# Design of SpellChecker

The main objective of the SpellChecker program is to:

* Load a list of correctly spelled words into a DoublyLinkedBag.
* Read a file containing words to be checked.
* Convert each word to lowercase.
* Check if each word exists in the dictionary.
* Output a list of incorrectly spelled words.

## Requirements

* Use the DoublyLinkedBag implementation provided in Part I.
* Create the dictionary from a file containing correctly spelled words.
* Convert all words to lowercase for case-insensitive comparison.
* Output a list of misspelled words from the input file.

## System Design

### Main Components

The SpellChecker program consists of the following main components:

1. **DoublyLinkedBag**:
   * A data structure that stores the dictionary of correctly spelled words.
2. **Helper Functions**:
   * toLowerCase(): Converts a string to lowercase.
   * loadDictionary(): Loads correctly spelled words from a file into the DoublyLinkedBag.
   * checkSpelling(): Checks the spelling of words in an input file against the dictionary.
3. **Main Function**:
   * Manages user input and program flow.

### Data Flow

1. **Loading the Dictionary**:
   * Open the dictionary file.
   * Read each word, convert it to lowercase, and add it to the DoublyLinkedBag.
2. **Checking Spelling**:
   * Open the file to be checked.
   * Read each word, convert it to lowercase, and check if it exists in the DoublyLinkedBag.
   * Output the misspelled words.

### Error Handling

* If the dictionary file or the file to be checked cannot be opened, the program will output an error message and exit.