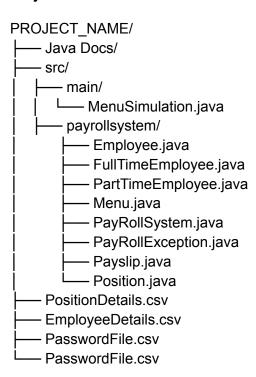# Payroll System Help File

Programme created in: Oracle OpenJDK 23.0.1, IntelliJ Community Edition
Language Level : 23 (Preview)

This project uses a two-package system:

- main package: Contains the entry point for the application.
- payrollsystem package: Contains all other classes related to the payroll system's implementation.

Project Structure

```
PROJECT_NAME/
├── Java Docs/
├── src/
│   ├── main/
│   │   └── MenuSimulation.java
│   ├── payrollsystem/
│   │   ├── Employee.java
│   │   ├── FullTimeEmployee.java
│   │   ├── PartTimeEmployee.java
│   │   ├── Menu.java
│   │   ├── PayRollSystem.java
│   │   ├── PayRollException.java
│   │   ├── Payslip.java
│   │   └── Position.java
├── PositionDetails.csv
├── EmployeeDetails.csv
├── PasswordFile.csv
└── PasswordFile.csv
```

How to Run

Extract the Project:

- Unzip the CS4013_groupProject.zip file into your desired location.

Open the Project:

- Open the extracted project folder CS4013_groupProject in your IDE.

Check File Placement:

- Inside the project folder:
  - Java source files are located in the src folder:
    - MenuSimulation.java is in the main package (src/main).
    - All other classes are in the payrollsystem package (src/payrollsystem).
  - Required CSV files (PositionDetails.csv, EmployeeDetails.csv, and PasswordFile.csv) are placed directly inside the CS4013_groupProject folder (outside the src folder).

Run the Program:

- Open MenuSimulation.java in your IDE and run it.

How to Use:

When the programme is run, the employee ID, name, and role of every employee in the payroll system will be printed in the command line. Underneath that, you will be given two options; L)og In, and Q)uit. User interaction with the payroll system is based on commands like these. To select an option, enter the letter to the left of the parenthesis (e.g. "L" or "Q") into the command line and hit Enter on your keyboard. "L)og In" prompts you to enter an Employee ID Number, while "Q)uit" terminates the programme.

To log in, enter an employee id number from the list printed at the start of the programme into the command line after "ID Number: ". Next you will be asked to enter a password. In this system, every employee's password is their name without spaces or apostrophes, followed by "123" as written under the list of employees. For example, Michael English's password is MichaelEnglish123. This is purely for ease of testing. Each password can be customised in the "PasswordFile.csv".

Once logged in as an employee, the user can access different information and perform different tasks depending on their role. The employee's ID number indicates their role. An ID beginning with "1" corresponds to a basic employee, an ID beginning with "2" corresponds to an administrator, and an ID beginning with "3" corresponds to a human resources employee. Basic employees can view their employment details, view their most recent payslip, and view a chosen number of historical payslips. Administrators can do the same, and also add and remove an employee. Human Resources employees can only view the employment details of any employee and offer promotions to employees. All part-time employees also have the option to submit a pay claim. If an employee has been offered a promotion, they can manage this promotion offer. All employees can invoke the time simulation function and log out.

Note that human resources employees cannot view their own personal employee details when logged in with their human resources account. They have their own basic employee account for that purpose.

Demonstration of Time-Based Functions:

Immediately after the programme is launched, the system date is set to the current date. Full-time employees have historical payslips dating back 5 months. Part-time employees will have none.

To create more payslips and trigger the annual rank incrementation, every user can access the T)ime Simulation command. When prompted, entering "M" will advance time by one month and entering "Y" will advance time by one year. This time change applies to all employees in the system, not only the employee that the user is logged in as when they execute the command. The simulated date is displayed either beside or before the list of command options for the employee.

For full-time employees, advancing time will generate payslips for every advanced month. For part-time employees, it will only generate a payslip if a pay claim was submitted. If the pay claim was submitted on time, i.e. before the second Friday of the month, their payslip will be generated for the simulated month. Otherwise, the submitted hours will carry over to the next month.

Logging out does not reset the date to the current date. When you log out, you are returned to the "L)og In   Q)uit" screen.

View JavaDocs

- The JavaDocs are included within the `CS4013_groupProject` folder.
- Open the `Java Docs` subfolder, then locate and run `index.html` in your web browser to view the full documentation.