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Lab 3

SOURCE: https://github.com/cinnamonbreakfast/flcd/tree/main/lab3

Symbol Table

Method	Preconditions	Postconditions	Observations
add	Key and Value must be objects	Value is added to the table	Collision resolution is chaining. A ValueError is thrown if we push the same element again
Get	Key must be object	Returns Value according to hash of Key	If no index could be found for Key in hash, a KeyError is raised. Also, if the value is not within table, a KeyError is raised again

A HashTable is a data structure which maps keys to values (in our case, a single value for one key). This HashTable uses chaining resolution for collision (list of lists). Hash function is based on hash function from Python (which is hash(key)%length, basically). On each position we store a pair of key & value (as we should get the exact value for a key; for keys having the same hash, their values will be within the same position – chain resolution). Adding the same element will result in a ValueError as the elements should be unique.

HashTable class is wrapped inside Symbol Table class and calls the methods.