

# Human Resources Management (HRM) Installation Manual

## 1. Configure the Human Resources Management Database

Please, follow these steps to configure and install the Human Resources Management database:

1.1.- Download from the **PhD\_Thesis GitHub** repository in the **PhD\_Thesis Software/Databases/HRM** location the **HRM\_Database\_Dump.sql** file.

1.2.- Install the **MySQL community server software version 8.0.21**.

Please select the version that fits the operating system you have installed on your computer. This software will install MySQL database on your computer to run the HRM database.

You can download this software from the following link:

<https://downloads.mysql.com/archives/community/>

1.3.- Please, follow the instructions on the screen to install this software.

1.4.- Once this software has been installed, install the **MySQL Workbench software version 8.0.21**.

Please select the version that fits the operating system you have installed on your computer. This software will install MySQL client on your computer to run queries related to the HRM database.

You can download this software from the following link:

<https://downloads.mysql.com/archives/workbench/>

1.5.- Once the MySQL Workbench software has been installed on your computer, open it and import the Human Resources Management (HRM) database. To do this, select from the Menu this option: Server>Data Import>Import from Self-Contained File

1.6.- Later, select the location in your computer where is located the database file:  
**HRM\_Database\_Dump.sql**

1.7.- Once the HRM database has been imported, this database contains 5 tables.

1.8 Make sure to start the MySQL server and to have the HRM database up and running before executing the HRM software in the Eclipse IDE.

Please select the instructions that fits the operating system you have installed on your computer.

You can find the instructions from the following link:

<https://phoenixnap.com/kb/start-mysql-server>

## 2. Configure the Human Resources Management Software

Now, please follow these steps to configure and install the HRM software:

### 2.1.- Install in your computer the **Java SE Development Kit version 11**.

Please select the version that fits the operating system you have installed on your computer. This software will install the Java programming language and frameworks in your computer to run the HRM software.

You can download this software from the following link:

<https://www.oracle.com/ie/java/technologies/javase/jdk11-archive-downloads.html>

### 2.2.- Once Java has been installed on your computer, you must install the most recent version of Eclipse **IDE for Java Developers**.

Please select the version that fits the operating system you have installed on your computer. This software will install the Eclipse IDE on your computer to open the HRM Java project.

You can download this software from the following link:

<https://www.eclipse.org/downloads/packages/release/2024-06/r/eclipse-ide-java-developers>

### 2.3.- After this, locate in the **PhD\_Thesis GitHub** repository the **PhD\_Thesis Software/Systems** path and download the **HRMApplication** folder.

### 2.4.- Copy into the eclipse-workspace directory located in your computer, the **HRMApplication** folder.

For example: /Users/f7/eclipse-workspace/**HRMApplication**

### 2.5.- Inside the Eclipse IDE, import the existing Java Project by selecting this option: File>Import>General>Projects from Folder or Archive and select the **HRMApplication** folder located in the eclipse-workspace directory.

### 2.6.- Make sure you have installed the libraries that are called inside the HRM. To this locate in the **HRMApplication** Java Project right-click and select the option Build Path and then Configure Path.

Make sure you have installed and configured the following external JAR libraries in the / **HRMApplication/lib/** path:

- apache-logging-log4j.jar
- joda-time-2.10.14.jar
- mysql-connector-java-8.0.21.jar
- plantuml.jar

2.7 In case, you don't have one or any of these Java libraries installed, you can download them from the **PhD\_Thesis GitHub** repository in the **PhD\_Thesis Software/** location in the **Libraries/HRM** folder.

2.8 In the Eclipse IDE, we need to install the **AspectJ Development Tools** version 2.2.4.202204060052 to be able to execute the aspect files generated by the Forensic-Ready Logger in the HRM software system.  
To do this, go to the Help > Install New Software.

2.9 In the Work with field copy the following link:  
<https://download.eclipse.org/tools/ajdt/423/dev/update>  
Select all the options which include a) AspectJ Development Tools, b) AspectJDevelopment Tools Source and c) Other AJDT Tools and click on the button Next.

2.10 Please, follow the instructions provided on the screen until you have installed in your Eclipse IDE the AspectJ Development Tool.

2.11 After this, you need to convert this Java Project to an AspectJ Project. To do this, Right click on the HRMApplication and then select the option: Configure > Convert to AspectJ project. This will transform this Java Project into an AspectJ and then it will be able to run the aspect files generated by the Forensic-Ready Logger software.

### 3. Run the Human Resources Management Software System

3.1.- To execute the HRM, Open the Eclipse IDE, locate the **HRMApplication** Java project, and find the **src/gui folder** and then locate the **HRMApp.java** file.

3.2.- This **HRMApp.java** file contains the main procedure. To execute it, right-click and select the option: run as AspectJ/Java Application.

3.3.- This **HRMApp.java** program displays the login screen which asks for a user and a password. You can use the following users:

#### 1.- Role: System Administrator

User: hsmith

Password: 12345

## 2.- Role: Manager

User: ajones

Password: 123

## 3.- Role: Employee

User: bmartinez

Password: 123

3.4.- According to the connected user, the HRM software system will display the main menu which includes the following options:

1. **Employees:** allows to create, modify, delete or view an employee.
2. **Users:** allows to create, modify, delete or view a user.
3. **Travel Requests:** allows to create, modify, approve, reject, delete and view a travel request.

3.5.- To start using the HRM software system, you should start connecting with the system administrator user (hsmith). First, create some new Employees in the HRM software system by clicking the option **Employees**, where you can add a new employee, modify, delete or view an existing employee. After that, you should create some Users in the HRM by clicking the option **Users**, where you can add a new user, modify, delete or view an existing user. Finally, you should create Travel Requests by clicking the option **Travel Requests**, where you can add a new travel request, modify, accept or reject, delete or view an existing travel request.