**Code:**

#include <iostream>

#include <vector>

using namespace std;

int main() {

int numServers;

cout << "Enter number of servers: ";

cin >> numServers;

//for multiple values at one position creating a hash table with vector

vector<vector<string>> servers(numServers);

int numRequests;

cout << "\nEnter number of incoming requests: ";

cin >> numRequests;

cout << "\nEnter request IDs:\n\n";

for (int i = 0; i < numRequests; i++) {

string requestID;

cout << "Request " << i + 1 << ": ";

cin >> requestID;

int hashValue = 0;

// simple hash for string by summing ASCII values

for(char c : requestID){

hashValue += (int)c;

}

int serverIndex = hashValue % numServers;

// Insert into the appropriate server list

servers[serverIndex].push\_back(requestID);

cout << "Request '" << requestID << "' is handled by Server "

<< serverIndex << endl << endl;

}

// Print server load summary

cout << "\nServer Load Summary:\n\n";

for (int i = 0; i < numServers; i++) {

cout << "Server " << i << " handled "

<< servers[i].size() << " requests";

if (!servers[i].empty()) {

cout << ": ";

for (int j = 0; j < servers[i].size(); j++) {

cout << servers[i][j];

if (j < servers[i].size() - 1) cout << ", ";

}

}

cout << endl << endl;

}

return 0;

}

**Output:**

Enter number of servers: 6

Enter number of incoming requests: 8

Enter request IDs:

Request 1: 231.14.234

Request '231.14.234' is handled by Server 4

Request 2: 27.745.33

Request '27.745.33' is handled by Server 3

Request 3: 34.755.45

Request '34.755.45' is handled by Server 5

Request 4: 424.76

Request '424.76' is handled by Server 3

Request 5: 445.745.34

Request '445.745.34' is handled by Server 2

Request 6: 346.755

Request '346.755' is handled by Server 4

Request 7: 456.743.34

Request '456.743.34' is handled by Server 2

Request 8: 753.45.344

Request '753.45.344' is handled by Server 1

Server Load Summary:

Server 0 handled 0 requests

Server 1 handled 1 requests: 753.45.344

Server 2 handled 2 requests: 445.745.34, 456.743.34

Server 3 handled 2 requests: 27.745.33, 424.76

Server 4 handled 2 requests: 231.14.234, 346.755

Server 5 handled 1 requests: 34.755.45