

Get Prime, Is prime

```
//GNU Library General Public License (LGPL)
//http://dac.codeplex.com/license
using System;
using System.Runtime.ConstrainedExecution;

namespace RaisingStudio.Collections.Generic
{
    internal static class HashHelpers
    {
        internal static readonly int[] primes = new int[] {
            3, 7, 11, 0x11, 0x17, 0x1d, 0x25, 0x2f, 0x3b, 0x47, 0x59,
            0x6b, 0x83, 0xa3, 0xc5, 0xef,
            0x125, 0x161, 0x1af, 0x209, 0x277, 0x2f9, 0x397, 0x44f, 0x52f,
            0x63d, 0x78b, 0x91d, 0xaf1, 0xd2b, 0xfd1, 0x12fd,
            0x16cf, 0x1b65, 0x20e3, 0x2777, 0x2f6f, 0x38ff, 0x446f,
            0x521f, 0x628d, 0x7655, 0x8e01, 0xaa6b, 0xcc89, 0xf583,
            0x126a7, 0x1619b,
            0x1a857, 0x1fd3b, 0x26315, 0x2dd67, 0x3701b, 0x42023, 0x4f361,
            0x5f0ed, 0x72125, 0x88e31, 0xa443b, 0xc51eb, 0xec8c1,
            0x11bdbf, 0x154a3f, 0x198c4f,
            0x1ea867, 0x24ca19, 0x2c25c1, 0x34fa1b, 0x3f928f, 0x4c4987,
            0x5b8b6f, 0x6dda89
        };

        internal static int GetMinPrime()
        {
            return primes[0];
        }

        [ReliabilityContract(Consistency.WillNotCorruptState, Cer.Success)]
        internal static int GetPrime(int min)
        {
            for (int i = 0; i < primes.Length; i++) { int num2 =
```

```
primes[i]; if (num2 >= min)
{
return num2;
}
}
for (int j = min | 1; j < 0x7fffffff; j += 2) { if
(IsPrime(j)) { return j; } } return min; }
[ReliabilityContract(Consistency.WillNotCorruptState,
Cer.Success)] internal static bool IsPrime(int candidate) { if
((candidate & 1) == 0) { return (candidate == 2); } int num =
(int)Math.Sqrt((double)candidate); for (int i = 3; i <= num; i
+= 2) { if ((candidate % i) == 0) { return false; } } return
true; } } } [/csharp]
```