Module 3: Working with Cubes and Dimensions

Overview

- Configuring Dimensions
- Defining Attribute Hierarchies
- Sorting and Grouping Attributes

Lesson 1: Configuring Dimensions

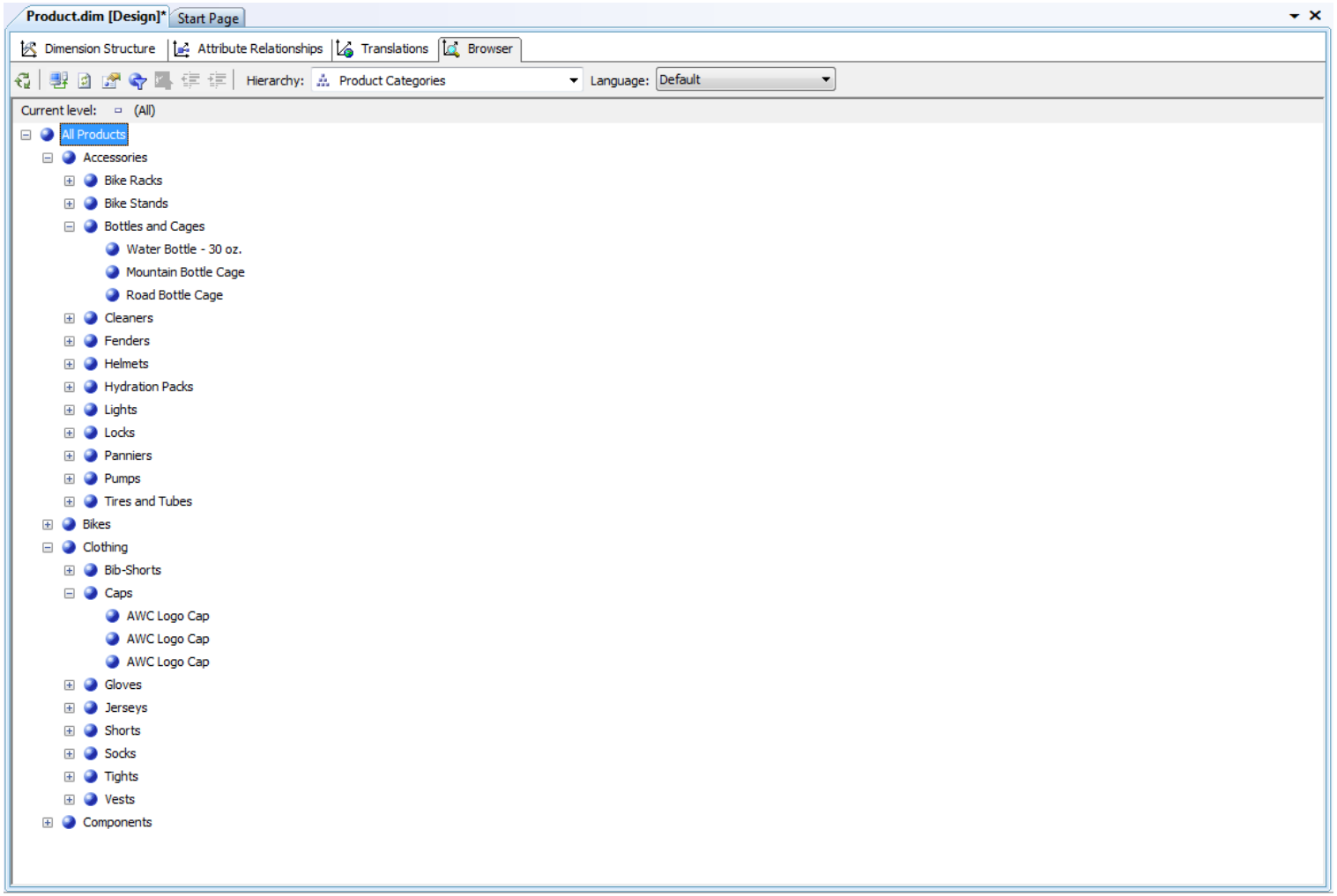
- Dimension Concepts
- The Dimension Designer
- Configuring Dimension Storage
- Configuring Dimension Attributes
- Attribute Column Bindings

Dimension Concepts

Dimensions:

- **Are collections of attributes from tables or views**
- **Are used to add meaning to fact tables**
- **Have Key attributes that connect to the fact table**
- **Are typically arranged into hierarchies**
- **Are categories on which we can drill down**

The Dimension Designer

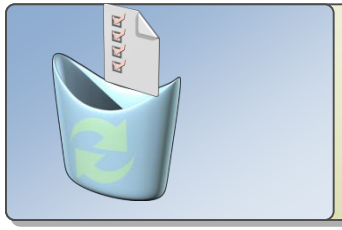


Configuring Dimension Storage

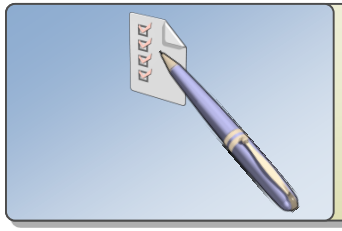
MOLAP	**Multi-dimensional storage provides faster query results**
ROLAP	**Relational storage allows storage of very large dimensions**

To configure Dimension Storage, use the Properties pane of Dimension Designer

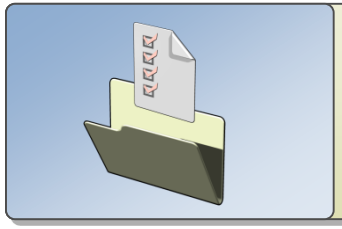
Configuring Dimension Attributes



Remove attributes



Rename attributes



Place attributes in folders

Attribute Column Bindings

Key Column	**The Key column connects to the fact table**
Name Column	**The Name column provides the value that a user will see**
Value Column	**The Value column can be accessed by MDX calculations**

Demonstration: Designing Dimensions

In this demonstration, you will see how to:

- Modify dimension attributes
- Modify attribute hierarchies

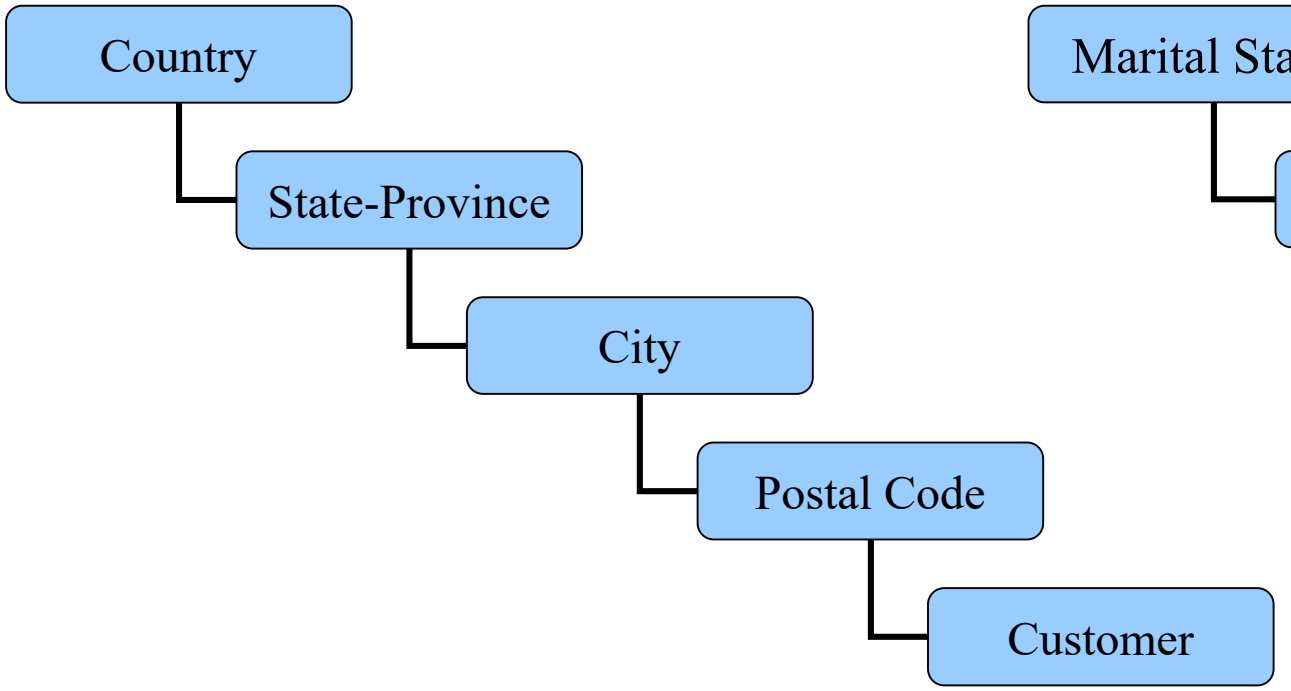
Lesson 2: Defining Attribute Hierarchies

- Introducing Hierarchies
- Parent-Child Hierarchies
- Ragged Hierarchies
- Using Hierarchies

Introducing Hierarchies

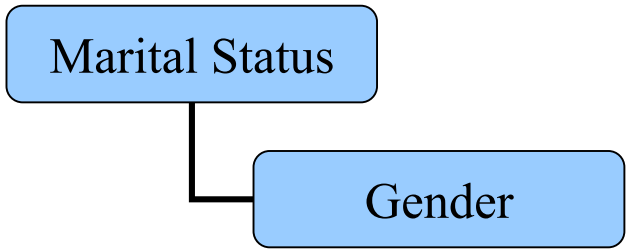
Customer Geography

Balanced Hierarchy

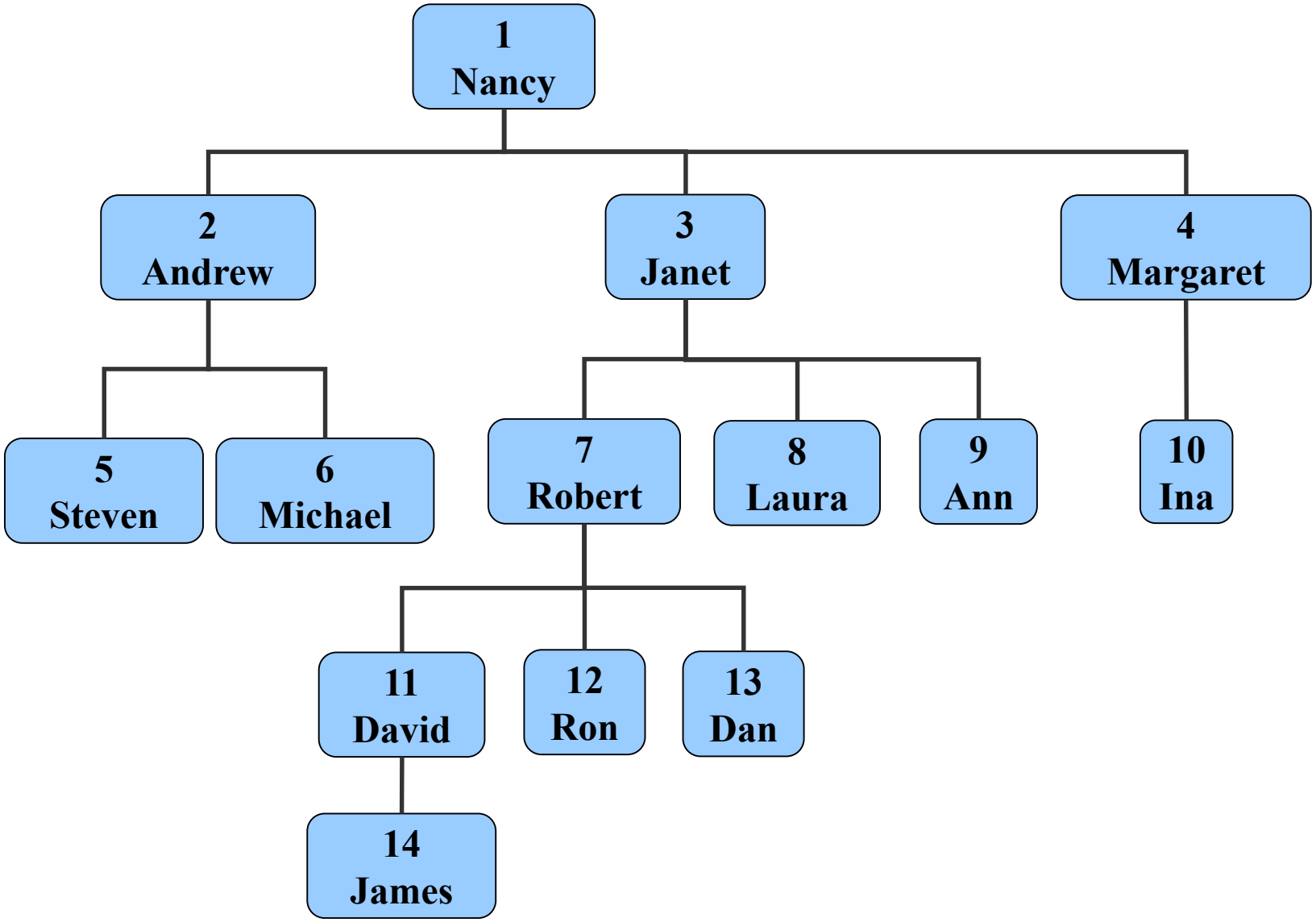


Marital Status-Gender

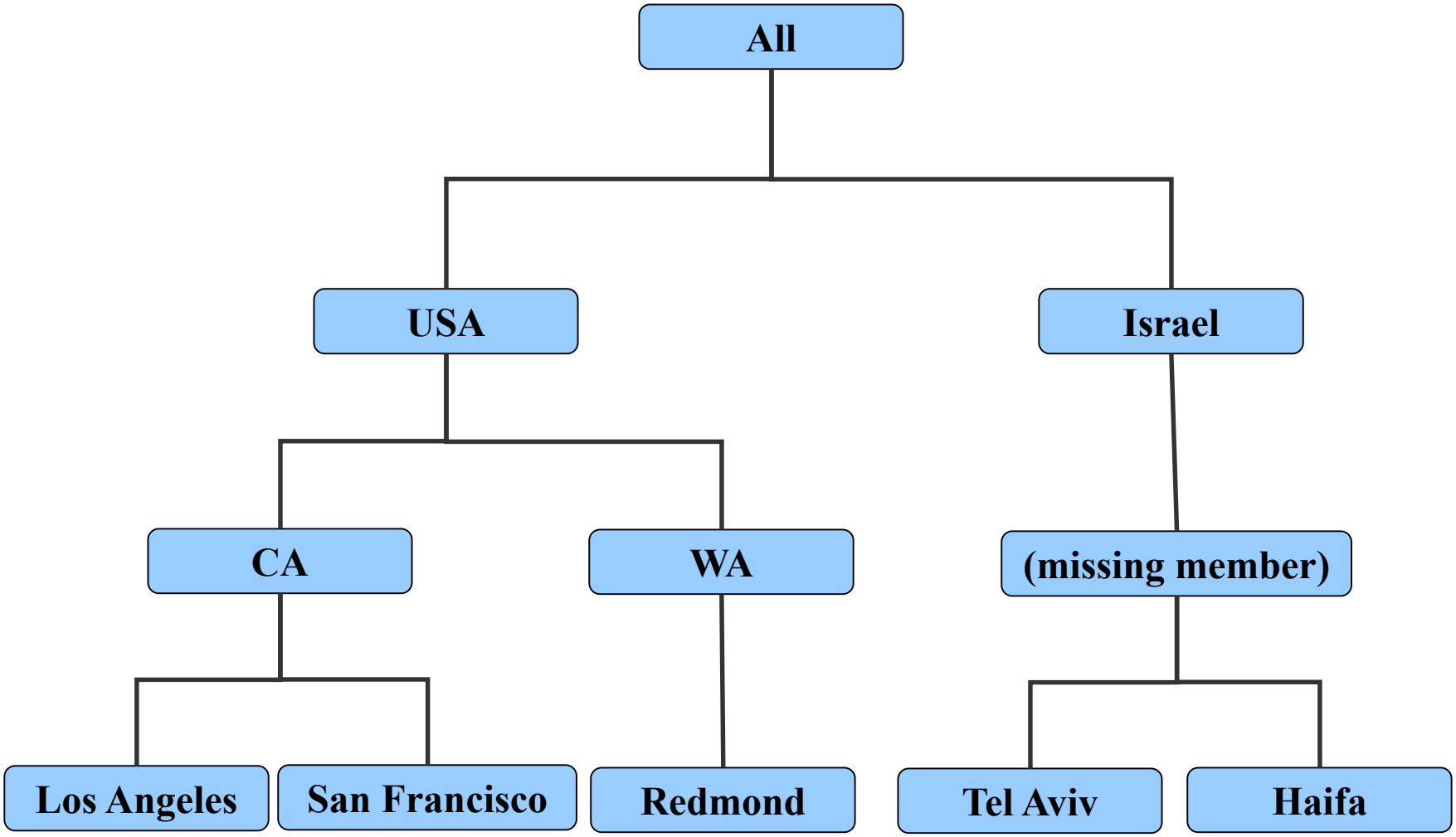
Unbalanced Hierarchy



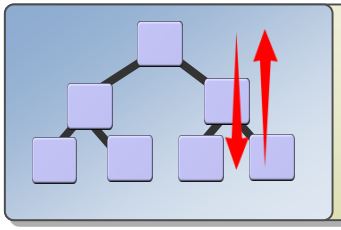
Parent-Child Hierarchies



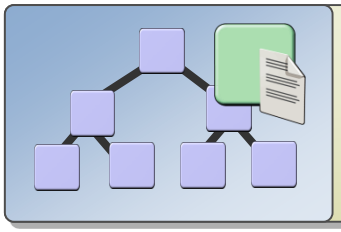
Ragged Hierarchies



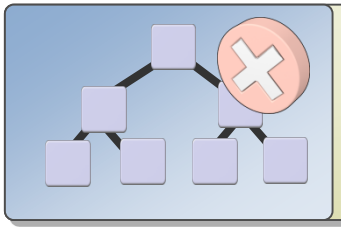
Using Hierarchies



Drilling-up and drilling-down



Setting hierarchy properties



Hiding and disabling hierarchies

Demonstration: Creating and Using Hierarchies

In this demonstration, you will see how to:

- Modify a natural hierarchy
- Modify a parent-child hierarchy
- Create a non-natural hierarchy

Lesson 3: Sorting and Grouping Attributes

- Sorting Attributes
- Grouping Attributes

Sorting Attributes

Name	**Sorts by Name attribute**
Key	**Sorts by Key attribute(s)**
Secondary Attribute	**Sorts by any chosen attribute**

Grouping Attributes

- Check the DiscretizationMethod property
- Check the DiscretizationBucketCount property
- Check the naming template

Demonstration: Using Sorting and Grouping

In this demonstration, you will see how to:

- Sort dimension attributes
- Group dimension attributes

Defining Dimensions

- Exercise 1: Configuring Dimensions
- Exercise 2: Defining Relationships and Hierarchies
- Exercise 3: Sorting and Grouping Dimension Attributes

Logon information

Virtual machine	NY-SQL-01
User name	Administrator
Password	Pa$$w0rd

Estimated time: 90 minutes

Lab Scenario

- You have been modifying a simple cube that was designed to demonstrate the benefits of Analysis Services to your company, but since then several junior database developers have received daily database inclusion requests and so the complexity of the cube has greatly increased. The senior database developer has asked that you create several dimensions, dimension relationships, and attribute hierarchies to improve cube usability and user productivity.

Lab Review

- After modifying dimensions, what do you need to do in order to view updated cube data?
- What attribute property can be used to prevent the attribute from participating in hierarchies?
- What attribute properties control grouping?

Module Review and Takeaways

- Review Questions
- Best Practices