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class HashTable:
    def __init__(self, size):
        self.size = size
        self.table = [None] * size
        self.DELETED = -1

    def _hash_function(self, key):
        return key % self.size

    def insert(self, key):
        initial_index = self._hash_function(key)
        index = initial_index

        while self.table[index] is not None and self.table[index] != self.DELETED:
            if self.table[index] == key:
                print(f"Key {key} already exists in the table.")
                return
            index = (index + 1) % self.size
            if index == initial_index:
                print("Hash table is full. Cannot insert key.")
                return

        self.table[index] = key
        print(f"Key {key} inserted at index {index}.")

    def search(self, key):
        initial_index = self._hash_function(key)
        index = initial_index

        while self.table[index] is not None:
            if self.table[index] == key:
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            print(f"Key {key} found at index {index}.")
            return index
        index = (index + 1) % self.size
        if index == initial_index:
            break
    print(f"Key {key} not found in the table.")
    return -1

def delete(self, key):
    initial_index = self._hash_function(key)
    index = initial_index

    while self.table[index] is not None:
        if self.table[index] == key:
            self.table[index] = self.DELETED
            print(f"Key {key} deleted from index {index}.")
            return
        index = (index + 1) % self.size
        if index == initial_index:
            break
    print(f"Key {key} not found for deletion.")

def display(self):
    print("\n--- Hash Table ---")
    for i, value in enumerate(self.table):
        if value == self.DELETED:
            print(f"Index {i}: DELETED")
        else:
            print(f"Index {i}: {value}")
    print("--------------------")
```

```
if __name__ == "__main__":
    size = int(input("Enter size of hash table: "))
    ht = HashTable(size)
    while True:
        print("\nMenu:")
        print("1. Insert a key")
        print("2. Search for a key")
        print("3. Delete a key")
        print("4. Display the table")
        print("5. Exit")
        choice = int(input("Enter your choice: "))

        if choice == 1:
            key = int(input("Enter key to insert: "))
            ht.insert(key)
        elif choice == 2:
            key = int(input("Enter key to search: "))
            ht.search(key)
        elif choice == 3:
            key = int(input("Enter key to delete: "))
            ht.delete(key)
        elif choice == 4:
            ht.display()
        elif choice == 5:
            print("Exiting...")
            break
        else:
            print("Invalid choice. Please try again.")
```