

University with Faculties and Departments (Composition and Aggregation)

Class: Faculty

- Attributes:

- Name : string
- FacultyID : string

- Methods:

- AssignToDepartment(department : Department)
- DisplayInfo()

Class: Department

- Attributes:

- Name : string
- FacultyList : List<Faculty>

- Methods:

- AddFaculty(faculty : Faculty)
- RemoveFaculty(faculty : Faculty)

Class: University

- Attributes:

- Name : string
- Departments : List<Department> // Composition

- Methods:

- AddDepartment(dep : Department)
- RemoveDepartment(dep : Department)
- DisplayDepartments()

Relationships:

- Composition: University contains Departments (Departments cannot exist without University)
- Aggregation: Department contains Faculties (Faculty can exist independently)