

1) Create a program that simulates a **text data compression system**.

The user enters a paragraph as a **string**.

The program should:

- a. Count the frequency of each word and store it in a **dictionary**.
- b. Convert the dictionary into a **list of tuples**, where each tuple is (word, frequency).
- c. Sort this list by frequency in descending order.
- d. Allow the user to retrieve the frequency of a particular word.

Exception handling requirements:

- e. Handle **KeyError** if the word is not present.
- f. Handle **IndexError** if the user tries to access an invalid index in the tuple list.
- g. Handle **AttributeError** if the user enters a non-string input.

2) Create a program to manage employee records and calculate monthly payroll using **tuples, dictionaries, strings, and exception handling**.

- a. Store employees in a dictionary, where keys are employee IDs (strings) and values are tuples containing (name, base\_salary, department).
- b. Allow the user to search for an employee by entering their ID.
- c. Handle the following cases with exceptions:
  - i. If the employee ID does not exist, handle the **KeyError** with a proper message.
  - ii. If the user accidentally enters a non-numeric salary adjustment (bonus or deduction), catch the **ValueError**.
  - iii. If the adjustment results in a negative final salary, raise and handle a **custom exception** **NegativeSalaryError**.
- d. After updating, print the employee's final salary slip in a well-formatted string.
- e. The program should run in a loop until the user types "exit".