Assignment 3

Goals

By the end of the assignment, you will have gained experience in writing programs using java collections. Students will also get to use a java gui framework.

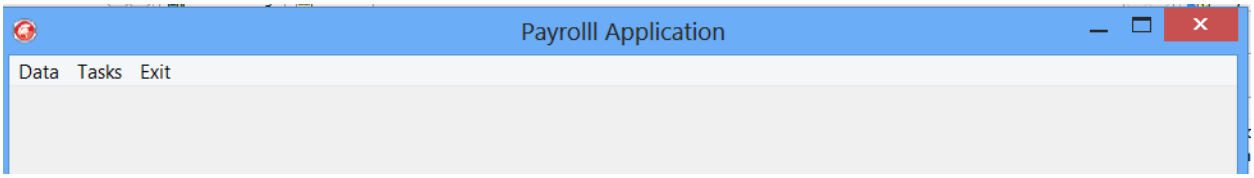
Resources

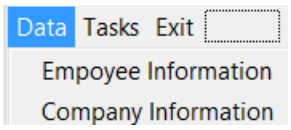
Download PayrollData.zip file from myElearning which contains the following files:

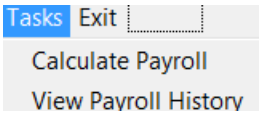
1. Employees.dat - File containing employee data (separated with dash -)
2. Company.dat – File containing one line of company data (separated with dash -)
3. Payroll.dat – File containing payroll calculations (students mainly write data to this file after payroll calculations are done) ** Initial File is empty – Student decides on file format
4. History.data – (After payroll calculations are confirmed, employee year-to-date information is updated if information exists for an employee for the given payroll year, otherwise the payroll data is appended to the file for the given payroll year) ** Initial File is empty – Student decides on file format

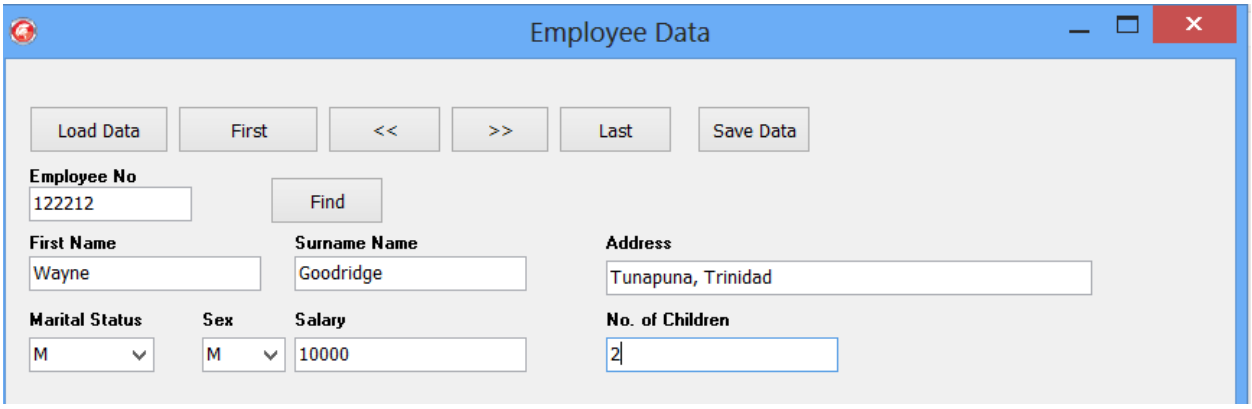
Overview

The figures below outline the some of the main screens in the program.



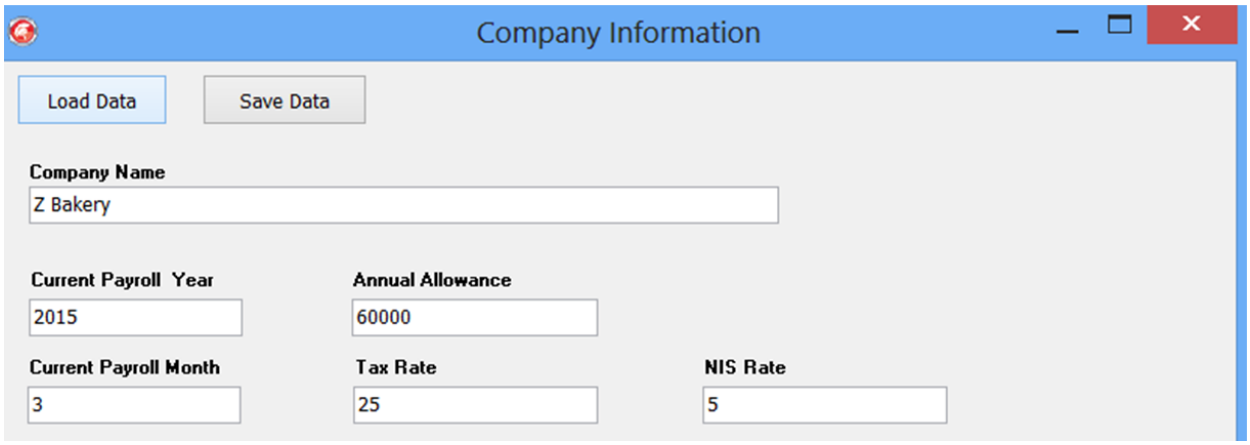






Notes:

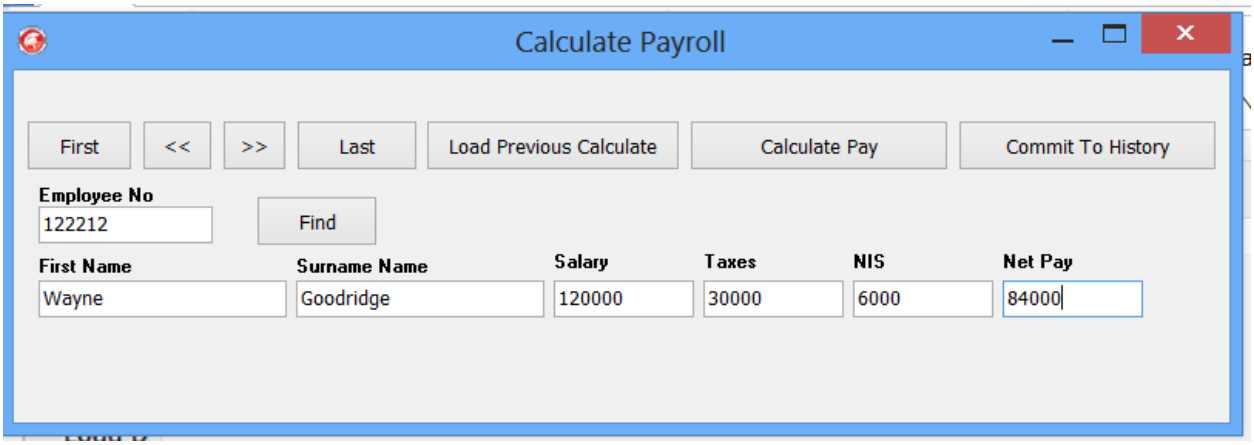
1. When the "Load Data" button is clicked the program should read the contents of the Employees.dat and load them into an Employee data structure ("whatever data structure you choose").
2. When user click on "Save Data" the program should take the data from the data structure and write it to the Employees.dat.
3. When the user click on "First" the program should display the data for the first employee in the collection
4. When the user click on "Last" the program should display the data for the last employee in the collection
5. When the user click on "Next" the program should display the data for the i + 1 employee in the collection – i is the position of the current record
6. When the user click on "Previous" the program should display the data for the i - 1 employee in the collection
7. When the user enters the employee number in the text box labeled "Employee No" the program should display the data for the employee



Notes:

1. When the "Load Data" button is clicked the program should read the contents of the Company.dat and load them into a Company data structure ("whatever data structure you choose").

2. When user click on "Save Data" the program should take the data from the data structure and write it to the Company.dat
3. Current Payroll Year – is the current payroll year
4. Annual Allowance – the amount of money Government gives off before deducting taxes
5. Current Payroll Month – is the month number which represents the current payroll month. This value must be incremented by 1 within a given payroll year once the function "Commit To History" is done.
6. Tax Rate – rate used to calculate employee taxes
7. NIS rate – rate used to calculate social security



1. When the "Calculate Pay" button is clicked the program should take ALL the employees inside the employee data structure and determine the following:
   a. The amount of nis to be deduction - nis rate * employee salary
   b. The amount of tax to be deduction -
   c. Tax deduction = ((Salary * 12 – AnnualAllowance) * TaxRate * 0.01)/12
   d. All results must be written to Payroll.dat

2. When the "Load Previous Calculate" button is clicked the program should load the previously stored calculations from the Payroll.dat file
3. When the "Commit To History" button is clicked current data in the History.data file is read into a data structure and the data from the current payroll data is used to update the payroll history data structure which is then written back to History.data.

Notes

1. When the "Load History Data" button is clicked current data in the History.data file is read into a data structure and then displayed in a memo or textarea field as shown in the figure.
2. When the "Sort By Last Name" button is clicked the data should appear in the memo field sorted by last name.
3. When the "Sort By Largest Net Pay" button is clicked the data should appear in the memo field sorted by largest netpay.

Task

Write Java code to implement similar interfaces and functionality for the above Payroll program