**Node type and ListType** (this is the only part of the code handout with C++ code):

```cpp
struct Node {
    int data;
    Node * next;
    Node() { data = 0; next = NULL; }
    Node(int d) { data = d; next = NULL; }
    Node(int d, Node * n) { data = d; next = n; }
};

typedef Node * ListType;
```

**Java Map<KeyType, ValueType> Interface**:

The classes that implement this interface are: TreeMap and HashMap.
Selected methods:

- **ValueType put(key, value)**
  Associates the specified value with the specified key in this map. If the map previously contained a mapping for this key, the old value is replaced by the specified value. Returns the previous value associated with specified key, or null if there was no mapping for key.

- **ValueType get(key)**
  Returns the value to which this key is mapped or null if the map contains no mapping for this key.

- **ValueType remove(key)**
  Removes the mapping for this key from this map if it is present, otherwise returns null.

- **int size()**
  Number of key-value mappings in this map.

- **boolean isEmpty()**
  Returns true if this map contains no key-value mappings.

- **Set<Map.Entry<KeyType, ValueType>> entrySet()**
  Returns a set view of the entries contained in this map.

- **Set<KeyType> keySet()**
  Returns a set view of the keys contained in this map.

**Java Map.Entry<KeyType, ValueType> Interface**

Selected methods:

- **KeyType getKey()**
  Return the key of the entry

- **ValueType getValue()**
  Return the value of the entry

- **void setValue(newVal)**
  Replace the current value with newVal

**Java Set<ElmtType> Interface**

Selected methods:

- **Iterator<ElmtType> iterator()**
  Returns an iterator over the elements in this collection.

**Java Iterator<ElmtType> Interface**

- **boolean hasNext()**
  Returns true iff the iteration has more elements.

- **ElmtType next()**
  Returns the next element in the iteration. Each successive call returns a different element in the underlying collection.

- **void remove()**
  Removes from the underlying collection the last element returned by the iterator.