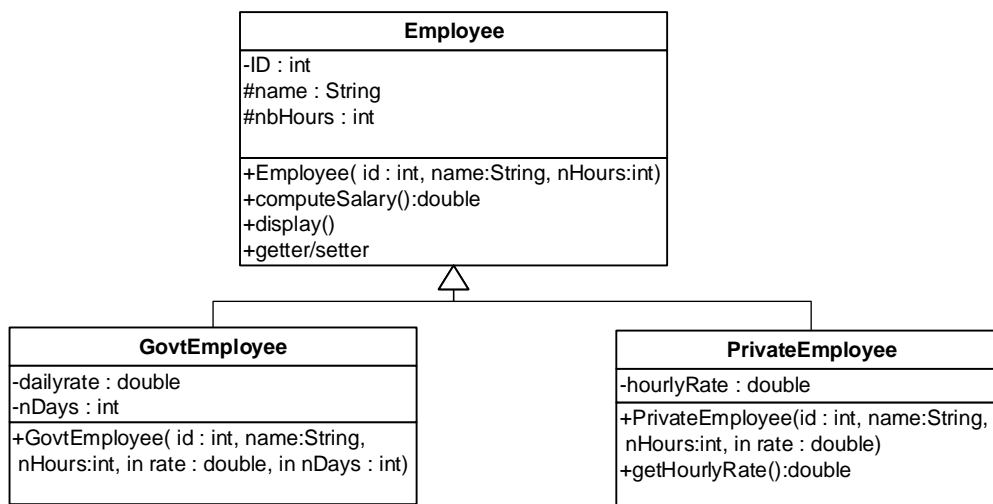


CSC113

Final Lab Exam

Name: _____ ID: _____

Consider the following UML class diagram:



Class **Employee**

- **ATTRIBUTES:**


- ID:** the ID of the vehicle.


- name:** Name of Employee.

- nbHours:** No of Hours worked.

- **METHODS:**

-  **Employee(.....):** constructor

-  **display().** this method displays all the attributes of the Employee whether it is GovtEmployee or PrivateEmployee object.

-  **computeSalary().** computes and returns the salary of the Employee with following rules

- For the **GovtEmployee** class, salary is: (dailyRate* No Of Days). Method throws an *ArithmeticException* if salary is greater than 20000 SR.

- For the **PrivateEmployee** class, salary is: (hourlyRate * nbHours). Method throws an *ArithmeticException* if salary is less than 3000 SR.

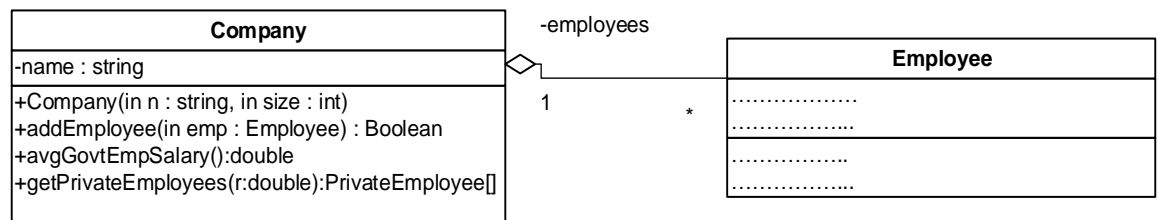
Class **GovtEmployee**

- *ATTRIBUTES:*
 - **dailyRate:** the daily rate of GovtEmployee.
 - **nDays:** the number of Days worked by the GovtEmployee.
- *METHODS:*
 - ✚ **GovtEmployee(.....):** Constructor..

Class **PrivateEmployee**




- *ATTRIBUTES:*
 - **hourlyRate:** the hourly rate of PrivateEmployee.
- *METHODS:*
 - ✚ **PrivateEmployee(.....):** Constructor.
 - ✚ **getHourlyRate():** Returns the value of *hourlyRate* attribute

Consider the following UML class diagram:



Class **Company**

- *ATTRIBUTES:*s
 - **name:** the name of the company.
- *METHODS:*
 - ✚ **Company(n: string, size: int).** Constructor .

-  **addEmployee(emp: Employee).** Adds an employee to the Company. It returns true if the employee is added, false otherwise.
-  **avgGovtEmpSalary().** Computes salaries and returns the average salary of all Govt employees working in the company. This method displays the message “Wrong Salary” for every employee who has salary greater than 20000 SR and his salary will not be used in calculating the average.
-  **getPrivateEmployees(r:double):** This method returns all private employees as an array who have hourly rate greater than *r*. **This method also saves this array in a file having name “emp.dat”.**