

Employee Management System User Guide

Welcome to the Employee Management System, henceforth referred to as the EMS. This documentation has been split into several different parts for ease of use for developers and users. It is recommended to start with installation (only onto Windows). The EMS was developed in Java using the JFrame GUI package by Chamod Gamage and Justin Lawrence.

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**The open source code can be viewed at github.com/chamod-gamage/EMS.

Installation & Initialization

1. Install Java.
2. Install an Integrated Development Environment (preferably Netbeans)
3. Open the project called 'EMS-master'.
4. In the IDE file directory, navigate to and open: EMS-master » src » MainFrame.java
5. Use the windows file system to move UserGuide.pdf from EMS-master >> src to Ems-master
6. Press the 'run' button (usually found in the top left corner of the IDE)

Gateway

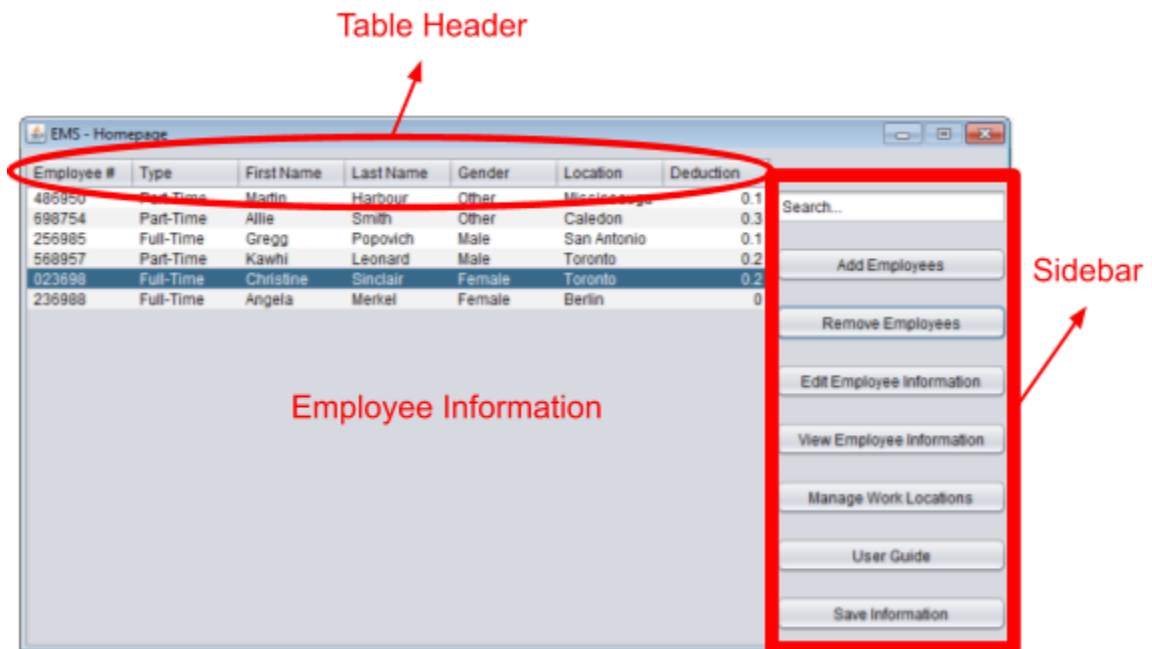
The gateway prevents unauthorized access to the EMS through password protection. Currently, the password is fixed as the seven-letter word "INVALID" (unless changed by developers) but more password functionality will be added in the future. To proceed past the gateway, simply enter the correct password into the text field and press Enter (either the keyboard key or display button). Should the password be incorrect, a text label will appear regarding the invalidity of the password. Otherwise, the user will proceed to the Homepage.



Homepage

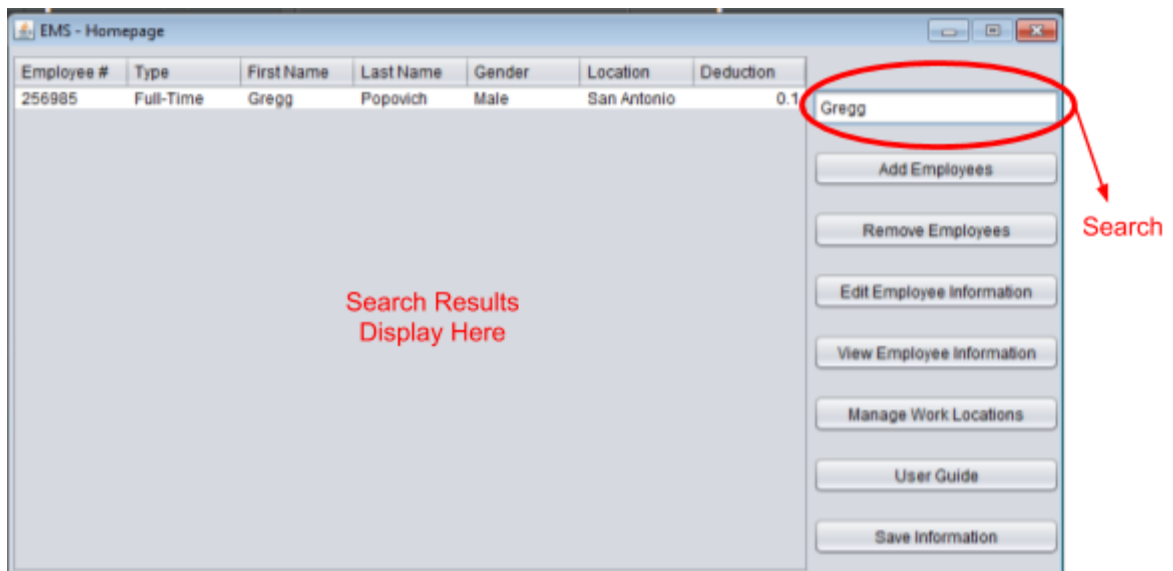
The homepage is the central display for the EMS. It provides a table listing information for all the employees in the system, with a search bar to assist in navigation of this table. Additionally, the display contains a column of buttons (sidebar) which enable:

- Adding employees
- Removing employees
- Editing employee information
- Viewing (complete) employee information
- Managing work locations
- Saving information to the designated file 'RWMemory.txt'



Searching the System

The search bar is located in the top right corner of the screen. To search, type your search into the bar and hit enter. You can search by employee number, name, location, and deduction rate. To display the whole table, make a blank search.



Sorting by Attribute

You can click the header for any column to sort by that attribute. Clicking the header again reverses the direction of the sort.

Adding Employees

To add a new employee, start by clicking the add employee button on the homepage. Then select either the part-time or full-time button (this selection can be changed at any time). Input valid information into all the fields and click submit. Ensure that the information is valid by consulting the Table of Valid Inputs. A success message should display, at which point you click done. To exit the display at any point and return to the Homepage, click Cancel.

The image displays two side-by-side screenshots of the 'ADD EMPLOYEE' form in the EMS - Add window. Both screenshots show the same form with the following fields: Employee Number (123123), First Name (Example), Last Name (Employee), Gender (Male), Work Location (Toronto), Deductions Rate (0.2), and Yearly Salary (15000) on the left, and Hourly Wage (15), Hours / Week (20), and Weeks/Year (40) on the right. The form has two radio buttons at the top: 'Part-Time' and 'Full-Time'. In the left screenshot, 'Part-Time' is selected, and in the right screenshot, 'Full-Time' is selected. Red circles highlight the 'Part-Time' and 'Full-Time' radio buttons, with arrows pointing to the text 'Press to Select Type'. Red circles also highlight the 'Cancel' and 'Submit' buttons at the bottom, with arrows pointing to them and the text 'Press to Exit' and 'Press to Submit Employee' respectively.

Removing Employees

To remove an employee, select them in the table and click the Remove Employee button found on the right (use the search bar to isolate employees as needed). Once clicked, a confirmation display will appear; press Yes to confirm the changes, or press No to go back to the Homepage. If confirmed, the removal will occur immediately, and the user will be returned to the Homepage.

Editing Employee Information

To edit an employee, select them in the table and click the Edit employee button found in the sidebar. Once clicked, a new screen will pop up containing the employees information. You can then edit the employee's information using the fields provided, and click submit when done. You may also change the employee from full time to part time, or vice versa, using the buttons on the top of the screen. Ensure that the information is valid by consulting the Table of Valid Inputs.

The screenshot shows a web application window titled "EMS - Edit" with a form titled "EDIT EMPLOYEE". The form contains several input fields and two radio buttons at the top. Annotations with red arrows point to specific elements:

- Toggle employee type:** Points to the radio buttons labeled "Part-Time" (selected) and "Full-Time".
- Edit employee information:** Points to a vertical red line on the right side of the form, indicating the area for editing the employee's details.
- Submit changes:** Points to the "Submit" button at the bottom right of the form.
- Return to homepage:** Points to the "Cancel" button at the bottom left of the form.

The form fields and their values are as follows:

Field	Value
Employee Number:	486950
First Name:	Martin
Last Name:	Harbour
Gender:	Other
Work Location:	Mississauga
Deductions Rate:	0.1
Hourly Wage:	20.0
Hours / Week:	40.0
Weeks/Year:	50.0

Click cancel or done (which pops up after you submit) to exit the screen.

Viewing Employee Information

To view the complete information of an employee, select them in the table and click the View Employee button found on the right (use the search bar to isolate employees as needed). Once clicked, the view employee display will appear, presenting all the information contained for the specific employee. To exit the display at any point and return to the Homepage, click Cancel.



The screenshot shows a window titled "EMS - View" with standard Windows window controls (minimize, maximize, close). The main heading is "View Employee". Below this is a table with two columns: "Attribute" and "Value". The table contains the following data:

Attribute	Value
Employee Number	023698
First Name	Christine
Last Name	Sinclair
Employee Type	Part Time
Gender	Female
Location	Toronto
Deduction Rate	0.2
Yearly Salary	5000000.0
Annual Net Income	4000000.0

Below the table is a large empty rectangular area, and at the bottom center is a button labeled "Return".

Managing Work Locations

To manage the available work locations in the system, click on the Manage Work Locations button on the Homepage. To add a location, type it into the top bar in the window and click Add; this location must not already be in the system and must be valid (consult Table of Valid Inputs) . To remove a location, select it from the bottom drop down box and click Remove. Note that Toronto can not be removed permanently. When you're done changing the locations, click Done. To exit the display at any point and return to the Homepage, click Cancel.

The screenshot shows a window titled "LOCATION MANAGEMENT". It contains two main input sections: "Add Location:" with a text field containing "Vancouver" and an "Add" button; and "Remove Location:" with a dropdown menu showing "Toronto" and a "Remove" button. Below these are three buttons: "Add", "Remove", and "Done". A red oval highlights the text "Location Added!" in the center, with a red arrow pointing to it from the label "Confirmation/Error Messages" on the left. Another red arrow points from the label "Location Removal Dropdown Menu" on the right to the dropdown menu. A red arrow also points from the label "Location Addition Text Field" on the left to the "Add Location:" text field.

Saving Information

To save your changes to the table, click the Save Information button on the homepage. A confirmation message should appear at the top right of the screen once you do this. The information is saved in a text file called RWMemory.txt. DO NOT DELETE THIS FILE. Doing so will result in you losing all of your saved information. If the file does not exist upon start up, a warning message will appear in the top right of the homescreen.

Table of Valid Inputs

Attribute	Allowed Inputs
Employee Number	Any whole number between 0 and 999999.
Names	Letters and spaces are allowed.
Locations	Letters and spaces are allowed.
Deduction Rate	Any number between 0 and 1 is allowed.
Wages (Yearly Salary, Hourly Wage, Hours per Week, Weeks per Year)	Any number greater than 0 is allowed.

FAQs

Q: Why are the names sorting improperly?

A: The program currently has a bug when trying to sort names with spaces in them. This is being worked on.

Q: Why does my number have an E in it?

A: Extremely large and small numbers are represented using scientific notation.

(<https://nnlm.gov/sites/default/files/nto/files/TOXNET/whatdoesEmeancalculator.pdf>)

Q: Why can't I permanently remove Toronto?

A: The program uses Toronto as a default location in case no others exist. It therefore will always add Toronto when the program loads.

Q: Why isn't the user guide opening when I click on the button?

A: The user guide doesn't open if the program can't find it. There are two possible reasons for this; either the file doesn't exist, or the file isn't in the same folder as the program. For the latter, you can fix the problem by moving the file to the folder EMS-master.