

```

1  #include <iostream>
2  #include <windows.h>
3  #include <stdio.h>
4  #include <time.h>
5  #include <chrono>
6
7  #include "NTL/ZZ.h"
8
9  using namespace NTL;
10
11 int main()
12 {
13     //Iniciar el timer
14
15     auto start = std::chrono::high_resolution_clock::now();
16
17     SYSTEM_INFO siSysInfo;
18
19     GetSystemInfo(&siSysInfo);
20
21     //Obtener información del hardware de la PC
22
23     printf("Hardware info: \n");
24
25     std::cout << std::endl;
26
27     printf(" OEM ID: %u\n",
28         siSysInfo.dwOemId);
29     printf(" Number of processors: %u\n",
30         siSysInfo.dwNumberOfProcessors);
31     printf(" Page size: %u\n",
32         siSysInfo.dwPageSize);
33     printf(" Processor type: %u\n",
34         siSysInfo.dwProcessorType);
35     printf(" Active processor mask: %u\n",
36         siSysInfo.dwActiveProcessorMask);
37     printf(" Processor level: %u\n",
38         siSysInfo.wProcessorLevel);
39     printf(" Processor Architecture: %u\n",
40         siSysInfo.wProcessorArchitecture);
41     printf(" Processor Revision: %u\n",
42         siSysInfo.wProcessorRevision);
43
44     //Convertir los datos a NTL
45
46     ZZ a(siSysInfo.dwOemId);
47     ZZ b(siSysInfo.dwNumberOfProcessors);
48     ZZ c(siSysInfo.dwPageSize);
49     ZZ d(siSysInfo.dwProcessorType);
50     ZZ e(siSysInfo.dwActiveProcessorMask);
51     ZZ f(siSysInfo.wProcessorLevel);
52     ZZ g(siSysInfo.wProcessorArchitecture);
53     ZZ h(siSysInfo.wProcessorRevision);
54
55     //Detener el timer
56
57     auto finish = std::chrono::high_resolution_clock::now();
58
59     //Mostrar el tiempo obtenido en nanosegundos
60
61     std::cout << "\nTime: " << std::chrono::duration_cast<std::chrono::nanoseconds>
62     >(finish-start).count() << " nanoseconds\n";
63
64     //Convertir el tiempo obtenido a NTL
65
66     ZZ t(std::chrono::duration_cast<std::chrono::nanoseconds>(finish-start).count());

```

```
66
67 //Multiplicar los datos de la PC por el tiempo y añadirlos a un array
68
69 ZZ Array[8] = {a * t, b * t, c * t, d * t, e * t, f * t, g * t, h * t};
70
71 std::cout << std::endl;
72
73 //Mostrar los números aleatorios
74
75 for(int i = 0; i < 8; i++)
76 {
77     std::cout << "Random number " << i+1 << ": " << Array[i] << std::endl;
78 }
79
80 return 0;
81 }
```