

Managing Applications Common Objects

By Ahmed Baraka

Objectives

By the end of this lecture, you should be able to:

- Describe and create the following objects:
 - Data-linked object
 - Metadata-linked object
 - Extended Data-Linked object
- Create partitions in PDBs using Container Maps



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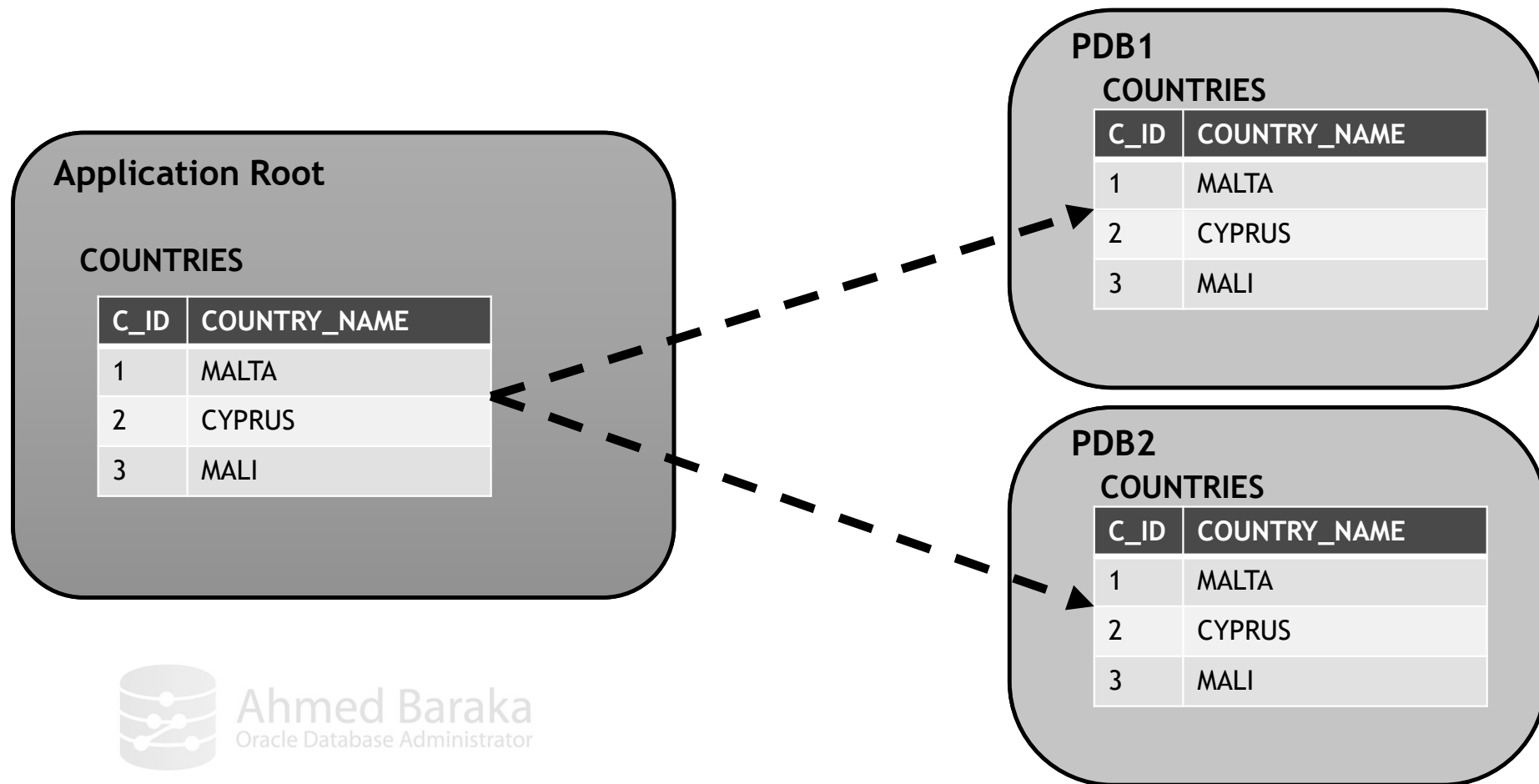
About Application Common Objects

- Your master application definition in the application root:
 - Data-linked objects
 - Metadata-linked objects
 - Extended Data-linked objects

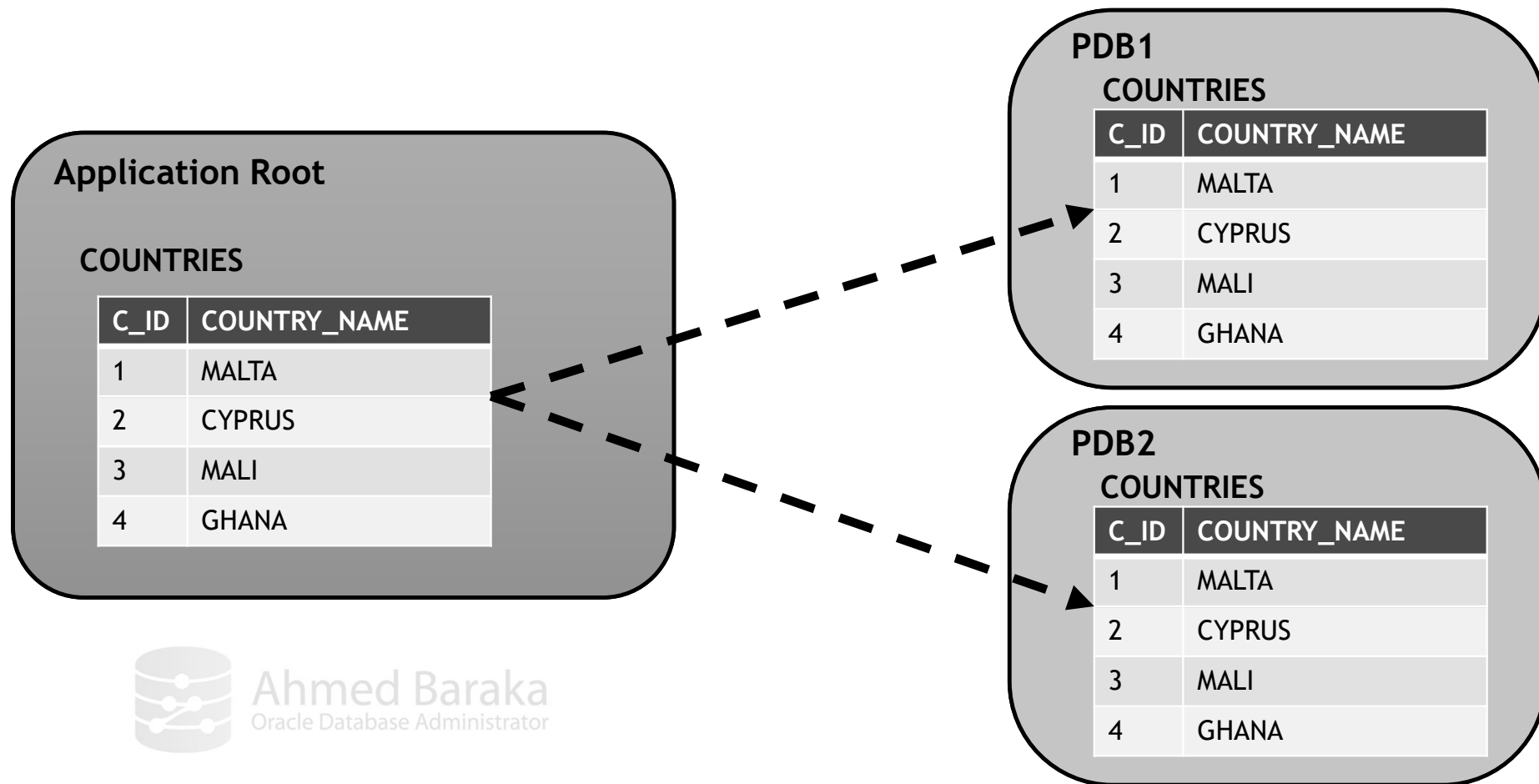


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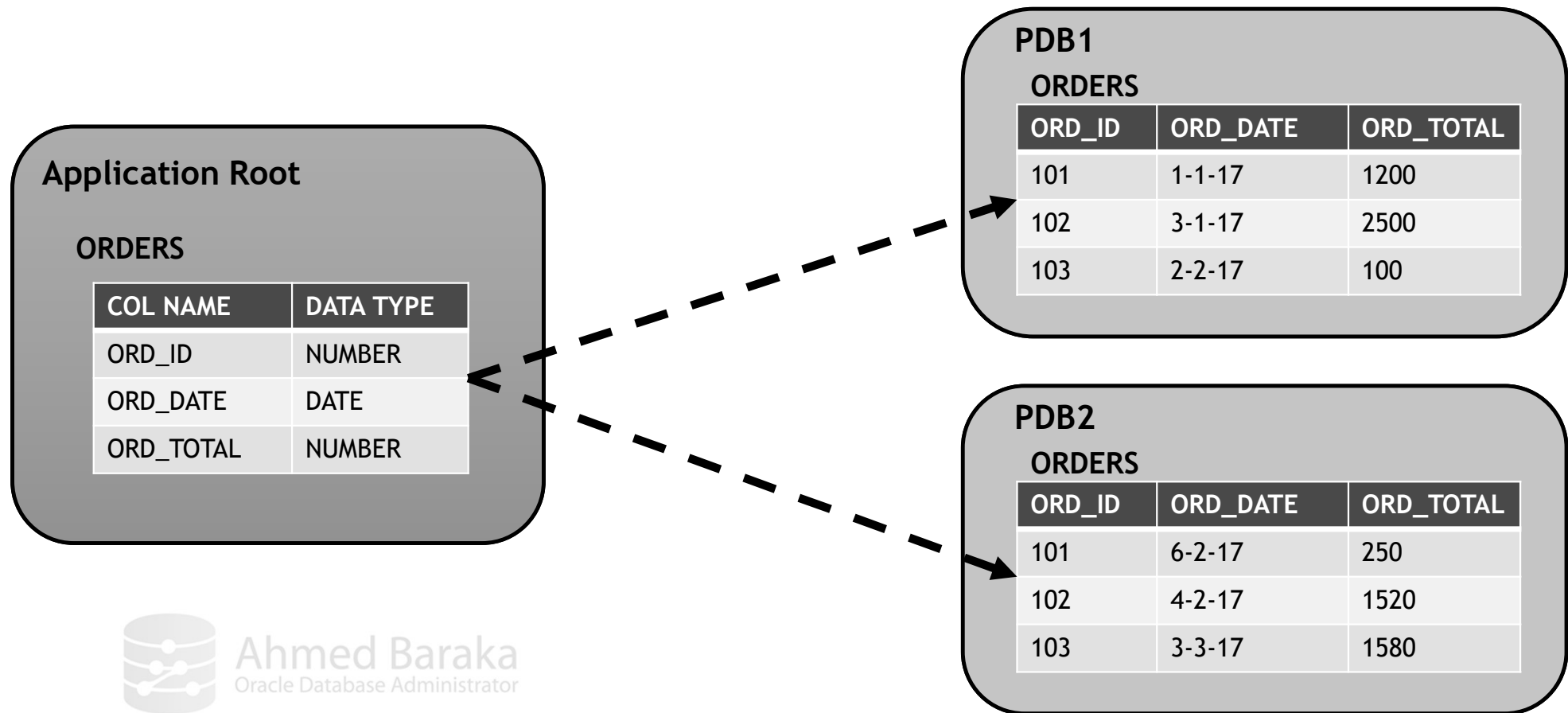
Data-linked Object



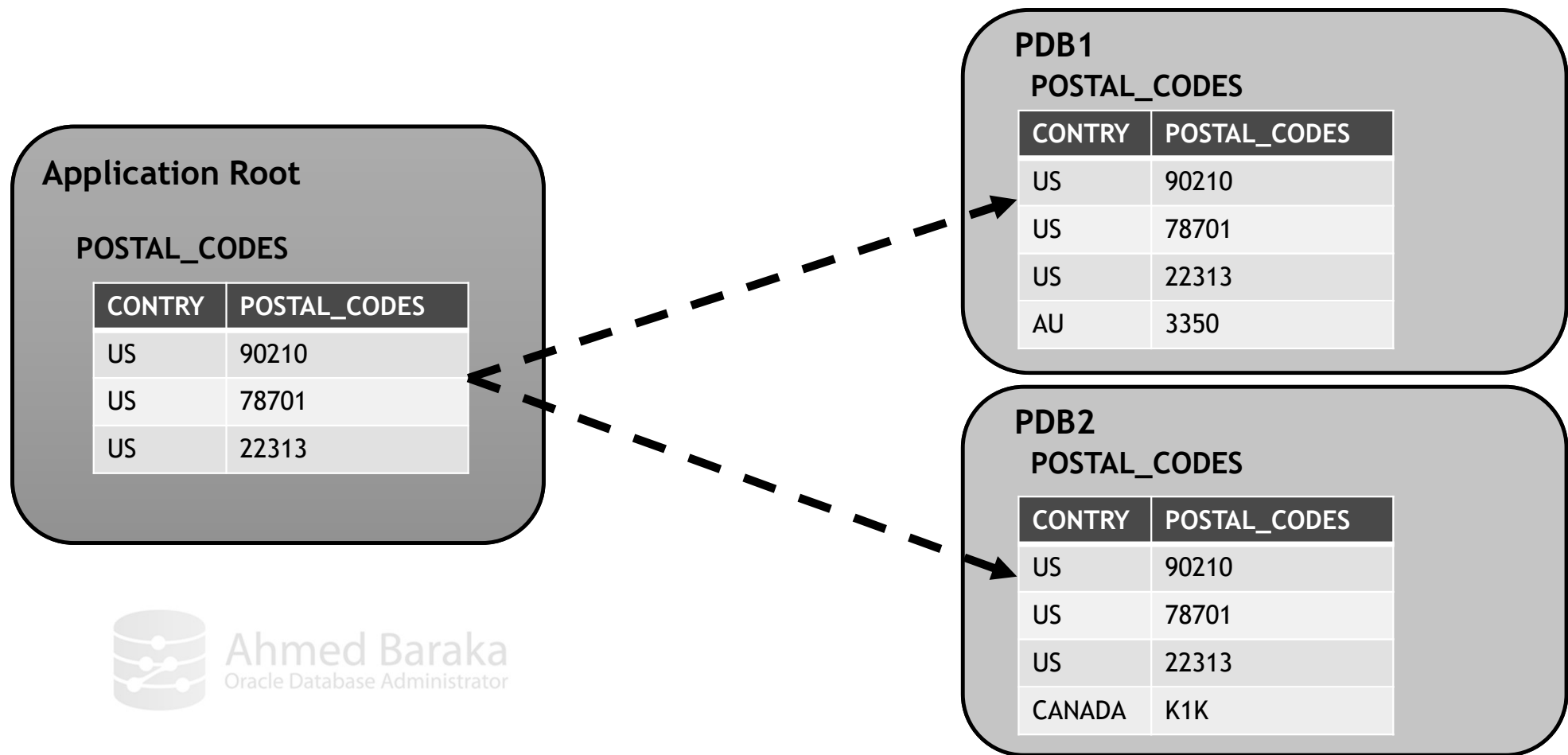
Data-linked Object



Metadata-linked Object



Extended Data-Linked Object



Creating a Data-linked Object Example

```
CREATE TABLE countries_d1t SHARING=DATA  
( COUNTRY_ID NUMBER,  
  COUNTRY_NAME VARCHAR2(20)  
);
```



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Creating a Metadata-linked Object Examples

```
CREATE TABLE sales_adm.orders_mlt SHARING=METADATA
( ORD_ID NUMBER(4),
  ORD_DATE DATE,
  TOTAL NUMBER(7,2),
  NOTES VARCHAR2(200)
);
```



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Creating an Extended Data-Linked Object Example

```
CREATE TABLE pcodes_edt SHARING=EXTENDED DATA
( COUNTRY VARCHAR2(5),
  POSTAL_CODE VARCHAR2(6),
);
```



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Querying an Application Common Object Across All Application PDBs

- From the application root as a common user:

```
SELECT * FROM CONTAINERS(sales.orders);
```

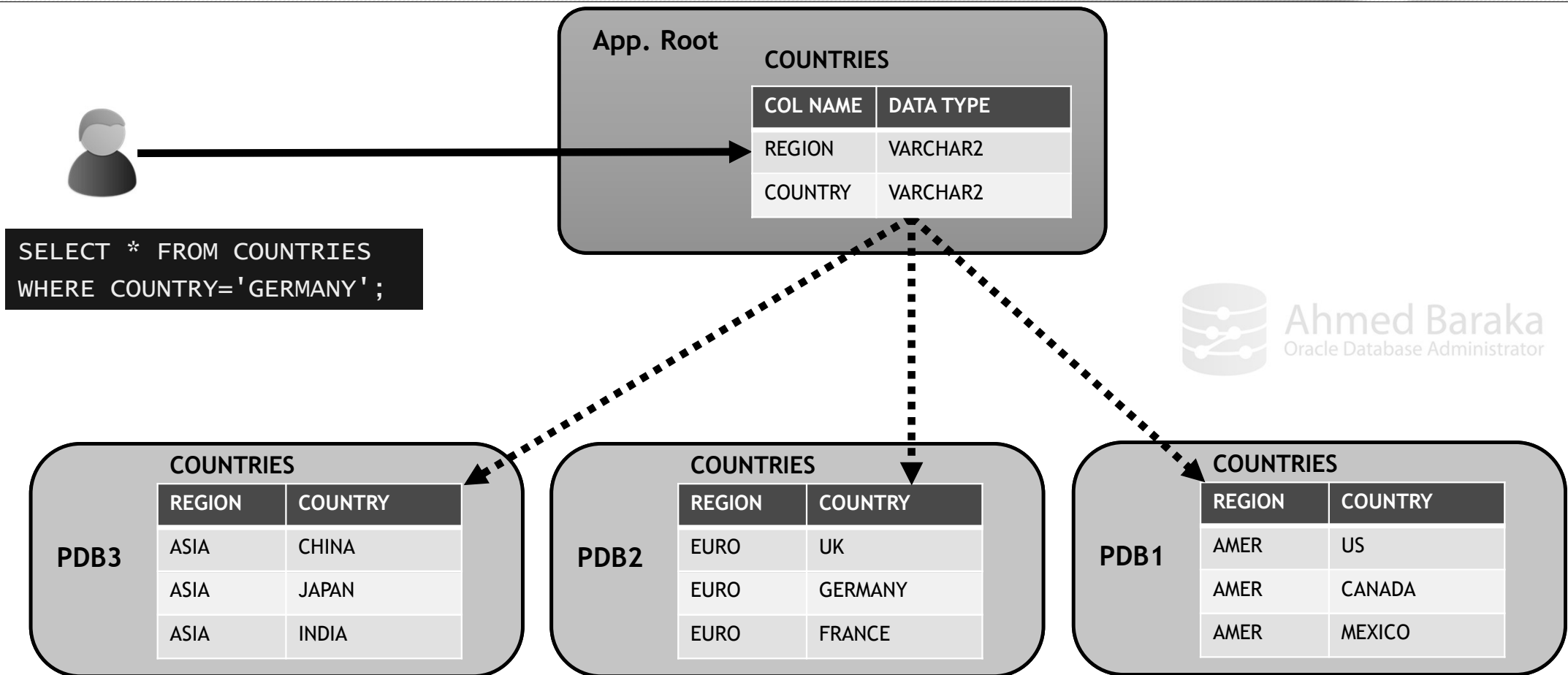
- To make the CONTAINERS clause the default:

```
ALTER TABLE sales.orders ENABLE CONTAINERS_DEFAULT;
```

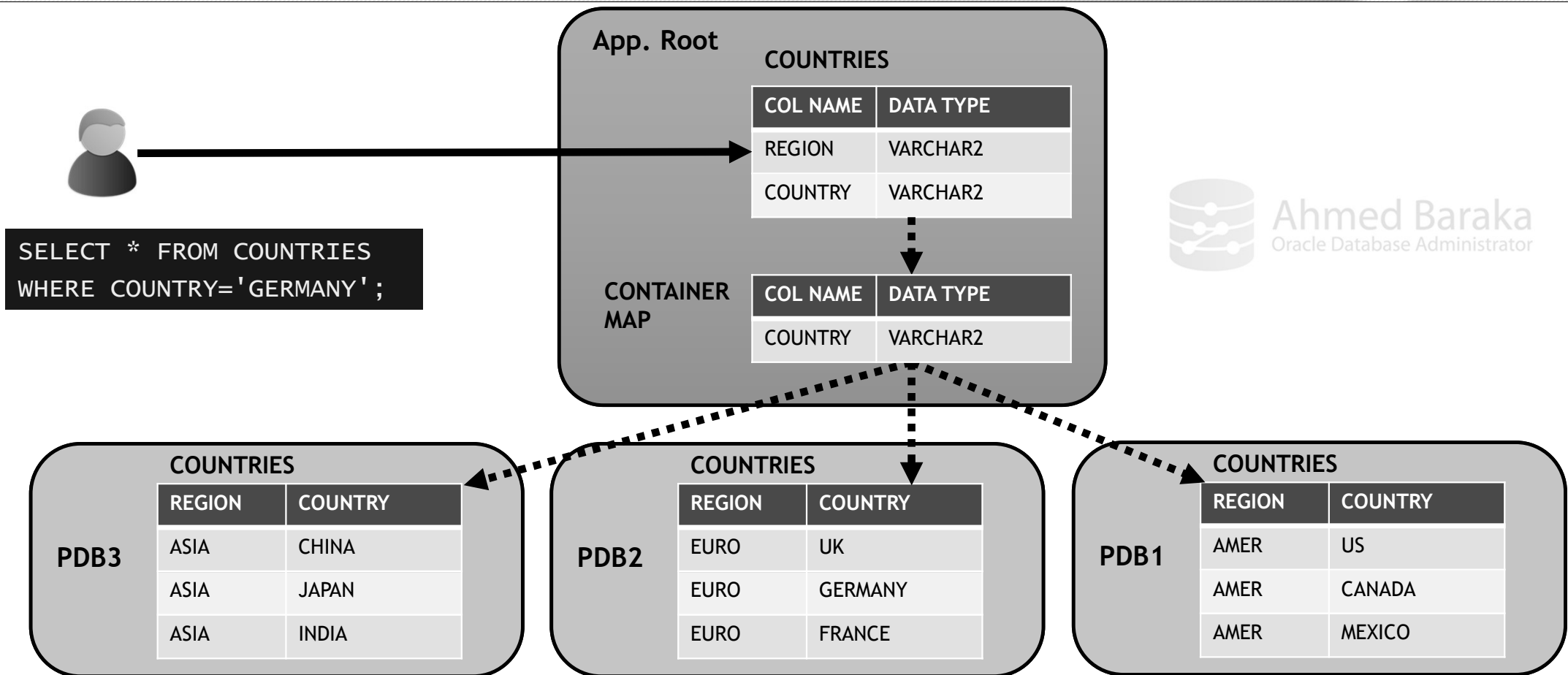


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Partitioning by PDB using Container Maps



Partitioning by PDB using Container Maps



About Container Maps

- Routes a query connected to the root to the appropriate PDB(s)
- Container Map components:
 - Metadata-linked table: the table to be queried
 - Map table: a single-column map table partitioned by list, hash, or range
 - Container Map: a PDB property that specifies a map table



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Creating Container Maps Example

1. Create the metadata-linked table:

```
CREATE TABLE countries_mlt SHARING=METADATA (  
  region VARCHAR2(30),  
  country VARCHAR2(30));
```

2. Create the partitioned map table (list, hash, or range):

```
CREATE TABLE pdb_map_tbl (country VARCHAR2(30) NOT NULL)  
  PARTITION BY LIST (country) (  
    PARTITION pdb1 VALUES ('US', 'MEXICO', 'CANADA'),  
    PARTITION pdb2 VALUES ('UK', 'FRANCE', 'GERMANY'),  
    PARTITION pdb3 VALUES ('INDIA', 'CHINA', 'JAPAN'));
```

Creating Container Maps Example (cont)

3. Set the CONTAINER_MAP database property:

```
ALTER PLUGGABLE DATABASE SET  
CONTAINER_MAP='salesadm.pdb_map_tbl';
```

4. Enable the container map for the metadata-linked table to be queried:

```
ALTER TABLE countries_m1t ENABLE CONTAINER_MAP;
```

5. Ensure that the table to be queried is enabled for the CONTAINERS clause:

```
ALTER TABLE countries_m1t ENABLE CONTAINERS_DEFAULT;
```



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Obtain Information about Common Objects

| View | Notes |
|-------------|--|
| DBA_OBJECTS | To view all the common objects in the current container, use the condition: SHARING != 'NONE' |
| DBA_TABLES | To view the Extended Data-Linked tables, use the condition: EXTENDED_DATA_LINK='YES' ; |



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Summary

In this lecture, you should have learnt how to:

- Describe and create the following objects:
 - data-linked object
 - Metadata-linked object
 - Extended Data-Linked object
- Create partitions in PDBs using Container Maps



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