**LAB (5) TASK (1)**

**Code:**

using System;

using System.Collections.Generic;

class SymbolTable

{

static Dictionary<int, string> table = new Dictionary<int, string>();

static int HashFunction(string key)

{

int hash = 0;

foreach (char c in key)

{

hash += (int)c;

}

return hash % 100;

}

static void Insert(string identifier)

{

int index = HashFunction(identifier);

if (!table.ContainsKey(index))

{

table[index] = identifier;

Console.WriteLine($"Inserted: {identifier} at index {index}");

}

else

{

Console.WriteLine($"Collision at index {index}, already has '{table[index]}'");

}

}

static void Search(string identifier)

{

int index = HashFunction(identifier);

if (table.ContainsKey(index) && table[index] == identifier)

{

Console.WriteLine($"Found: '{identifier}' at index {index}");

}

else

{

Console.WriteLine($"'{identifier}' not found");

}

}

static void Display()

{

Console.WriteLine("\n--- Symbol Table ---");

foreach (var pair in table)

{

Console.WriteLine($"Index: {pair.Key} => Identifier: {pair.Value}");

}

}

static void Main()

{

Insert("x");

Insert("y");

Insert("total");

Insert("main");

Insert("sum");

Console.WriteLine();

Search("main");

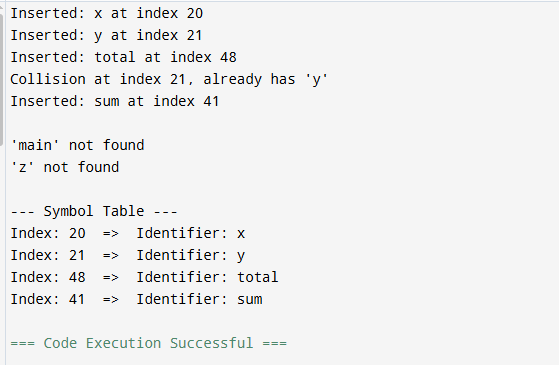
Search("z");

Display();

}

}

**Output:**

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