

Previous session : HAS-A relationship
(1:1,1:M)

Today session : HAS-A relationship(M:1,M:M)
Association
a. Composition
b. Aggregation

Many to one Association

It refers to relationship b/w entites, where mulitple instance of one entity should be mapped to one instance of another entity.

eg: Multiple student have joined with single branch

```
public class Branch{  
    private String bid;  
    private String bloc;  
}
```

```
public class Student {  
    private Integer sid;  
    private String sname;  
    private Integer age;
```

```
//HAS-A  
    private Branch branch;  
}
```

Many to Many Association

It refers to relationship b/w entites, where mulitple instance of one entity should be mapped to Multiple instance of another entity.

eg: Many students have taken Many courses

```
public class Course{//Many  
    private Integer cid;  
    private String cname;  
    private Integer cost;  
  
}
```

```
public class Student{//Many  
    private Integer sid;  
    private String sname;
```

```
//HAS-A  
    private Course[] course;  
}
```

refer: Many-Many-Association(Constructor Injection)
Many-One-Association(Constructor Injection)

refer: Many-To-Many.png

Many-To-One.png

Association

- a. Composition
- b. Aggregation

What is the difference b/w Composition and Aggregation?

Aggregation => In case of Aggregation, even if the contained object does not exist still the Container object can be reused.

Composition => In case of Composition, if the contained object does not exist then container Object can't be reused.

eg: Relationship b/w library and student => Aggregation

Relationship b/w library and books => Composition

Relationship b/w Department and Professor => Aggregation

Relationship b/w University and Department => Composition

Relationship b/w Human and Heart => Composition

Relationship b/w Mobile and charger => Aggregation

refer: Composition vs Aggregation.png