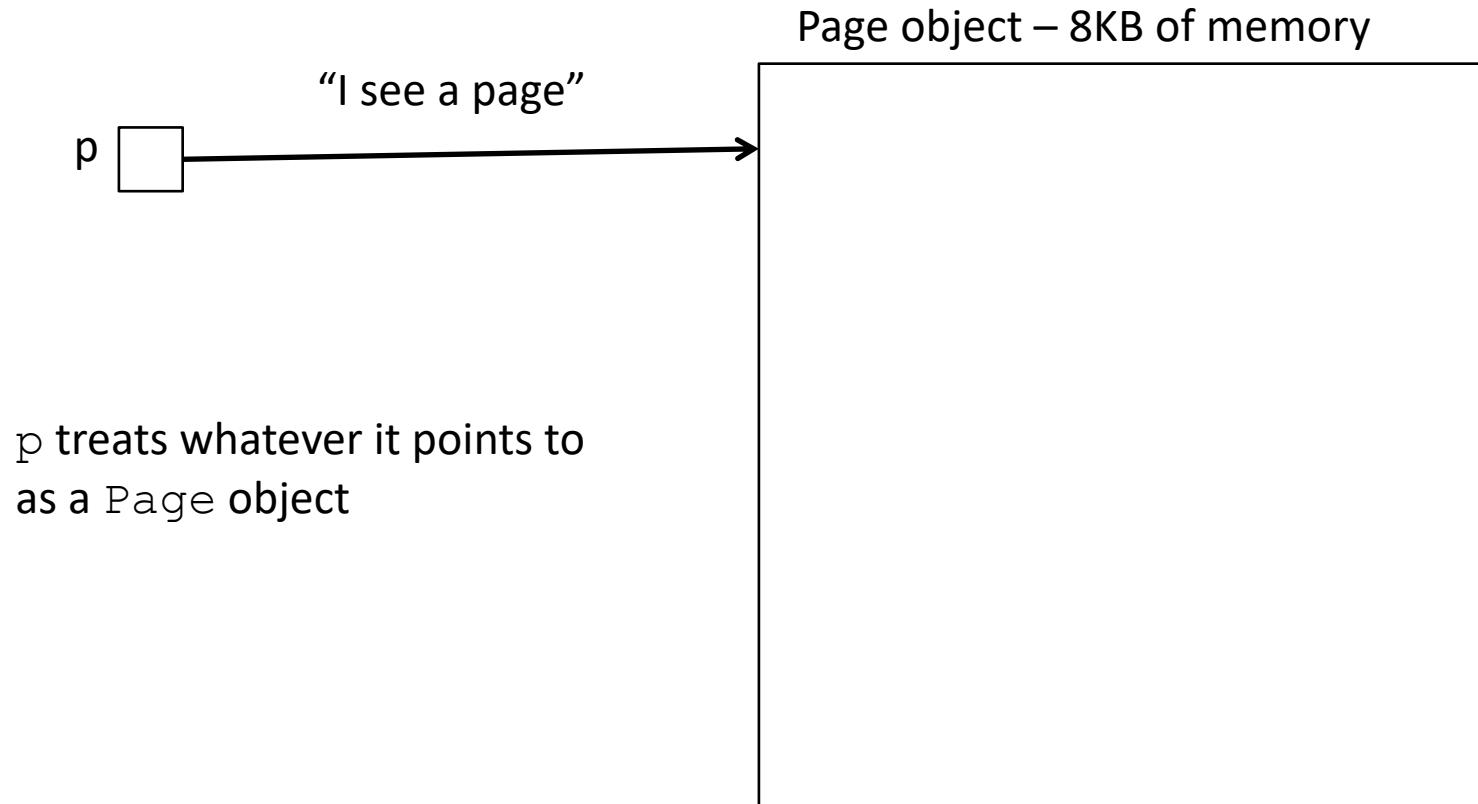```
Page* p;
bufferManager->allocatePage(file, pid, p);
  //Gets a "Raw" Page from a RawFile
```

Page object – 8KB of memory

"I see a page"

p

p treats whatever it points to
as a Page object

```
LeafNode* node = new LeafNode;
```
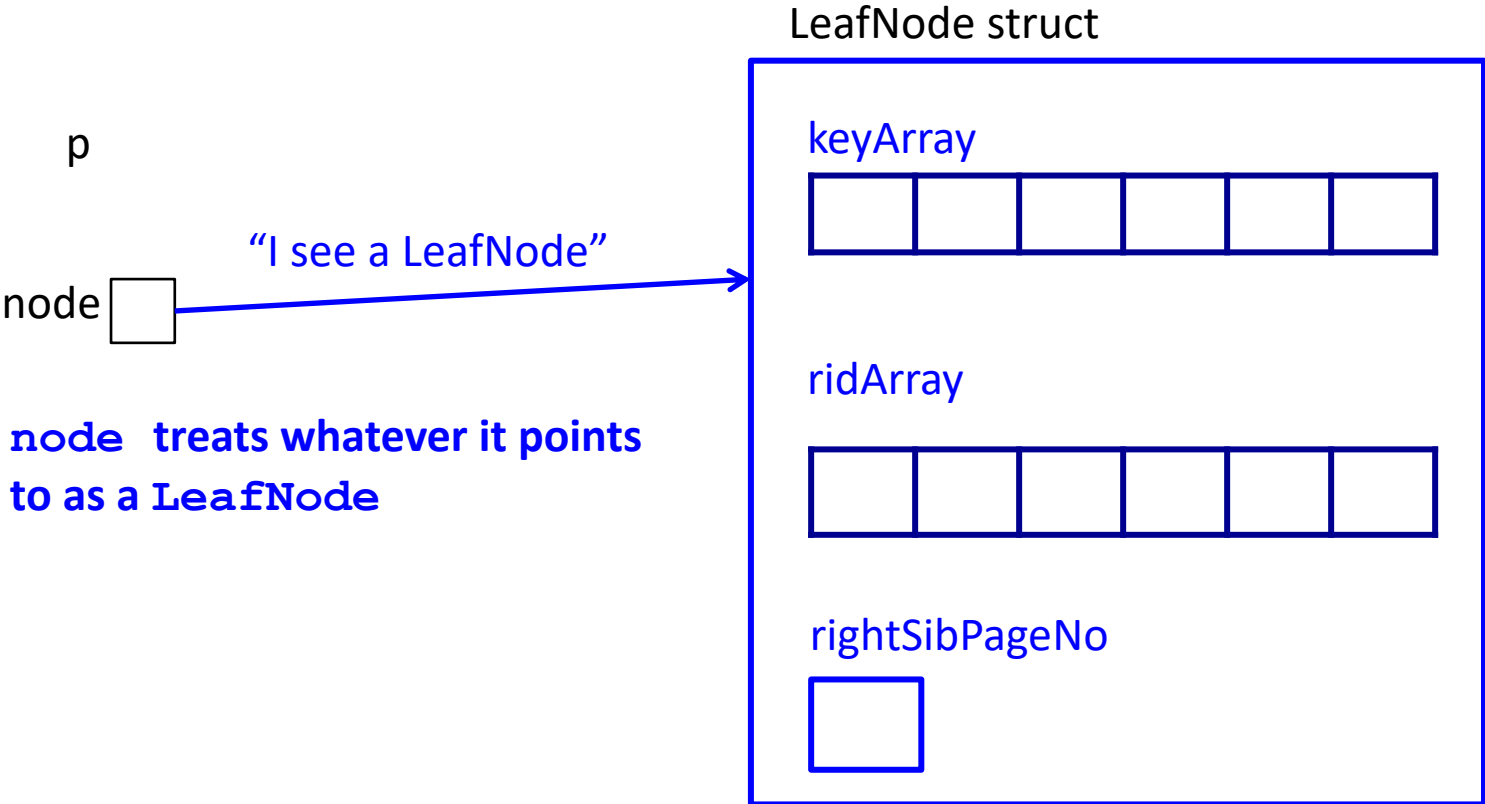
p
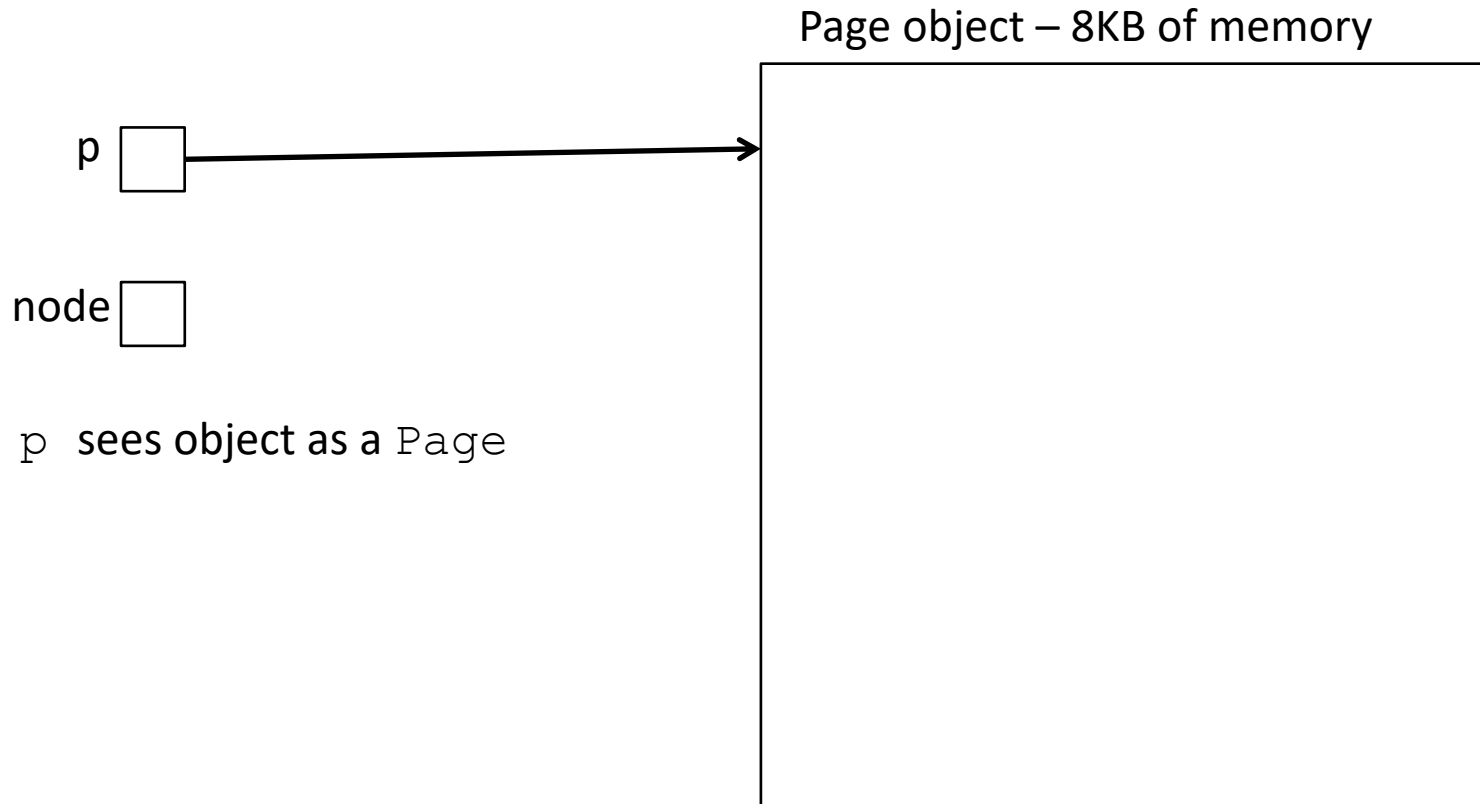
node

"I see a LeafNode"

node treats whatever it points to as a `LeafNode`

LeafNode struct

keyArray

ridArray

rightSibPageNo

```
Page* p;
bufferManager->allocatePage(file, pid, p);
LeafNode* node;
```

Page object – 8KB of memory

p

node

p sees object as a `Page`

```
Page* p;
bufferManager->allocatePage(file, pid, p);
LeafNode* node;
node = (LeafNode*) p;
```

Page object – 8KB of memory

p

"I see a LeafNode"

node

p sees object as a Page
but
node sees it as a LeafNode

keyArray

ridArray

rightSibPageNo

```
Page* p;
bufferManager->allocatePage(file, pid, p);
LeafNode* node;
node = (LeafNode*) p;
node->keyArray[0] = 2;
node->rightSibPageNo = 5;
```

Page object – 8KB of memory

p

"I see a LeafNode"

node

p sees object as a Page
but
node sees it as a LeafNode

keyArray

2					

ridArray

rightSibPageNo

5

```
Page* p;
bufferManager->allocatePage(file, pid, p);
LeafNode* node;
node = (LeafNode*) p;
node->keyArray[0] = 2;
node->rightSibPageNo = 5;
 ...
```

Page object – 8KB of memory

p

"I see a LeafNode"

node

p sees object as a `Page`
but
node sees it as a LeafNode

keyArray

2	5	9			

ridArray

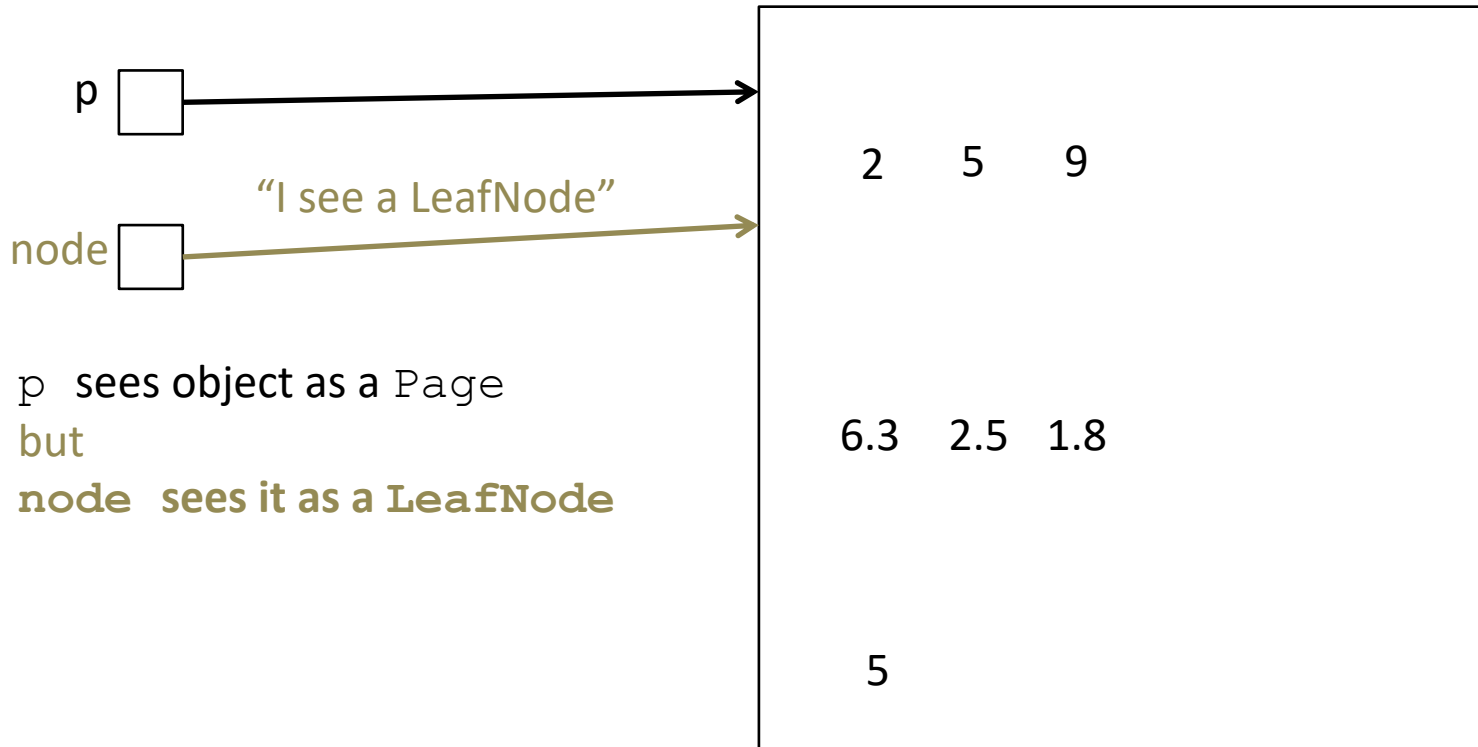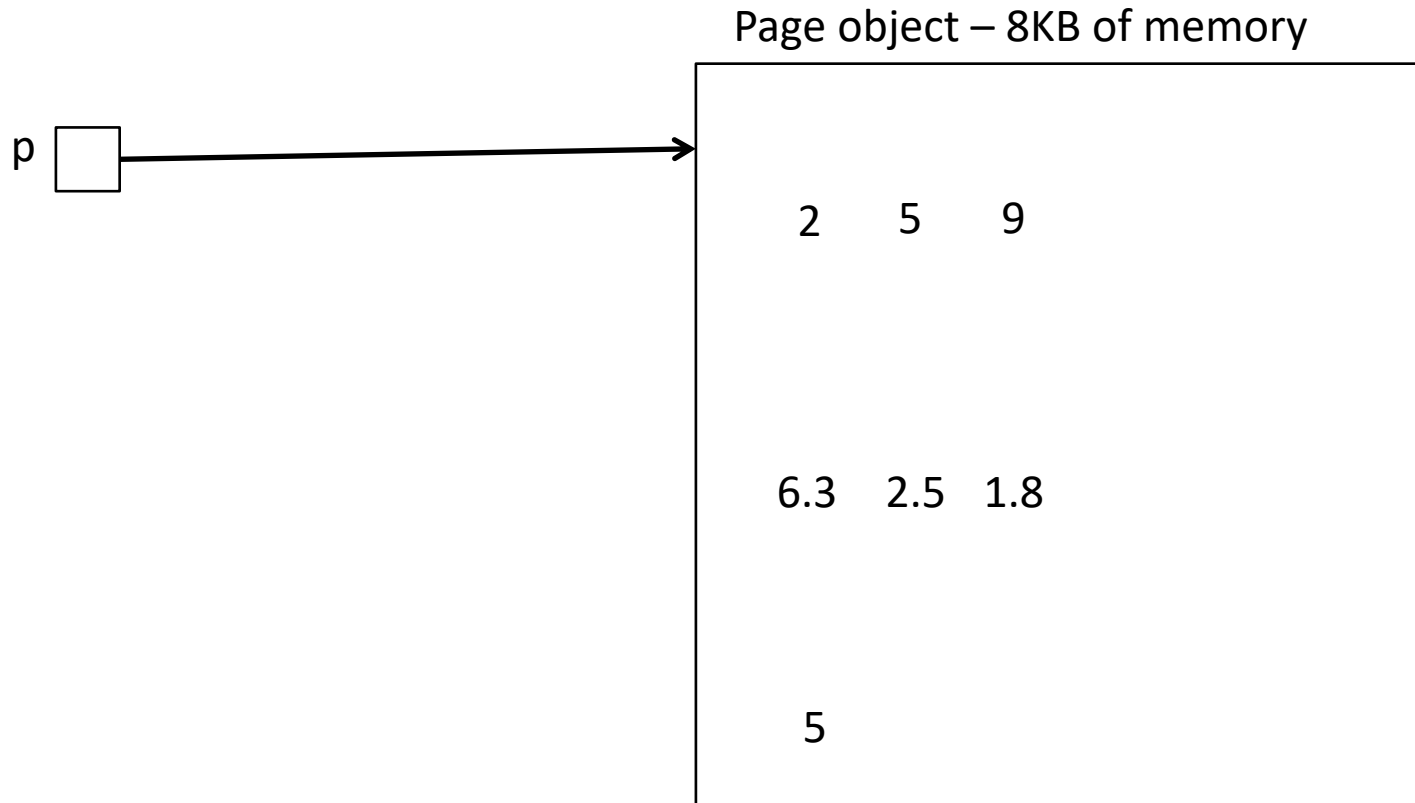| 6.3	2.5	1.8			

rightSibPageNo

5
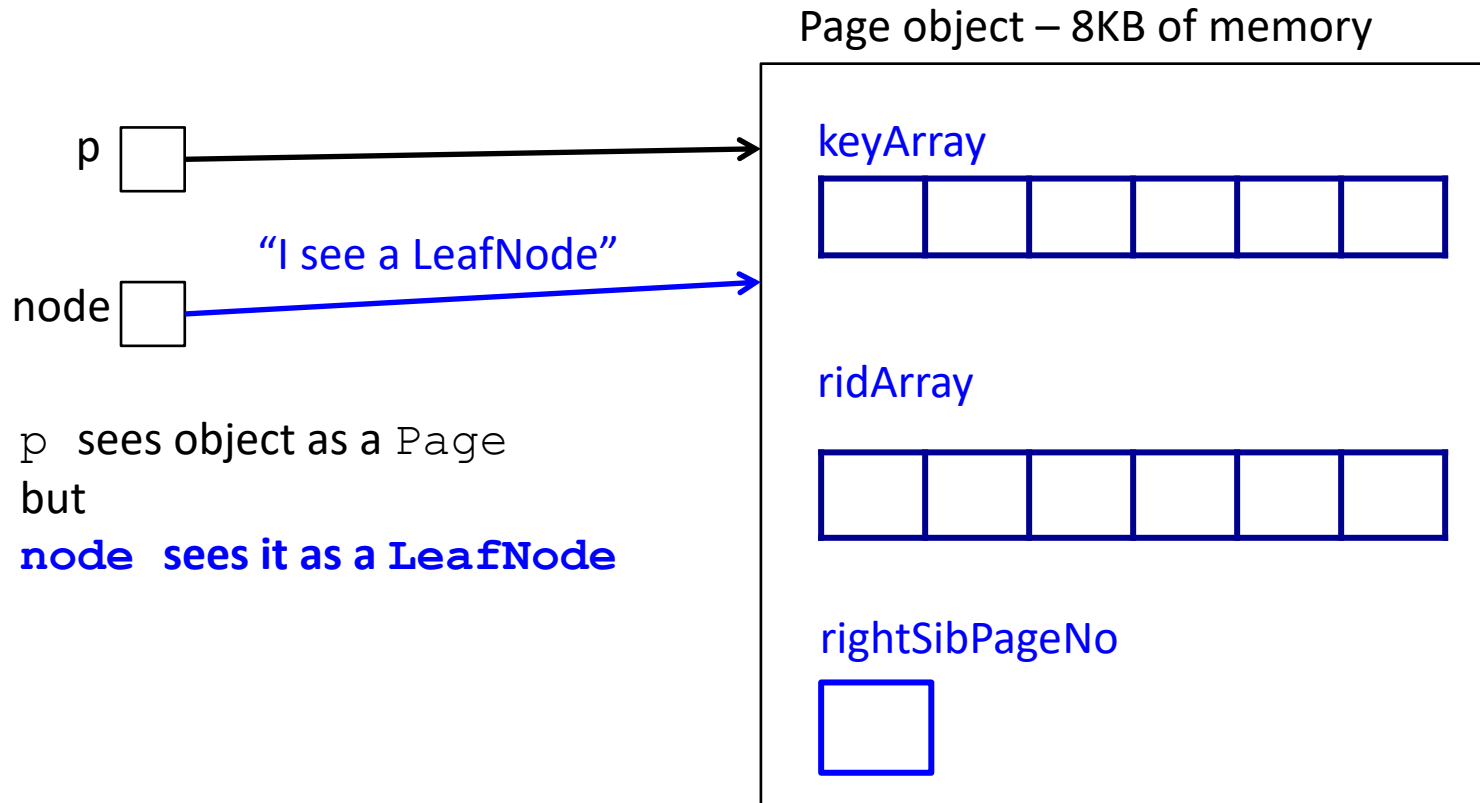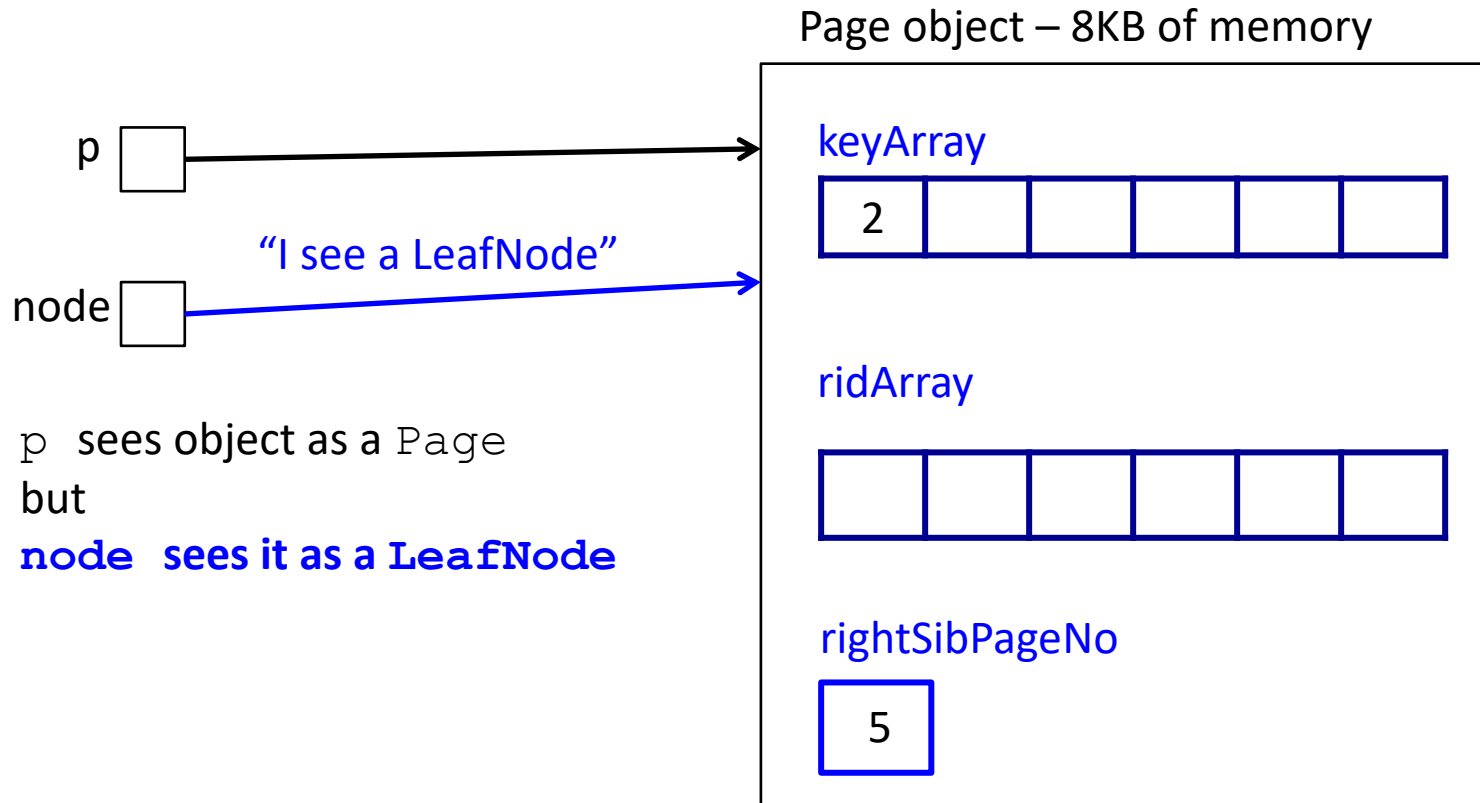
```
Page* p;
bufferManager->allocatePage(file, pid, p);
LeafNode* node;
node = (LeafNode*) p;
node->keyArray[0] = 2;
node->rightSibPageNo = 5;
...
bufferManager->writePage(p);
```

Page object – 8KB of memory

p

"I see a LeafNode"

node

p sees object as a `Page`
but
node sees it as a LeafNode

```
2     5     9



6.3   2.5  1.8



 5
```

```
Page* p;
bufferManager->readPage(file, pid, p);
return ((LeafNode*)p)->keyArray[2];
```

Page object – 8KB of memory

p

2   5   9

6.3   2.5 1.8

5

```
Page* p;
bufferManager->readPage(file, pid, p);
return ((LeafNode*)p)->keyArray[2];
```

Look at is if it were a leaf node

Page object – 8KB of memory

p

keyArray

2	5	9			

ridArray

6.3	2.5	1.8			

rightSibPageNo

5

```
Page* p;
bufferManager->readPage(file, pid, p);
return ((LeafNode*)p)->keyArray[2];
```

Look at is if it were a leaf node

Page object – 8KB of memory

p

keyArray

2	5	9			

ridArray

6.3	2.5	1.8			

rightSibPageNo

5