https://github.com/tudormoldovan17/limbaje-formale-si-tehnici-de-compilare

Class: HashTableSymbolTable

description: Implements a Symbol Table using a Hash Table data structure.

It allows for efficient storage and retrieval of key-value pairs based on hash values.

Constructor:

def __init__(self, size=100):

description: Initialize a Hash Table-based Symbol Table with a specified size.

parameters: - size (int): The size of the hash table (default is 100).

returns: None

Methods:

1. hash(self, key)

description: Compute the hash value for a given key using the modulo operator.

parameters: key: The key to be hashed.

returns: int: The hash value.

2. insert(self, key, value)

description: Insert a key-value pair into the hash table.

parameters:

- key: The key.

- value: The corresponding value.

returns: None

3. lookup(self, key)

description: Look up a key in the hash table and return its value if it exists.

parameters: key: The key to be looked up.

returns: value: The value associated with the key, or None if not found.

4. delete(self, key)

description: delete a key from the hash table if it exists.

parameters: - key: The key to be deleted.

returns: None

5. display(self)

description: Retrieve and display the entire hash table, including its buckets.

returns: list: A list representing the hash table.