



SEEK WISDOM, ELEVATE YOUR INTELLECT AND SERVE HUMANITY!

Addis Ababa University  
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## DEPARTMENT of COMPUTER SCIENCE

### OBJECT ORIENTED PROGRAMMING

#### SECTION – 1: GROUP-ASSIGNMENT

##### PROJECT NAME- DICTIONARY

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## Documentation for the English<>Español Dictionary App

### Overview

The English<>Español Dictionary App is a user-friendly application that allows users to translate words between English and Spanish. It provides various features such as word suggestions, word descriptions, and the ability to save favorite words. The app has a clean and intuitive graphical user interface (GUI) built using Java Swing, making it easy for users to navigate and use.

### Project Goal

The goal of this project is to develop a user-friendly and efficient English<>Español Dictionary App that helps users quickly translate words between the two languages. The app aims to provide accurate translations, detailed descriptions, and the ability to save favorite words for easy access. By leveraging the power of Java Swing, the app offers a visually appealing and intuitive interface to enhance the user experience.

### Classes and Methods

#### 1. Main class:

- This is the main entry point of the application and contains the driver method.
- It handles the creation and management of the GUI components, including panels, text areas, text fields, and buttons.
- The class also manages the translation mode (English to Spanish or Spanish to English) and the list of favorite words.
- Key methods:
  - `addComponents(...)`: Adds components to the GUI layout using a `GridBagLayout`.
  - `searchWord(String)`: Performs a search for the given word and displays the translation and description.
  - `updateSuggestions()`: Updates the suggestion list based on the current search term and translation mode.
  - `removeSuggestionList()`: Removes the suggestion list from the GUI.
  - `addToFavorites(String)`: Adds a word to the list of favorite words.
  - `removeFavorite(String)`: Removes a word from the list of favorite words.

#### 2. Translation class:

- This class is responsible for managing the dictionary data, including the translations and descriptions for English and Spanish words.
- It provides methods to look up the translation and description for a given word.
- Key methods:

- `addTranslation(String, String, String, String)`: Adds a new word translation and description to the dictionary.
- `getTranslation(String, boolean)`: Retrieves the translation for a given word based on the current translation mode.
- `getDescription(String, boolean)`: Retrieves the description for a given word based on the current translation mode.

In conclusion, This English<>Español Dictionary App is a valuable tool for anyone who needs to translate words between English and Spanish. With its comprehensive dictionary, word suggestions, and favorite word management, the app streamlines the translation process and makes it accessible to a wide range of users. The clean and intuitive GUI, combined with the robust underlying functionality, makes this app a practical and user-friendly solution for language translation needs.