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Program Description:  
Takes in user input numbers and words and outputs the highest value, lowest value, and adds all values together and returns those values, along with the listed source of said value.

Functions used in the Program (listed in order as they are called):

**1. Function Name**: main

**Description**: Calls all the other functions and also features some error handling.

**Parameters**: None

**Variables**: costs\_dict, result

**Logical Steps**: Calls cost\_assembler to convert user input into a dictionary of word-number pairs. Checks if the dictionary is empty, raising a ValueError if so. Uses reduce with cost\_processor to compute the sum, max, min, and their associated sources from the dictionary. Calls show\_results to display the computed results and the dictionary. Handles errors for invalid input formats or other exceptions, printing appropriate error messages.

**Returns**: None (executes program logic and outputs results or errors to the console).

2. **Function Name**: cost\_assembler

**Description**: Takes a user input string of word-number pairs and converts it into a dictionary where words are keys and numbers are values.

**Parameters**: ui

**Variables**: cost (list of strings), costs\_dict (dictionary), pair (string), word (string), number (string before conversion to float)

**Logical Steps**: Splits the input string by commas to create a list of word-number pairs. Initializes an empty dictionary. Iterates through each pair, strips whitespace, and splits by space to separate word and number. Converts the number to a float and stores it in the dictionary with the word as the key.

**Returns**: A dictionary containing word-number pairs.

3. **Function Name**: cost\_processor  
**Description:** Takes in a data set and processes the highest, lowest, and sum total of the set.  
**Parameters**: acc, item  
**Variables:** word, number, (kinda) sum, max, min  
**Logical Steps:** Inputs a dictionary, processes the highest, lowest, and sum total of all the costs, and updates a global dictionary with the results. Also records the associated key with the highest and lowest values in the dictionary.  
**Returns:** The updated dictionary values and keys for highest/lowest values.

4. **Function Name**: show\_results

**Description**: Displays the results of cost processing, including the total sum, highest cost with its source, and lowest cost with its source.

**Parameters**: r

**Variables**: None (uses dictionary keys directly: sum, max, min, max\_cost, min\_cost)

**Logical Steps**: Prints the total sum of costs from the result dictionary. Prints the highest cost along with its associated source (word). Prints the lowest cost along with its associated source (word).

**Returns**: None (outputs results to the console).

Logical Steps:  
Asks user for data, initializes dictionary and sets starting values to be zero/empty. Activates main() function. Checks for valid values within the user input. Reduce operator within main calls cost\_assembler and then passes the result to cost\_processor. Calls the display\_results function to print the results of the previous poerations for the user to use.

Link to your repository: https://github.com/KailFournier/CS-Repository.git

Output Screenshot: (make sure big enough so I can see)

