Lab 05:

Code:

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace CCLab05

{

public partial class Form1 : Form

{

// Define a simple hash table using a dictionary.

private Dictionary<int, string> symbolTable;

public Form1()

{

InitializeComponent();

symbolTable = new Dictionary<int, string>();

}

// Simple Hash Function for Strings (Symbol)

private int GetHash(string symbol)

{

int hash = 0;

foreach (char c in symbol)

{

hash += (int)c;

}

return hash % 10; // To limit the table size

}

// Button Click Event: Add Symbol to the Table

private void btnAddSymbol\_Click(object sender, EventArgs e)

{

string symbol = txtSymbol.Text.Trim();

if (!string.IsNullOrEmpty(symbol))

{

int hashValue = GetHash(symbol);

if (!symbolTable.ContainsKey(hashValue))

{

symbolTable.Add(hashValue, symbol);

lblMessage.Text = "Symbol added successfully!";

UpdateSymbolTable();

}

else

{

lblMessage.Text = "Symbol already exists!";

}

}

else

{

lblMessage.Text = "Please enter a symbol!";

}

}

// Update the DataGridView with the current symbol table.

private void UpdateSymbolTable()

{

dataGridView1.Rows.Clear();

foreach (var entry in symbolTable)

{

dataGridView1.Rows.Add(entry.Value);

}

}

}

}

Output:

