```cpp
1    /*
2    Filename: p8.h
3    Author(s): Zachary Rea and Parker Ross
4    Date: 8 March 2023
5    Description: The header file for p8
6    */
7    #ifndef __P8_H
8    #define __P8_H
9
10   //***************************************************************************
11   class intList {
12   private:
13       int *a;
14       int listCapacity;
15       int listSize;
16       int heapSize;
17   public:
18       //Constructors and Destructors
19       intList (int listCapacity = 100);//Zach
20       ~intList ();//Zach
21       //Public Functions
22       bool insert (int key); //parker
23       bool add (int key); //parker
24       bool insertAt (int index,int key); //parker
25       bool deleteAt (int index,int &key);
26       void clear();//Zach
27       void printIt(int n) const;//Zach
28       int getIndex(int key) const;
29       int readAt(int index, int &key) const; //parker
30       int capacity() const;//Zach
31       //Sorting Functions
32       void bubbleSort();
33       void selectionSort();
34       void insertionSort();
35       //Sorting Check
36       bool isSorted() const;
37       //Program 6 Functions
38       void heapify(int index);
39       void swap(int &x, int &y);
40       int left(int index) const;
41       int right(int index) const;
42       //New Functions
43       void heapSort();
44       void buildHeap();
45   };
46
47   #endif
```