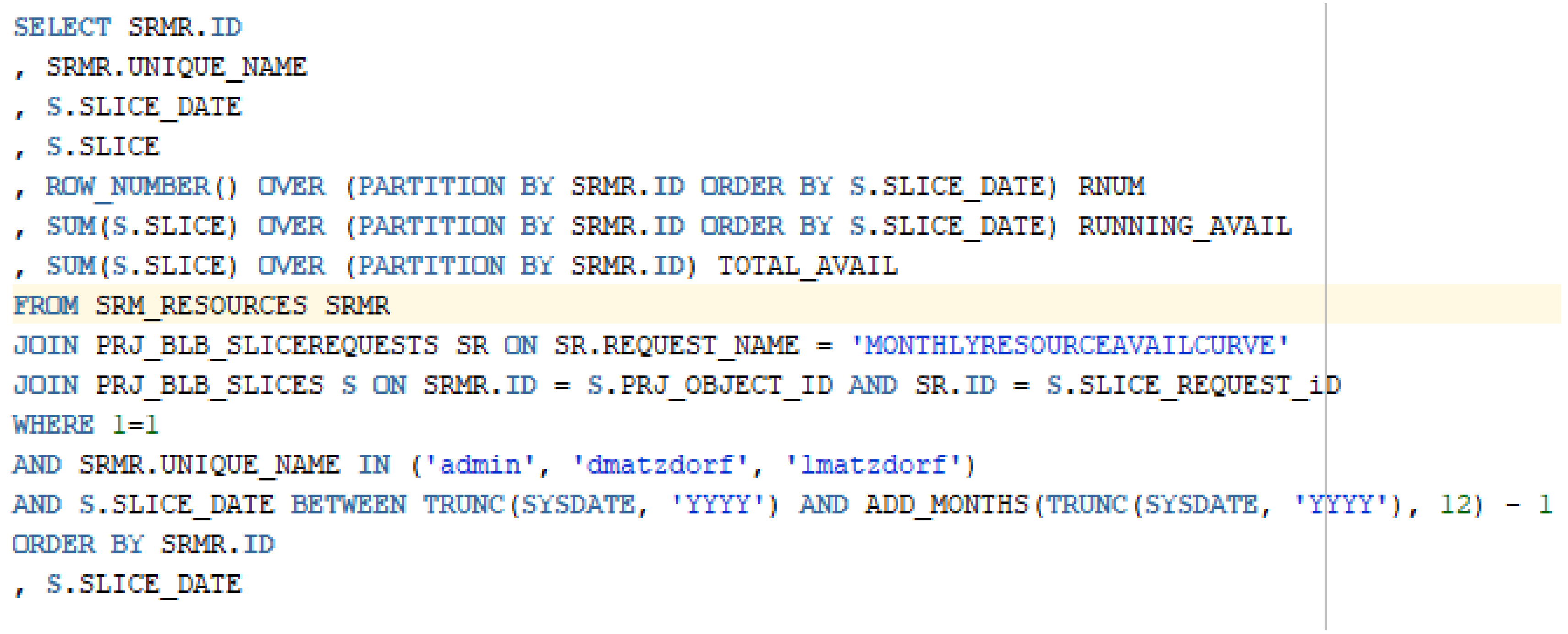
- Most recent status report by project



```
SELECT INVI.ID
, INVI.CODE
, INVI.NAME
, SR.STATUS_ID
, SR.STATUS_NAME
, TO_CHAR(SR.CREATED_DATE, 'YYYY-MM-DD HH24:MI:SS') CREATED_DATE
, SR.RNUM

FROM INV_INVESTMENTS INVI
JOIN (SELECT SR.ID STATUS_ID, SR.ODF_PARENT_ID, SR.NAME STATUS_NAME, SR.CREATED_DATE
      , ROW_NUMBER() OVER (PARTITION BY SR.ODF_PARENT_ID ORDER BY SR.CREATED_DATE DESC) RNUM
      FROM ODF_CA_COP_PRJ_STATUSRPT SR
      WHERE 1=1) SR ON INVI.ID = SR.ODF_PARENT_ID

WHERE 1=1
AND SR.RNUM = 1

ORDER BY INVI.ID
```

Running Totals

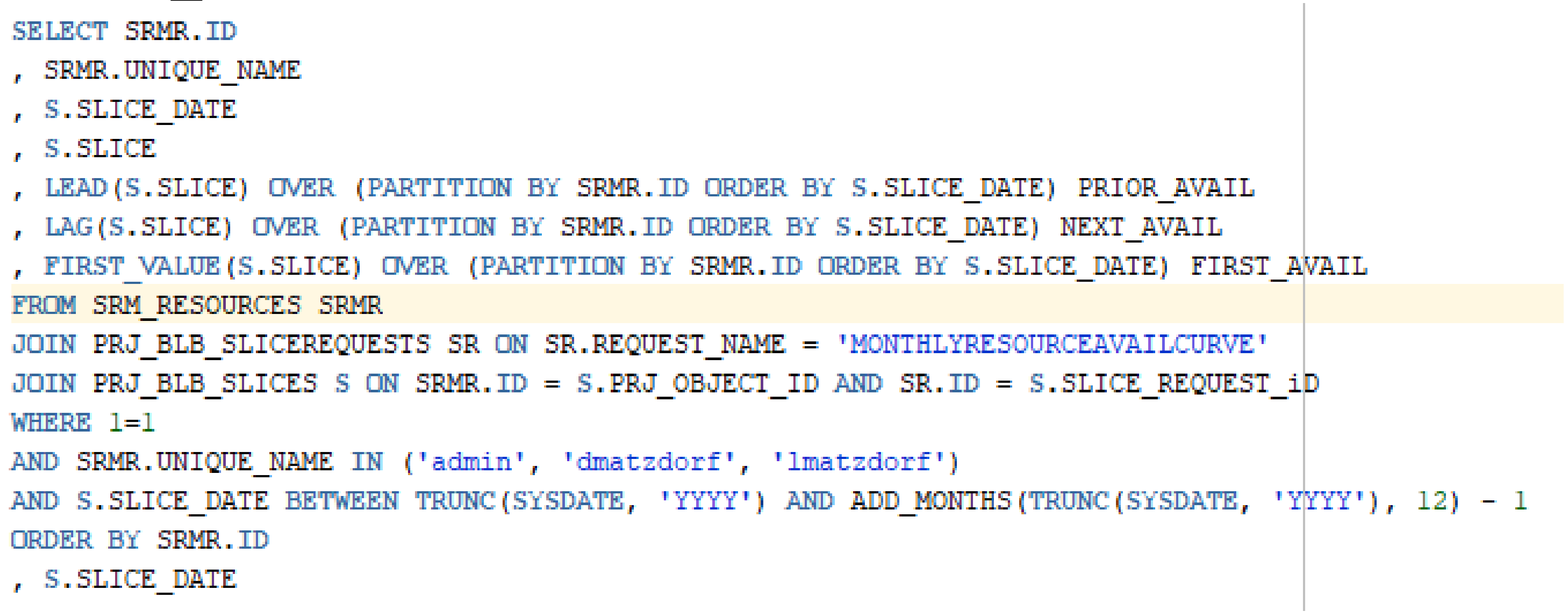
- ROW_NUMBER()
- Running Availability
- Total Availability By Resource



```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, S.SLICE_DATE
, S.SLICE
, ROW_NUMBER() OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE_DATE) RNUM
, SUM(S.SLICE) OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE_DATE) RUNNING_AVAIL
, SUM(S.SLICE) OVER (PARTITION BY SRMR.ID) TOTAL_AVAIL
FROM SRM_RESOURCES SRMR
JOIN PRJ_BLB_SLICEREQUESTS SR ON SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
JOIN PRJ_BLB_SLICES S ON SRMR.ID = S.PRJ_OBJECT_ID AND SR.ID = S.SLICE_REQUEST_ID
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
ORDER BY SRMR.ID
, S.SLICE_DATE
```

LEAD / LAG

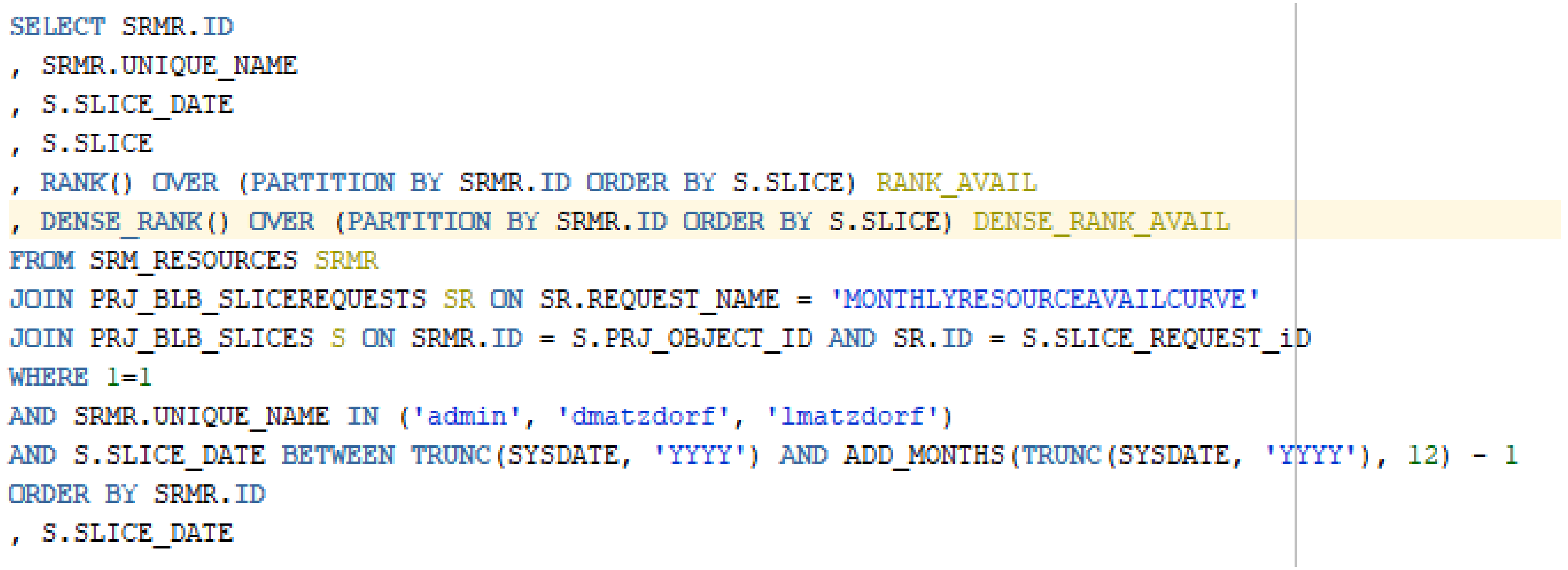
- LEAD
- LAG
- FIRST_VALUE



```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, S.SLICE_DATE
, S.SLICE
, LEAD(S.SLICE) OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE_DATE) PRIOR_AVAIL
, LAG(S.SLICE) OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE_DATE) NEXT_AVAIL
, FIRST_VALUE(S.SLICE) OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE_DATE) FIRST_AVAIL
FROM SRM_RESOURCES SRMR
JOIN PRJ_BLB_SLICEREQUESTS SR ON SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
JOIN PRJ_BLB_SLICES S ON SRMR.ID = S.PRJ_OBJECT_ID AND SR.ID = S.SLICE_REQUEST_iD
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
ORDER BY SRMR.ID
, S.SLICE_DATE
```

Ranking

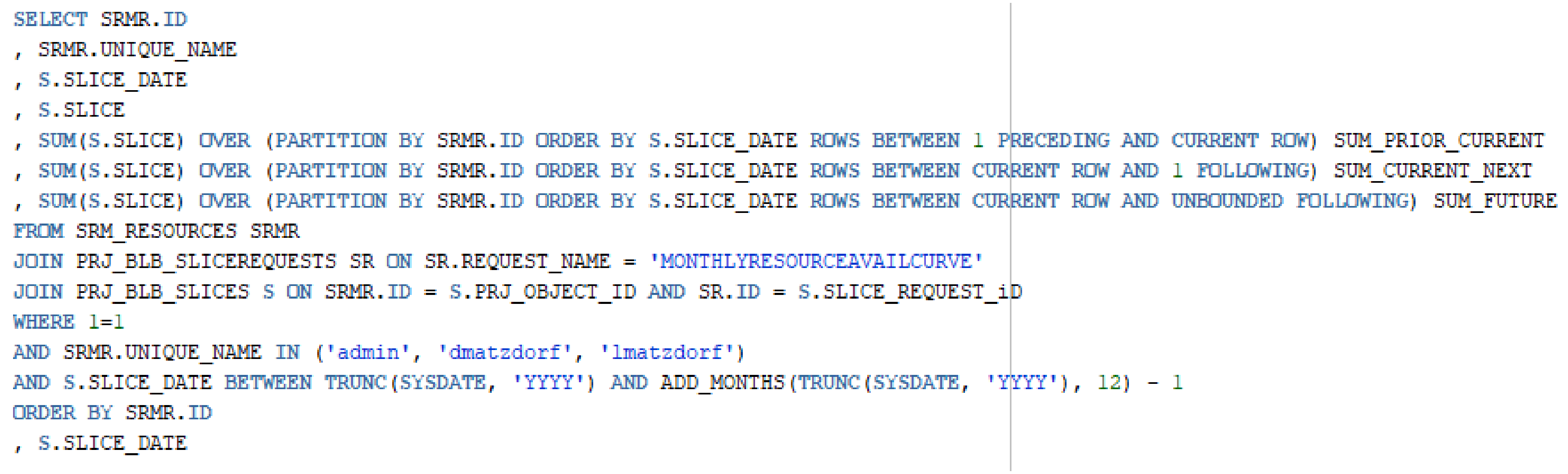
- RANK
  - Leaves gaps in the ranking sequence when ties occur
- DENSE_RANK
  - Does not leave gaps in the ranking sequence when ties occur



```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, S.SLICE_DATE
, S.SLICE
, RANK() OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE) RANK_AVAIL
, DENSE_RANK() OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE) DENSE_RANK_AVAIL
FROM SRM_RESOURCES SRMR
JOIN PRJ_BLB_SLICEREQUESTS SR ON SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
JOIN PRJ_BLB_SLICES S ON SRMR.ID = S.PRJ_OBJECT_ID AND SR.ID = S.SLICE_REQUEST_iD
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
ORDER BY SRMR.ID
, S.SLICE_DATE
```

Window Functions

- Operate on a defined set of rows
  - Current Row
  - Unbounded Preceding
  - Offset Preceding
  - Unbounded Following
  - Offset Following



```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, S.SLICE_DATE
, S.SLICE
, SUM(S.SLICE) OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE_DATE ROWS BETWEEN 1 PRECEDING AND CURRENT ROW) SUM_PRIOR_CURRENT
, SUM(S.SLICE) OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE_DATE ROWS BETWEEN CURRENT ROW AND 1 FOLLOWING) SUM_CURRENT_NEXT
, SUM(S.SLICE) OVER (PARTITION BY SRMR.ID ORDER BY S.SLICE_DATE ROWS BETWEEN CURRENT ROW AND UNBOUNDED FOLLOWING) SUM_FUTURE
FROM SRM_RESOURCES SRMR
JOIN PRJ_BLB_SLICEREQUESTS SR ON SR.REQUEST_NAME = 'MONTHLYRESOURCEAVAILCURVE'
JOIN PRJ_BLB_SLICES S ON SRMR.ID = S.PRJ_OBJECT_ID AND SR.ID = S.SLICE_REQUEST_iD
WHERE 1=1
AND SRMR.UNIQUE_NAME IN ('admin', 'dmatzdorf', 'lmatzdorf')
AND S.SLICE_DATE BETWEEN TRUNC(SYSDATE, 'YYYY') AND ADD_MONTHS(TRUNC(SYSDATE, 'YYYY'), 12) - 1
ORDER BY SRMR.ID
, S.SLICE_DATE
```

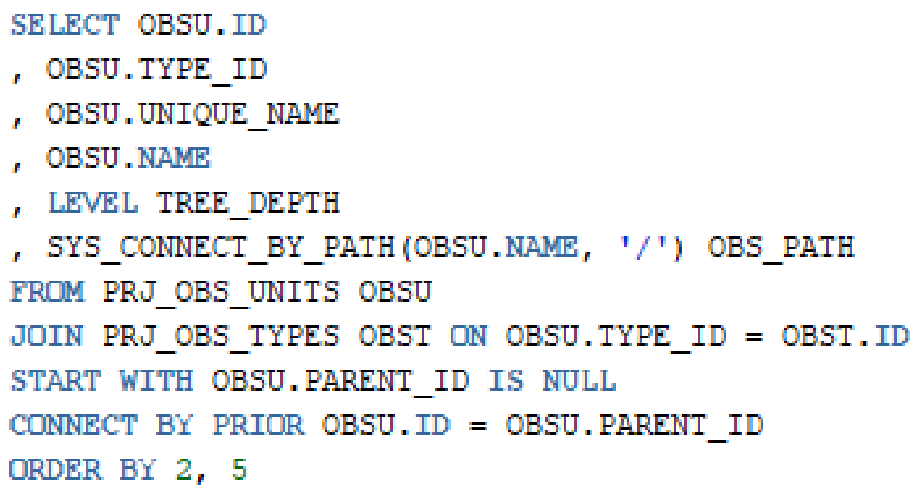
Hierarchical Queries

Hierarchical Queries

- Used to receive data with a parent-child relationship
- Allow results to show levels of data
- Useful for showing
  - OBS Data
  - Calculating the OBS Path
  - Showing reporting structure

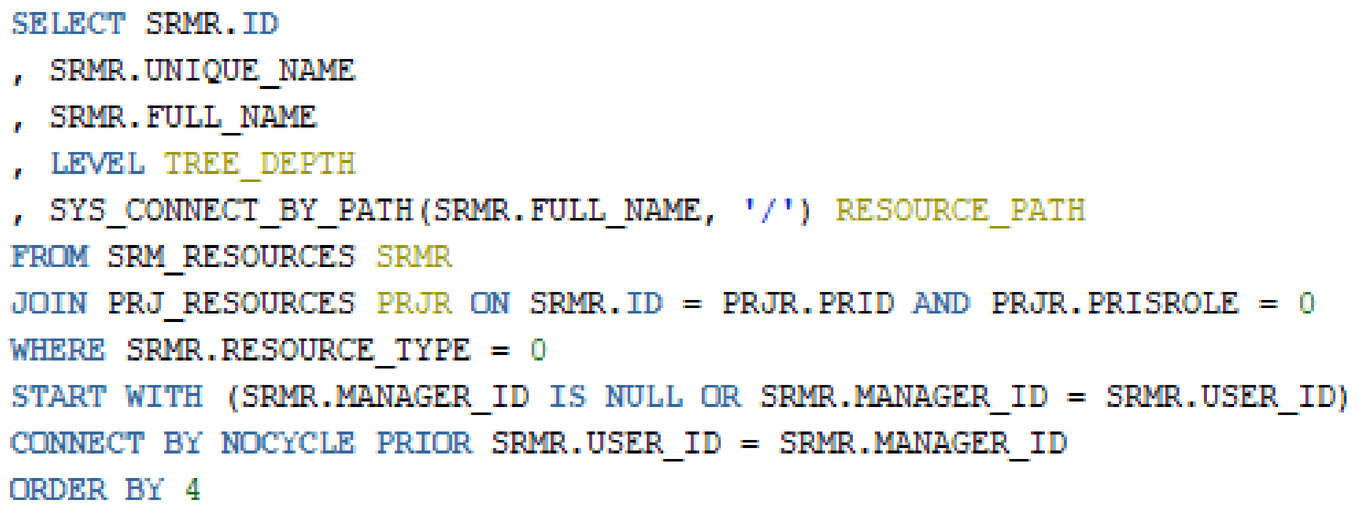
Oracle CONNECT BY

OBS Path



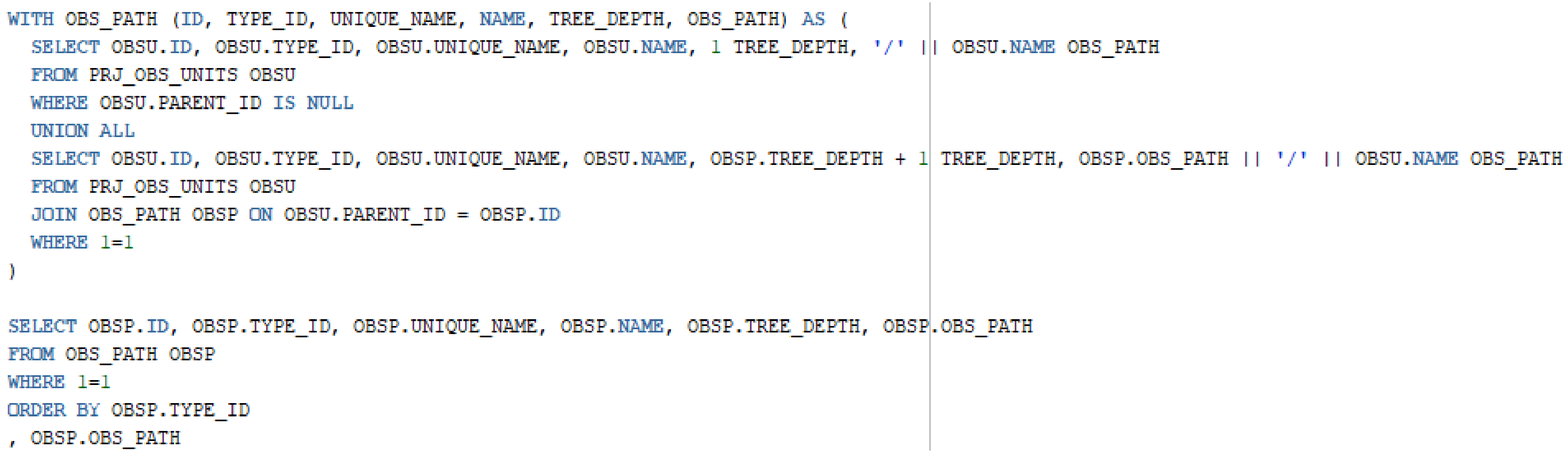
```
SELECT OBSU.ID
, OBSU.TYPE_ID
, OBSU.UNIQUE_NAME
, OBSU.NAME
, LEVEL TREE_DEPTH
, SYS_CONNECT_BY_PATH(OBSU.NAME, '/') OBS_PATH
FROM PRJ_OBS_UNITS OBSU
JOIN PRJ_OBS_TYPES OBST ON OBSU.TYPE_ID = OBST.ID
START WITH OBSU.PARENT_ID IS NULL
CONNECT BY PRIOR OBSU.ID = OBSU.PARENT_ID
ORDER BY 2, 5
```

Resource Reporting Structure



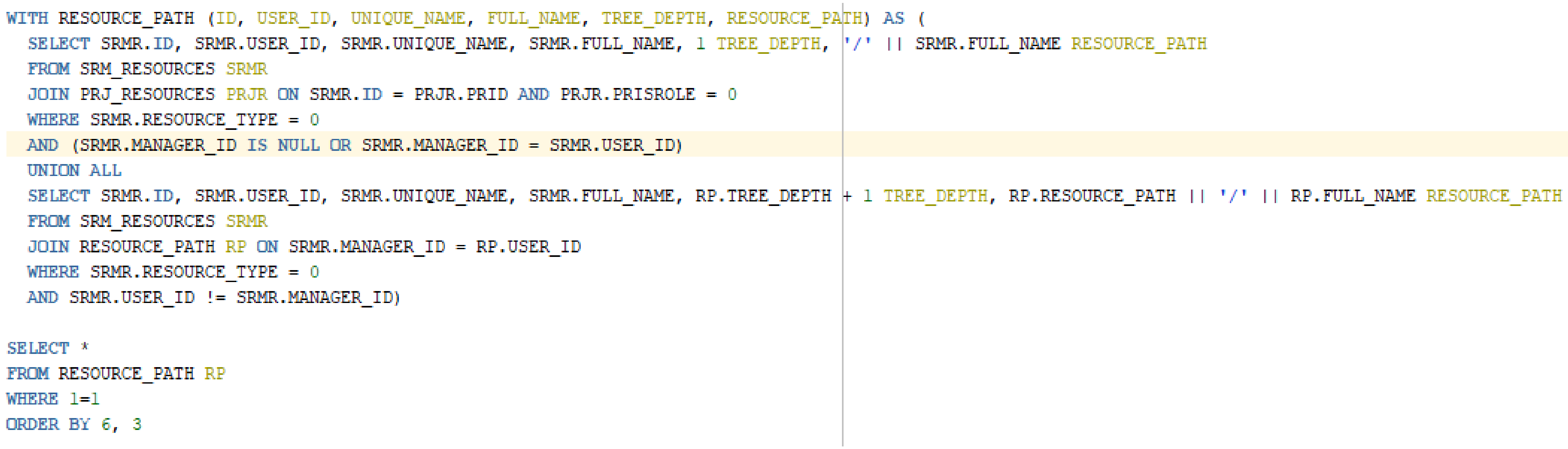
```
SELECT SRMR.ID
, SRMR.UNIQUE_NAME
, SRMR.FULL_NAME
, LEVEL TREE_DEPTH
, SYS_CONNECT_BY_PATH(SRMR.FULL_NAME, '/') RESOURCE_PATH
FROM SRM_RESOURCES SRMR
JOIN PRJ_RESOURCES PRJR ON SRMR.ID = PRJR.PRID AND PRJR.PRISROLE = 0
WHERE SRMR.RESOURCE_TYPE = 0
START WITH (SRMR.MANAGER_ID IS NULL OR SRMR.MANAGER_ID = SRMR.USER_ID)
CONNECT BY NOCYCLE PRIOR SRMR.USER_ID = SRMR.MANAGER_ID
ORDER BY 4
```

Recursive CTE – OBS Path



```
WITH OBS_PATH (ID, TYPE_ID, UNIQUE_NAME, NAME, TREE_DEPTH, OBS_PATH) AS (
  SELECT OBSU.ID, OBSU.TYPE_ID, OBSU.UNIQUE_NAME, OBSU.NAME, 1 TREE_DEPTH, '/' || OBSU.NAME OBS_PATH
  FROM PRJ_OBS_UNITS OBSU
  WHERE OBSU.PARENT_ID IS NULL
  UNION ALL
  SELECT OBSU.ID, OBSU.TYPE_ID, OBSU.UNIQUE_NAME, OBSU.NAME, OBSP.TREE_DEPTH + 1 TREE_DEPTH, OBSP.OBS_PATH || '/' || OBSU.NAME OBS_PATH
  FROM PRJ_OBS_UNITS OBSU
  JOIN OBS_PATH OBSP ON OBSU.PARENT_ID = OBSP.ID
  WHERE 1=1
)

SELECT OBSP.ID, OBSP.TYPE_ID, OBSP.UNIQUE_NAME, OBSP.NAME, OBSP.TREE_DEPTH, OBSP.OBS_PATH
FROM OBS_PATH OBSP
WHERE 1=1
ORDER BY OBSP.TYPE_ID
, OBSP.OBS_PATH
```

Recursive CTE – Resource Reporting Structure



```sql
WITH RESOURCE_PATH (ID, USER_ID, UNIQUE_NAME, FULL_NAME, TREE_DEPTH, RESOURCE_PATH) AS (
  SELECT SRMR.ID, SRMR.USER_ID, SRMR.UNIQUE_NAME, SRMR.FULL_NAME, 1 TREE_DEPTH, '/' || SRMR.FULL_NAME RESOURCE_PATH
  FROM SRM_RESOURCES SRMR
  JOIN PRJ_RESOURCES PRJR ON SRMR.ID = PRJR.PRID AND PRJR.PRISROLE = 0
  WHERE SRMR.RESOURCE_TYPE = 0
  AND (SRMR.MANAGER_ID IS NULL OR SRMR.MANAGER_ID = SRMR.USER_ID)
  UNION ALL
  SELECT SRMR.ID, SRMR.USER_ID, SRMR.UNIQUE_NAME, SRMR.FULL_NAME, RP.TREE_DEPTH + 1 TREE_DEPTH, RP.RESOURCE_PATH || '/' || RP.FULL_NAME RESOURCE_PATH
  FROM SRM_RESOURCES SRMR
  JOIN RESOURCE_PATH RP ON SRMR.MANAGER_ID = RP.USER_ID
  WHERE SRMR.RESOURCE_TYPE = 0
  AND SRMR.USER_ID != SRMR.MANAGER_ID)

SELECT *
FROM RESOURCE_PATH RP
WHERE 1=1
ORDER BY 6, 3
```

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Program

Certification Requirements:

- ✓ **Completion**: 12 units per certification track
- ✓ **Eligibility**: Open to all Rego University attendees

Important Reminder:

To have your certification **credits tracked**, ensure you **complete the class surveys in the app** after each session. This step is critical for certification progress.

Questions?

LAS VEGAS regoUniversity 2025

Surveys

Please take a few moments to fill out the class survey.
Your feedback is extremely important for future events.

Thank You For Attending Rego University

Instructions for PMI credits

- Access your account at pmi.org
- Click on **Certifications**
- Click on **Maintain My Certification**
- Click on **Visit CCR's** button under the **Report PDU's**
- Click on **Report PDU's**
- Click on **Course or Training**
- Class Provider = **Rego Consulting**
- Class Name = **Rego University**
- Course **Description**
- Date Started = **Today's Date**
- Date Completed = **Today's Date**
- Hours Completed = **1 PDU per hour of class time**
- Training classes = **Technical**
- Click on **I agree** and **Submit**

Let us know how we can improve!
Don't forget to fill out the class survey.

Phone
888.813.0444

Email
info@regoconsulting.com

Website
www.regouniversity.com

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