ASSIGNMENT-3

```cpp
/*Name: Sahil Badve PRN: B24CE1114 Div: S.Y.B-Tech 2 Batch C*/
#include <iostream>
using namespace std;

int main() {
    int N, R, val, hash_val;

    cout << "Enter number of servers: ";
    cin >> N;

    cout << "Enter number of requests: ";
    cin >> R;

    int arr[N];
    for (int m = 0; m < N; m++) {
        arr[m] = 0; // initialize counts to 0
    }

    for (int i = 0; i < R; i++) {
        cout << "Enter request " << i + 1 << ": ";
        cin >> val;

        hash_val = val % N; // hash function

        arr[hash_val]++; // increment request count for that server

        cout << "Request " << val << " assigned to server " << hash_val << endl;
    }

    cout << "\nFinal request count per server:\n";
    for (int j = 0; j < N; j++) {
        cout << "Server " << j << ": " << arr[j] << " requests\n";
    }

    return 0;
}
```

OUTPUT:-

```
Enter number of servers: 3
Enter number of requests: 3
Enter request 1: 2
Request 2 assigned to server 2
Enter request 2: 5
Request 5 assigned to server 2
Enter request 3: 10
Request 10 assigned to server 1

Final request count per server:
Server 0: 0 requests
Server 1: 1 requests
Server 2: 2 requests
```