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1  /*
2  * Instituto Superior de Formación Técnica 151
3  * Tecnicatura Superior en Análisis de Sistemas
4  *
5  * Programación II
6  *
7  * Queue Project ( without parametrization )
8  * Queue Variant : simple
9  *
10 * Version:  Revision 1.0  (23/8/2015)
11 *             Revision 1.1  (31/8/2015)
12 *
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20 *
21 * File:      main.cpp (testing file)
22 *
23 */
24
25
26 #include <iostream>
27 #include "QueueCircular.hpp"
28
29
30 using namespace std;
31
32
33 int AsInt( void* input )
34 {
35     return *( (int*) input );
36 };
37
38
39 int main()
40 {
41     //Default
42     cout << "TEST A : Default Construction using default parameter\n";
43     cout << "-----\n\n";
44
45     cout << "::Initialization...\n";
46     Queue testA;
47
48     cout << "::Fill 100% with int's [Available items = 256]... \n";
49     //Fill all possible items.
50     for( int i=0; !testA.isFull(); i++ ) testA.add( new int(i) );
51
52     cout << "::Pop all items until queue be empty...\n\nResult:\n\n";
53     //Pop all items from queue.
54     while ( !testA.isEmpty() ) cout << AsInt( testA.pop() ) << " ";
55
56
57     //With size defined
58     cout << "\n\n\nTEST B : Construction by sizeof(type)\n";
59     cout << "-----\n\n";
60
61     cout << "::Initialization...\n";
62
63     Queue testB( sizeof(int) );
64
65
66     cout << "::Fill with int's (1..10)...\n";
67     for (int i=1; i<=10; i++ ) testB.add( new int(i) );
68
69     cout << "::Pop all items until queue be empty...\n\nResult:\n\n";
70     while( !testB.isEmpty() ) cout << AsInt( testB.pop() ) << endl;
71
72
73

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74
75 //Copy Constructor TEST
76 cout << "\n\nTEST C : Copy Construction\n";
77 cout << "-----\n\n";
78
79 cout << "::Initialization default (A)...\n";
80 Queue testC;
81
82 cout << "::Fill (A) with int's (10..20)...\n";
83 for (int i=10; i<=20; i++ ) testC.add( new int(i) );
84
85 cout << "::Initialization (B) using copy of (A)...\n";
86 Queue testD( testC );
87
88 cout << "::Pop all items of queue (B)...\n\nResult:\n\n";
89 while( !testD.isEmpty() ) cout << AsInt( testD.pop() ) << endl;
90
91 //Operator assignment TEST
92 cout << "\n\nTEST D : Assignment operation \n";
93 cout << "-----\n\n";
94
95 cout << "::Initialization default (A)...\n";
96 Queue testE;
97
98 cout << "::Initialization default (B)...\n";
99 Queue testF;
100
101 cout << "::Fill (A) with int's (20..30)...\n";
102 for (int i=20; i<=30; i++ ) testE.add( new int(i) );
103
104 cout << "::Assignment of B = A...\n";
105 testF = testE;
106
107 cout << "::Pop all items until queue be empty...\n\nResult:\n\n";
108 while( !testF.isEmpty() ) cout << AsInt( testF.pop() ) << endl;
109
110 return 0;
111 }
112

```