

```
1: # include <stdio.h>
2: #include "Heap.h"
3:
4: int main(int argc, char * argv[])
5: {
6:     Heap heap(10);
7:
8:     fprintf(stderr, "inserindo 0, 3\n");
9:
10:    heap.insertOnHeap(0, 3);
11:
12:    fprintf(stderr, "inserindo 1, 1\n");
13:
14:    heap.insertOnHeap(1, 1);
15:
16:    fprintf(stderr, "inserindo 2, 3\n");
17:
18:    heap.insertOnHeap(2, 3);
19:
20:    fprintf(stderr, "inserindo 3, 2\n");
21:
22:    heap.insertOnHeap(3, 2);
23:
24:    fprintf(stderr, "inserindo 4, 2\n");
25:
26:    heap.insertOnHeap(4, 2);
27:
28:    fprintf(stderr, "inserindo 5, 3\n");
29:
30:    heap.insertOnHeap(5, 3);
31:
32:    fprintf(stderr, "inserindo 6, 2\n");
33:
34:    heap.insertOnHeap(6, 2);
35:
36:    fprintf(stderr, "inserindo 7, 1\n");
37:
38:    heap.insertOnHeap(7, 1);
39:
40:    fprintf(stderr, "inserindo 8, 4\n");
41:
42:    heap.insertOnHeap(8, 4);
43:
44:    fprintf(stderr, "inserindo 9, 1\n");
45:
46:    heap.insertOnHeap(9, 1);
47:
48:    heap.print();
49:    fprintf(stderr, "\n");
50:
51:    heap.DecrementDegree(2);
52:
53:    heap.print();
54:
55:
56:    fprintf(stderr, "Removendo da heap:\n");
57:
58:
59:    for(int i = 0; i < 20; i++) {
60:        std::pair<int, int> element;
61:        heap.removeFromHeap(element);
62:
63:        fprintf(stderr, "%d - vertex: %d - degree: %d\n", i, element.first, element.second);
64:    }
65:
66:    return 0;
67: }
```