Week3/ UI and DB localization
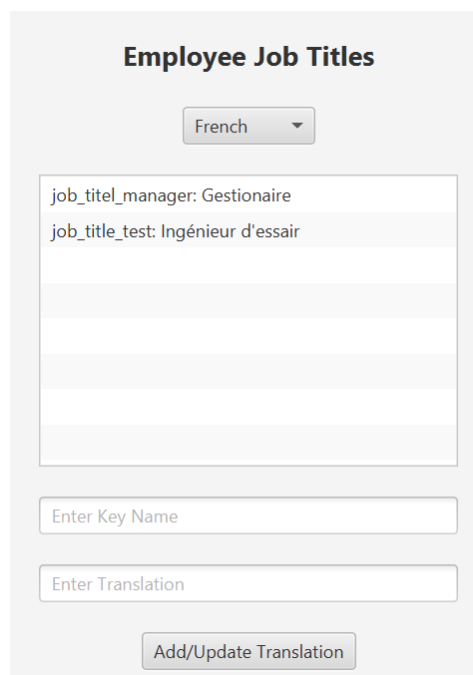
AD/2025

NOTE: As an in-class assignment, you need to extend the in-class demo to save additional job titles in the respective languages.

Extend the Functionality of the in-class demo application to:

- **Save**: Insert language-specific messages into the database.
- **Retrieve:** Fetch messages based on the selected language.

Extend the application to Save new job title into the respected languages for example the French language extended with new job title as test such as test engineer, see figure 1.

Figure 1. Added text field and a button to add new entry to the database

Submission:

1. *GitHub repository of the application*
2. *Screenshots of the languages: Make sure your name is included in the screenshots, e.g., as the title of your application.*

sample solution: https://github.com/ADirin/week3_inclass_Demo_2025.git

Week3/ UI and DB localization -Inclass demo

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Assignment: JavaFX and MariaDB Localization Application

Task: Implement an FXML or JavaFX application that supports both UI and database localization.

Requirements:

1. **UI Localization**: Use ResourceBundle to support at least three languages (English French, Spanish, and Chinese).

2. **Database Localization**: Store and retrieve localized text from a MariaDB database.

3. **Language Switching**: Implement a ComboBox to switch languages dynamically.

4. **Database Integration**: Use a Button to fetch localized messages from the database.

5. **Error Handling**: Ensure proper database connection handling and error management.
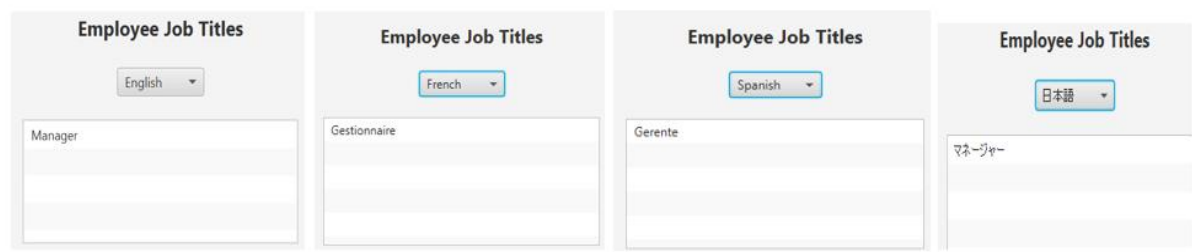
Figure 1 demonstrates a sample output:

Figure 1. Sample of application screenshots

Database Schema:

Table: localization (Translation table)

Columns:

- id (INT, PRIMARY KEY, AUTO_INCREMENT)
- Key_name (VARCHAR(50))
- Language_code
- Translation text - Stores the localized text message (job title), figure 2 shows a sample table

```
CREATE TABLE translations (

  id INT AUTO_INCREMENT PRIMARY KEY,

  Key_name VARCHAR(50) NOT NULL,

  Language_code VARCHAR(10) NOT NULL,

  translation_text VARCHAR(255) NOT NULL,

  UNIQUE KEY unique_translation (Key_name, Language_code) -- Prevents duplicate key-language pairs

);
```


Figure 2. sample database table