



Module 1

DBMS Extensions and Example Data Warehouses

Lesson 2: Course topics and assignments



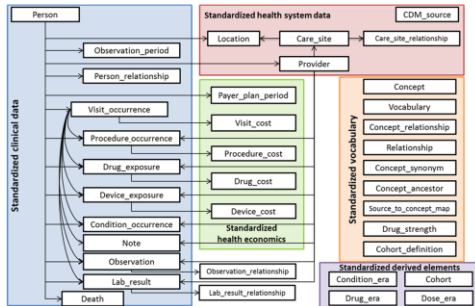
Lesson Objectives

- Understand course topics and flow
- Understand assessments especially practice and graded problems
- Install PostgreSQL or configure Oracle cloud account and install SQL Developer

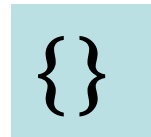
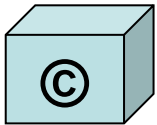


Course Artifacts

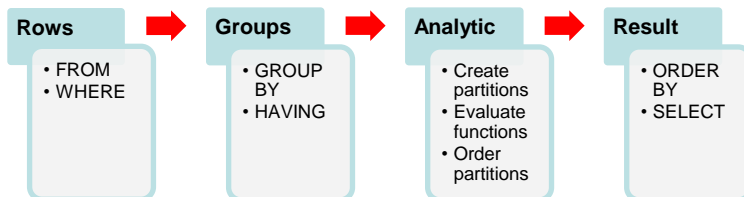
1: Example DWs



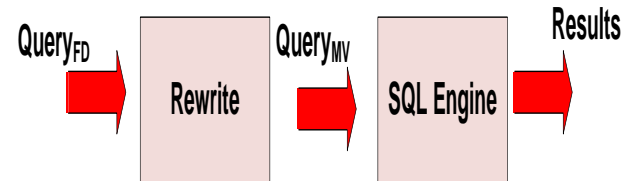
2: SQL Subtotal Operators



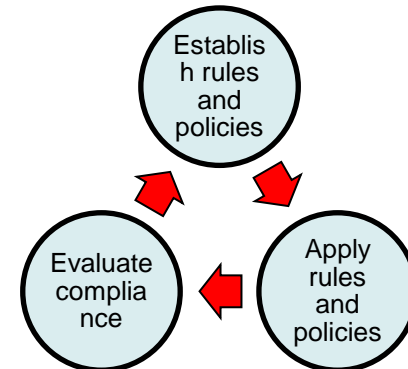
3: SQL Analytic Functions



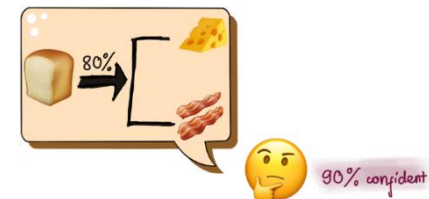
4: Materialized Views



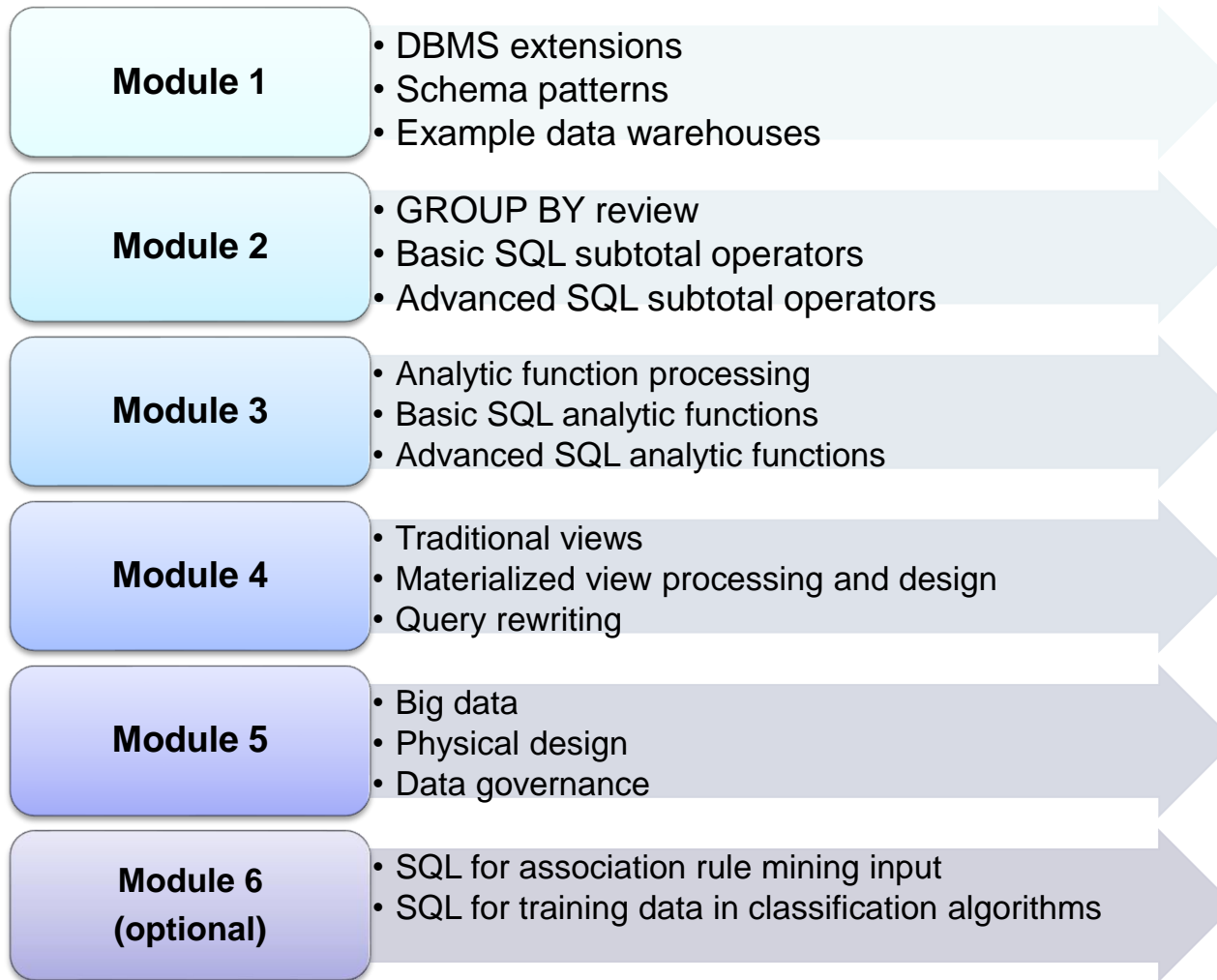
5: Data Governance



6: SQL for Data Mining Input



Course Flow



Assignments

SQL Subtotal Operators

```
SELECT State, Month, SUM(Sales)
...
GROUP BY ROLLUP(State, Month)
```

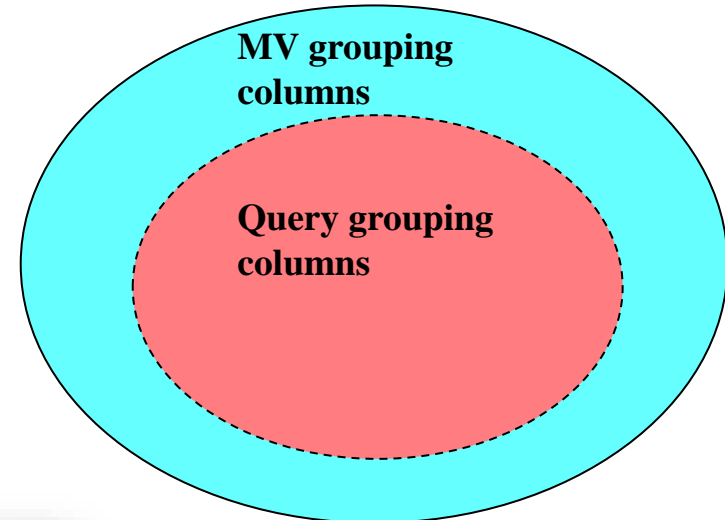
SQL Analytic Functions

```
SELECT CustState, CustName,
       SUM(SalesDollar) AS SumSales,
       RANK() OVER (PARTITION BY CustState
                    ORDER BY SUM(SalesDollar) DESC)
       SalesRank
...
```

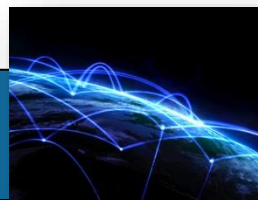
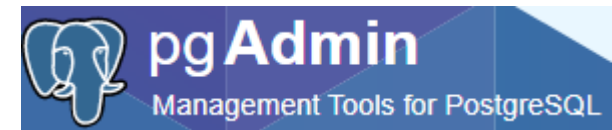
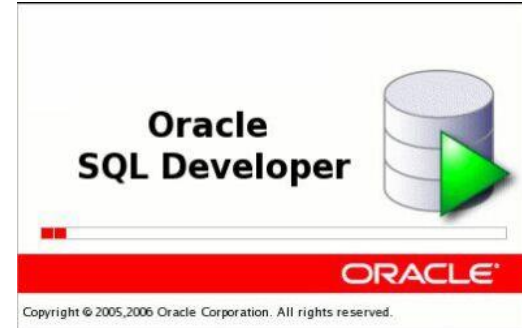
SQL for Data Mining Input

```
SELECT OrdNo, ARRAY_AGG(ProdNo
    ORDER BY ProdNo) AS ProdNoList
FROM OrdLine
GROUP BY OrdNo
HAVING COUNT(*) > 1
ORDER BY OrdNo;
```

Query Rewriting



Tools



Summary

- Unified coverage of relational database support
- Coverage of important data warehouse administration topics
- Assignments for query formulation and materialized view usage
- Use an SQL client to submit statements to an Oracle or PostgreSQL server

