Lesson 6

Association

By the end of this lesson you will learn:

- Introduction to Association

Introduction to Association

An association is a relationship between two classes that a denotes a connection between those classes. An association implies a peer-to-peer relationship between the classes that participate in the association. If you have two classes, class A and class B, and there is an association between class A and class B, then class A and class B are linked together at the same level of importance. They may each depend on the other and the link between them will be navigable in one, or perhaps two, directions.

Association can be **one-to-one**, **one-to-many**, **many-to-one**, **many-to-many**.

one-to-one: A person can have only one passport. That is a one-to-one association.

See the below code snippet to understand one-to-one association.

```
class Person {
    String name;
    Passport passport;
}

class Passport {
    String id;
}
```

one-to-many: If we talk about the association between a Bank and Employee, a bank can have many employees, so it is a one-to-many relationship.

See the below code snippet to understand one-to-many association.

```java
class Bank {
    String name;
    Employee[] employees;
}

class Employee {
    String id;
}
```

From the above code snippet, we understand that Bank can have many employees.

Exercise

1. Write a Java program to represent the following relationship
   a. A state has many cities
   b. A customer has an address