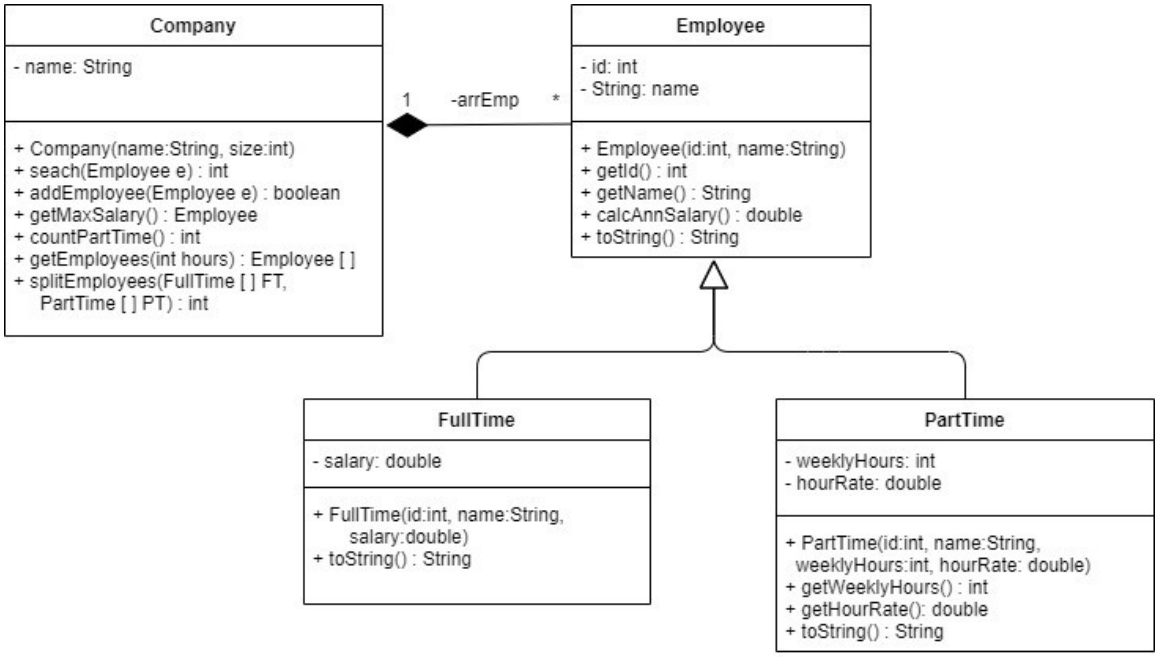
King Saud University
College of Computer and Information Sciences
Department of Computer Science
CSC113 – Computer Programming II – Tutorial: Polymorphism – Spring 2020



Employee class:
Attributes:

- id: employee's id
- name: the name of the employee

Methods:

- Employee(id:int, name:String): constructor
- **Getters**
- calcAnnSalary(): Employee annual salary is calculated as follows:
  - **FullTime**:
    - Salary = *salary* * 12
  - **PartTime**:
    - Salary = *weeklyHours* * *hourRate* * 4 * 12
- toString(): returns the Employee info in the following format: " *id* : *name* "

FullTime class:
Attributes:

- Salary: the monthly salary of the employee

Methods:

- FullTime(id:int, name:String, salary:double): constructor
- toString(): returns the object info in the following format: " *id* : *name* : *salary*"

PartTime class:
Attributes:

- weeklyHours: the weekly hours of the part time employee
- hourRate: how much the part time employee gets paid per hour

Methods:

- PartTime(id:int, name:String, weeklyHour:int, hourRate:double): constructor
- **Getters**
- toString(): returns the Employee info in the following format: "*id* : *name* : *weeklyHours* : *hourRate*"

Company class:

Attributes:

- name: the name of the company

Methods:

- Company(name:String, size:int): constructor
- search(Employee e): returns the index of the Employee with the same id as *e*, or returns -1 if not found
- addEmployee(Employee e): add the employee *e* if it's not already added and return true. Thie method returns false if the employee is already added or the array is full
- getMaxSalary(): returns the employee with the highest annual salary
- countPartTime(): returns the number of part time employees in the company
- getEmployees(int hours): returns an array of employees who are part time, and their weekly hours are more than *hours*
- splitEmployees(FullTime [ ] FT, PartTime [ ] PT): add all full time employees into the array FT, all part time employees into the array PT, and return the number of part time employees