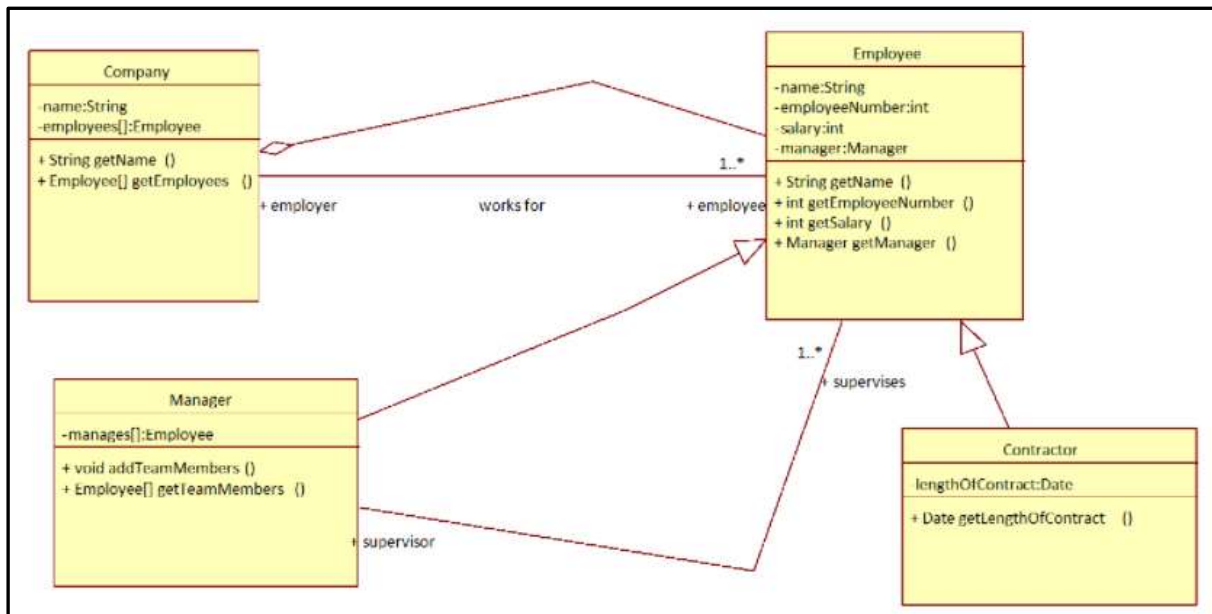


## Assignment 3

- 1) Design and implement applications using basic OOP paradigms. Analyse following class diagram and answer below questions.
- Identify the classes
  - Identify the relationships between each class.
  - Identify the attributes and methods



**Answer:**

**Classes:**

- Company
- Employee
- Manager
- Contractor

**Identify the relationships between each class.**

- Employee works for a Company: *N:1 Relation*.
- Manager Supervises an Employee *1: N Relation*.
- Employees who come on the bases of contractor *1:1 Relation*.

**Identify the attributes and methods:**

**A) Company:**

- Attributes:
  - String* CompanyName.
  - ArrayList* EmployeeDetails

## 2. Methods:

- a. `getName() : String`
- b. `getEmployees(): ArrayList`

### **B) Employee:**

- 1) Attributes:
  - a) *String* Name
  - b) *int* EmployeeID
  - c) *int* salary
  - d) *Manager* manager
- 2) Methods:
  - a) `getName(): String`
  - b) `getEmployeeNumber(): int`
  - c) `getSalary(): int`
  - d) `getManager(): Manager`

### **C) Manager:**

- 1) Attributes:
  - a. *ArrayList* Employee
- 2) Methods:
  - a. `addTeamMembers(): void`
  - b. `getTeamMembers(): ArrayList`

### **D) Contractor:**

- 1) Attribute:
  - a. *Date* lengthOfcontract
- 2) Methods:
  - a. `getLengthOfContract(): Date`