

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?

