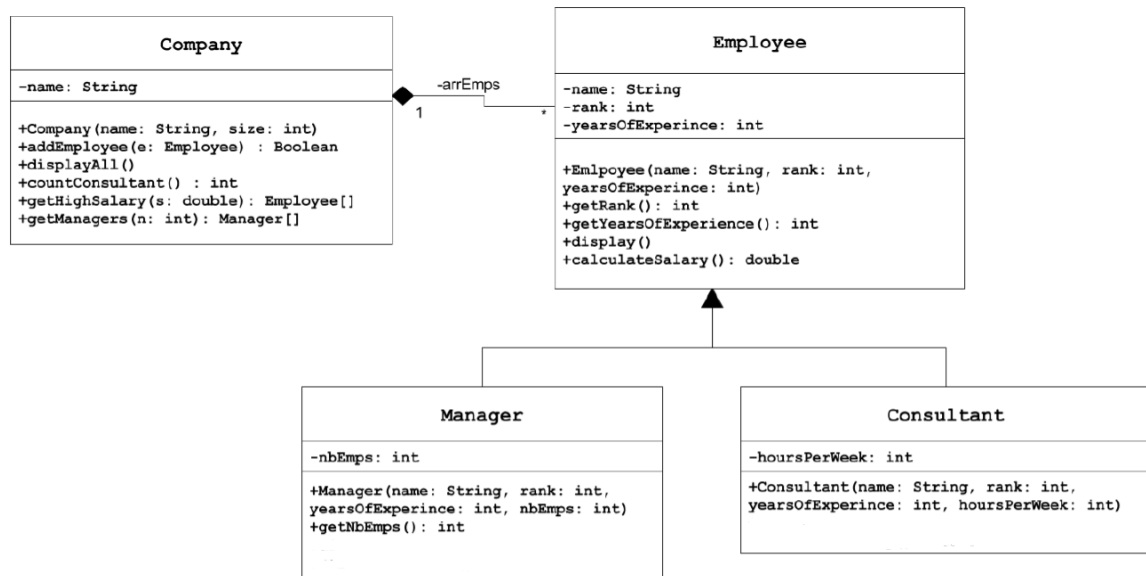




King Saud University
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CSC 113: Java Programming-II



Tutorial: Polymorphism



Employee class:

Attributes:

- **name:** the name of the employee.
- **rank:** rank in the company structure (1-15).
- **yearsOfExperience:** number of years of experience for the employee.

Methods:

- **Employee (name: String, rank: int, yearsOfExperience: int):** constructor
- **getRank():** this method returns the rank of employee.
- **getYearsOfExperience ():** returns the years of experience of the employee.
- **display():** this method display all the attributes of the **employee or consultant or manager**
- **calculateSalary():** this method calculates and return the Salary of the employee as the following:
 - Employee: years of experience * 500 + rank * 1000
 - Manager: years of experience * 500 + rank * 1500 + nbOfEmps * 10
 - Consultant: hoursPerWeek * 1000 + rank *500



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Tutorial: Polymorphism

Manager class:

Attributes:

- *nbEmps*: number of employees managed.

Methods:

- *Manager (name: String, rank: int, yearsOfExperience: int, nbEmps: int)*: constructor
- *getNbEmps()*: this method returns the rank of employee.

Consultant class:

Attributes:

- *hoursPerWeek*: number of hours per week.

Methods:

- *Consultant(name: String, rank: int, yearsOfExperience: int, hoursPerWeek: int)*: constructor

Company class:

Attributes:

- *name*: the name of the company.

Methods:

- *Company (name: String, size: int)*: constructor
- *addEmployee(Employee e)*: this method adds an employee to the company. An employee can be of type Employee, type Manager or type Consultant.
- *displayAll ()*: Display all employees and their attributes along with their salary.
- *countConsultant()*: this method returns the number of all Consultants in the company
- *getHighSalary(double s)*: this method returns an array all employees with salary greater than s.
- *getManagers (int n)*: returns an array of all managers with nbEmps greater than n.