

Lab: Inheritance

Background

A company has three employee categories: salaried, wage and part-time. All employees have an employee ID number, name and SIN. Salaried employees have ID numbers starting with 0–4, whereas wage employee's IDs start with 5–7 and part-time employee's IDs start with 8–9. All employees are paid weekly and payment for each employee category is calculated as follows:

- Salaried employees are paid a set salary each week.
- Wage employees' pay is calculated using **hourly rate** * **work hours** with overtime paid at time and a half for any hours worked over 40 in one week.
- Part-time employees' pay is calculated based on hourly rate * work hours with no overtime paid.

Instructions

- 1. Create the classes as shown in the diagram on the following page.
- 2. Place the employees.txt data file in the res folder.
- 3. Create an inheritance tree whereby Salaried, PartTime and Wages inherit from Employee.
- 4. Create an application with the following methods:
 - a. Fill a list with objects based on the supplied data file.
 - b. Calculate and return the average weekly pay for all employees.
 - c. Calculate and return the highest weekly pay for the wage employees, including the name of the employee.
 - d. Calculate and return the lowest salary for the salaried employees, including the name of the employee.
 - e. What percentage of the company's employees fall into each employee category?



Add Getters/Setters and properties as needed!

- salary: double

+ «create» Salaried ()

+ getPay (): double

+ ToString (): String

Salaried

Employee id: String name: String address: String phone: String sin: long dob: String dept: String + «create» Employee () + «create» Employee (id : String, name : String, address : String, phone : String, sin: long, dob: String, dept: String) + ToString (): String PartTime Wages rate: double rate: double hours: double hours: double + «create» PartTime () + «create» Salaried (id : String, name : + «create» Wages () String, address : String, phone : String, sin : + «create» PartTime (id : String, name : String, + «create» Wages (id : String, name : String, long, dob : String, dept : String, salary : address: String, phone: String, sin: long, dob: address: String, phone: String, sin: long, String, dept: String, rate: double, hours: double dob : String, dept : String, rate : double, hours : double) + getPay (): double + ToString :: String MODELE + getPay (): double

+ ToString (): String