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# **Singleton Lab**

using System;

using System.Collections.Generic;

namespace Singleton.RealWorld

{

public class Program

{

public static void Main(string[] args)

{

LoadBalancer b1 = LoadBalancer.GetLoadBalancer();

LoadBalancer b2 = LoadBalancer.GetLoadBalancer();

LoadBalancer b3 = LoadBalancer.GetLoadBalancer();

LoadBalancer b4 = LoadBalancer.GetLoadBalancer();

if (b1 == b2 && b2 == b3 && b3 == b4)

{

Console.WriteLine("Same instance\n");

}

LoadBalancer balancer = LoadBalancer.GetLoadBalancer();

for (int i = 0; i < 10; i++)

{

string server = balancer.Server;

Console.WriteLine("Dispatch Request to: " + server);

}

Console.ReadKey();

}

}

public class LoadBalancer

{

static LoadBalancer instance;

List<string> servers = new List<string>();

Random random = new Random();

private static object locker = new object();

protected LoadBalancer()

{

servers.Add("Server Hue");

servers.Add("Server Quang Tri");

servers.Add("Server Da Nang");

servers.Add("Server Quang Nam");

servers.Add("Server Quang Binh");

}

public static LoadBalancer GetLoadBalancer()

{

{

lock (locker)

{

if (instance == null)

{

instance = new LoadBalancer();

}

}

}

return instance;

}

public string Server

{

get

{

int r = random.Next(servers.Count);

return servers[r].ToString();

}

}

}

}

