```
Node
                                                                                    HashTable
         - key:int
                                                                 + table[]: Node*
         - offset:int
         - next: Node*
                                                                 <constructor>> HashTable();
         <<constructor>> Node();
         <<constructor>> Node(int n, int k);
                                                                  populate(fstream& infile, int n); void
        + getKey(); int
                                                                  hashingReport();void
        + getOffset(); int
                                                                  hashValue(int n):int
        + getNext(); Node*
                                                                  printTable(int n):void
        - setNext(Node* next); void
                                                                  NumberToString(int t):string
        - setKey(int); void
                                                                  insert(Node* newNode):void
        - setOffset(int); void
                                                                  search(int n):int
                    Item.h
                                                                                        Record.h
- stockNum:int
                                                                       + key: int
- description[]: char
                                                                       + offset: int
- code:int
- cost: double
                                                                       <<constructor>> Record();
                                                                       <<constructor>> Record(int, int);
<<constructor>> Item();
<<constructor>> Item(int, string, int, double);
                                                                       + getKey() const; int
+ getStockNum() const; int
                                                                       + getOffset() const; string
+ getDescription() const; string
                                                                       + printDetails() const; void
+ getCount() const; int
+ getCost() const; double
                                                                       + operator <(const Record& r2)const; bool
                                                                       + operator ==(const Record& r2)const; bool
- setStockNum(int n); void
                                                                       + operator> (const Record& r2)const; bool
- setDescription(string str); void
                                                                       - setKey(int n); void
- setCount(int n); void
                                                                       - setOffset(int n); void
- setCost(double n); void
                                                    CreateIndex
                              - records: int
                              <<constructor>> CreateIndex();
                              <<constructor>> Node(int n, int k);
                          + run(string fileName): void
                          + printInventory(list <Record> myList, fstream& myFile): void
                          + getRecords(): int
                          + createBinaryFile(int numRecords): void
                          + createBinaryIndex(int numRecords): void
                           NumberToString (int t): string
                                      filename; string
                                      list: CreateIndex
                                     infile: fstream
                                     + main(int argc, const char * argv[]): int
```

```
Node
                                                                                   HashTable
         - key:int
                                                                - table[]: Node*
         - offset:int
         - next: Node*
                                                               <<constructor>> HashTable();
         <<constructor>> Node();
         <<constructor>> Node(int n, int k);
                                                                 populate(fstream& infile, int n); void
       + getKey(); int
                                                                 hashingReport();void
        + getOffset(); int
                                                                 hashValue(int n):int
       + getNext(); Node*
                                                                 printTable(int n):void
        - setNext(Node* next); void
                                                                 NumberToString(int t):string
        - setKey(int); void
                                                                 insert(Node* newNode):void
        - setOffset(int); void
                                                                 search(int n):int
                   Item.h
                                                                                       Record.h
- stockNum:int
                                                                      + key: int
                                                                      + offset: int
- description[]: char
- code:int
- cost: double
                                                                      <<constructor>> Record();
<<constructor>> Item();
                                                                      <<constructor>> Record(int, int);
<<constructor>> Item(int, string, int, double);
                                                                      + getKey() const; int
+ getStockNum() const; int
                                                                      + getOffset() const; string
+ getDescription() const; string
                                                                      + printDetails() const; void
+ getCount() const; int
                                                                      + operator <(const Record& r2)const; bool
+ getCost() const; double
                                                                      + operator ==(const Record& r2)const; bool
- setStockNum(int n); void
                                                                      + operator> (const Record& r2)const; bool
- setDescription(string str); void
                                                                      - setKey(int n); void
- setCount(int n); void
                                                                      - setOffset(int n); void
- setCost(double n); void
                                                    p8Search
                                  + filename; string
                                  + search; string
                                  + table: HashTable
                                  infile: fstream
                                   main(int argc, const char * argv[]): int
                                   get_int(string): int
                                   getRecord(int): void
```