

FIGURE 10.4 This UML diagram shows that a student may take any number of courses, a faculty member may teach at most three courses, a course may have from five to sixty students, and a course is taught by only one faculty member.

```

public class Student {
    private Course[]
        courseList;

    public void addCourse(
        Course s) { ... }
}
  
```

```

public class Course {
    private Student[]
        classList;
    private Faculty faculty;

    public void addStudent(
        Student s) { ... }

    public void setFaculty(
        Faculty faculty) { ... }
}
  
```

```

public class Faculty {
    private Course[]
        courseList;

    public void addCourse(
        Course c) { ... }
}
  
```

วิชา

- ชื่อ
- จำนวนรับ
- ผู้สอน
- น.ศ.
- อื่นๆ

น.ศ.

- ชื่อ
- ที่อยู่
- วิชาที่เรียน
- อื่นๆ

FIGURE 10.5 The association relations are implemented using data fields and methods in classes.

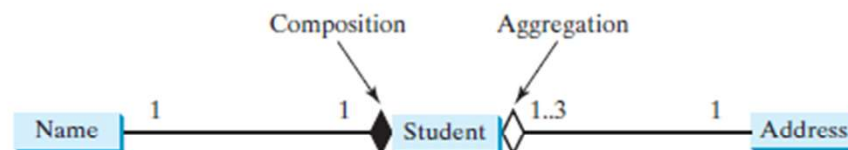


FIGURE 10.6 Each student has a name and an address.

```

public class Name {
    ...
}
  
```

```

public class Student {
    private Name name;
    private Address address;
    ...
}
  
```

```

public class Address {
    ...
}
  
```

Aggregated class

Aggregating class

Aggregated class

อาจารย์ผู้สอน

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- อื่นๆ

FIGURE 10.7 The composition relations are implemented using data fields in classes.