

# CSE 333 – SECTION 7

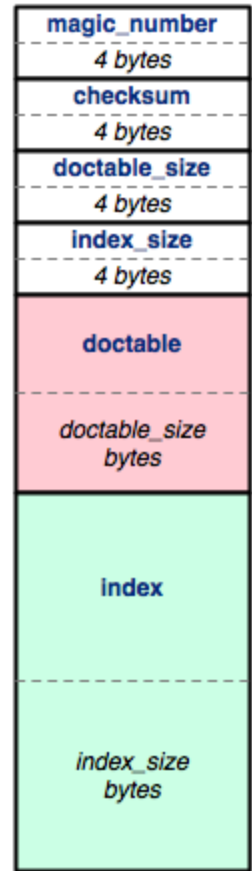
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- HW3 Hex View
- Inheritance Constructors/Destructors

# Hex View

1. Find a hex editor.
2. Learn 'goto offset' command.
3. See HW3 pictures.

```
0000000: cafe f00d 1c42 4620 0000 205b 0000 075d  ....BF .. [...]
0000010: 0000 0400 0000 0000 0000 2014 0000 0001  ....
0000020: 0000 2014 0000 0001 0000 2031 0000 0001  .. ..... 1....
0000030: 0000 204e 0000 0000 0000 206b 0000 0000  .. N..... k....
0000040: 0000 206b 0000 0000 0000 206b 0000 0000  .. k..... k....
0000050: 0000 206b 0000 0000 0000 206b 0000 0000  .. k..... k....
```

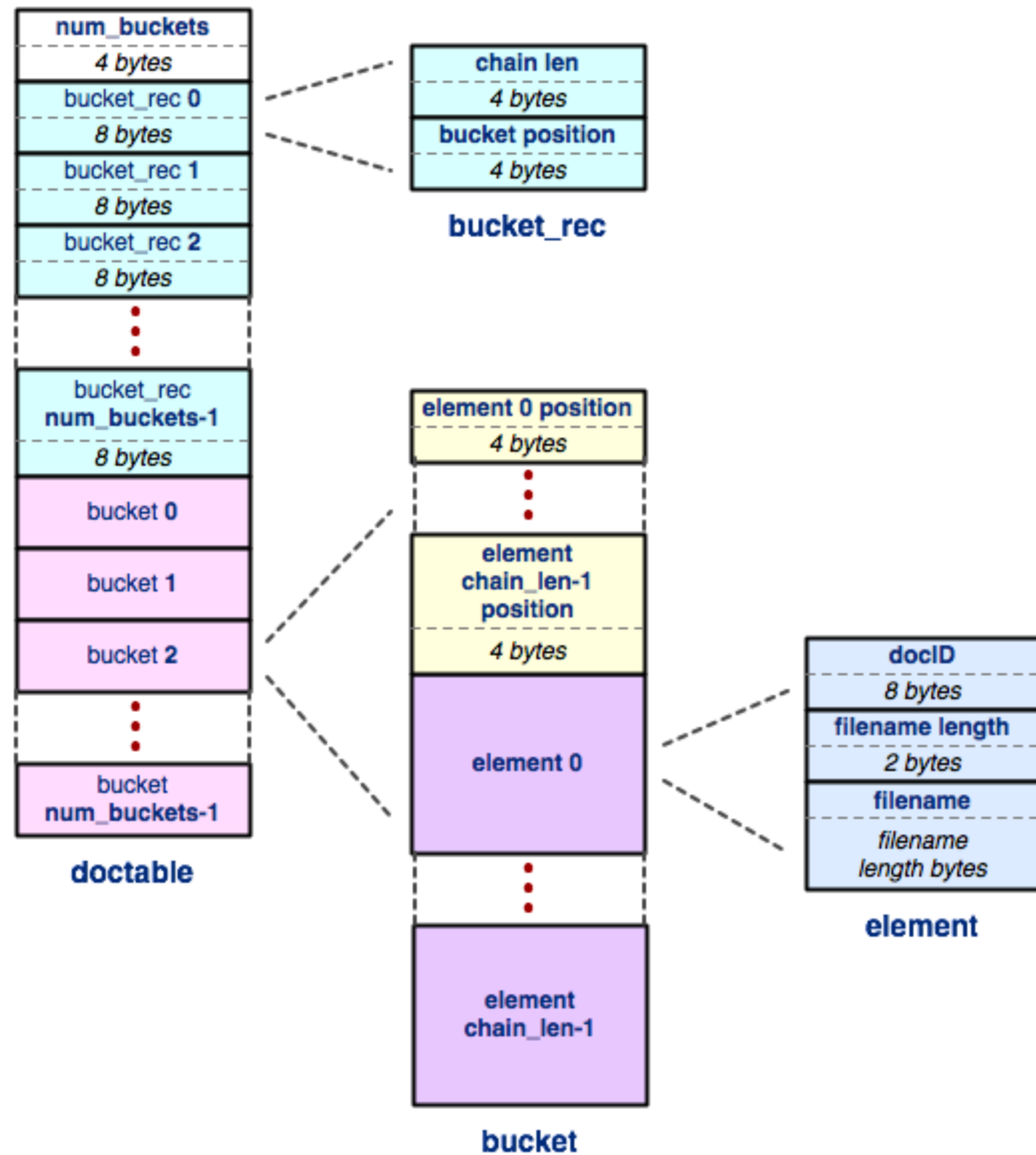


index file

The header:

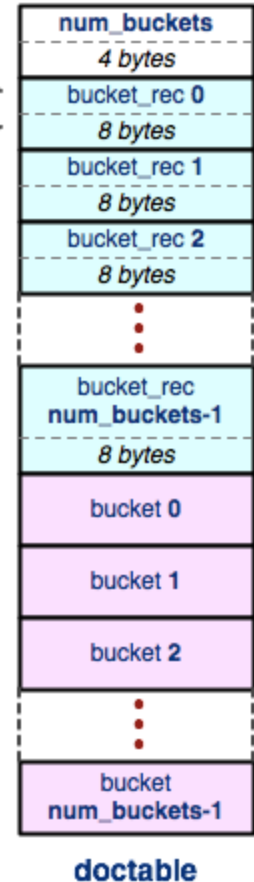
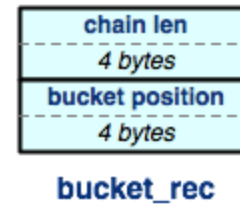
**Magic word**    **Checksum**    **Doctable size**    **Index size**

# Hex View



The doctable

# Hex View



```

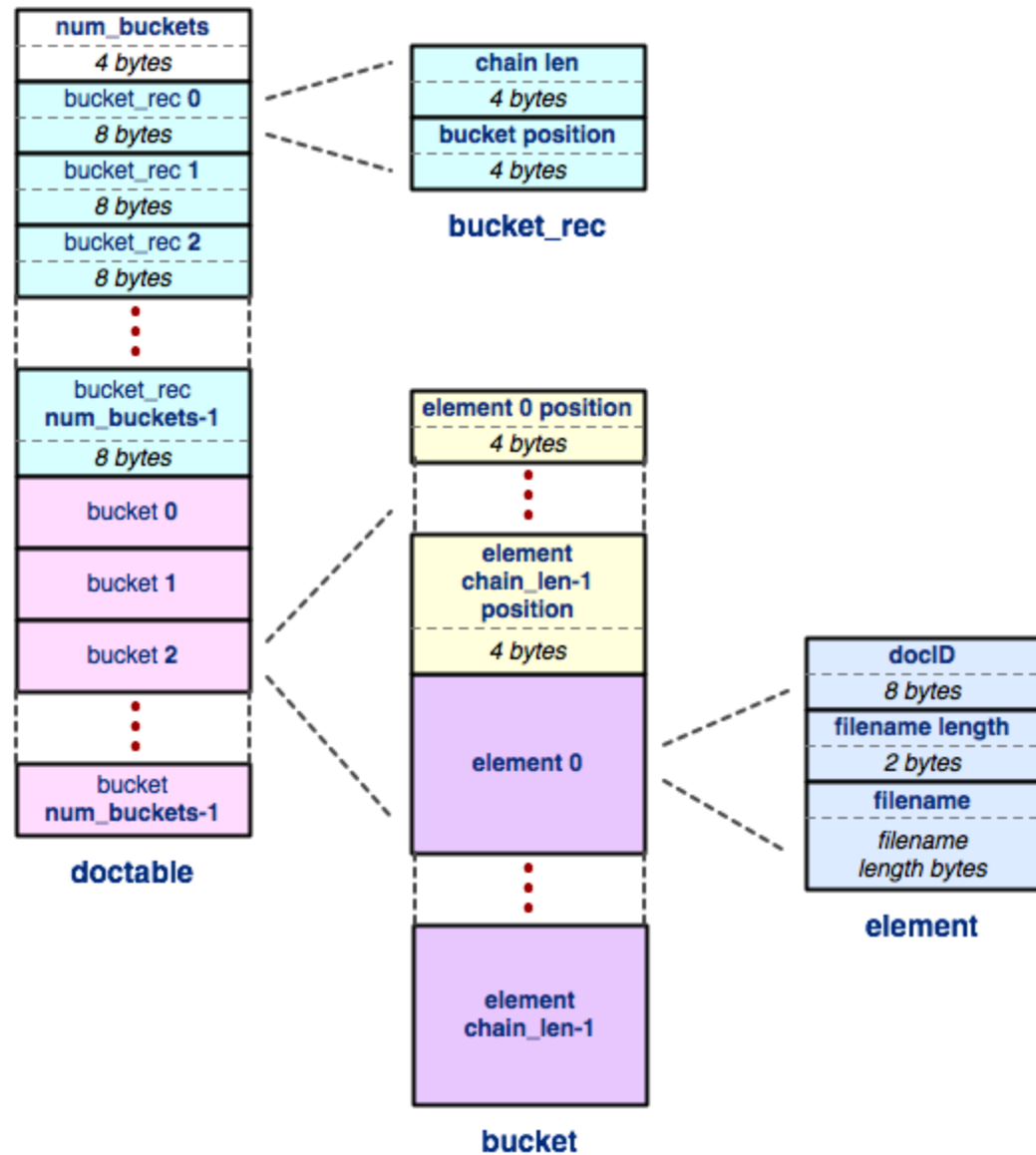
0000000: cafe f00d 1c42 4620 0000 205b 0000 075d  ....BF .. [...]
0000010: 0000 0400 0000 0000 0000 2014 0000 0001  .....
0000020: 0000 2014 0000 0001 0000 2031 0000 0001  .. ..... 1....
0000030: 0000 204e 0000 0000 0000 206b 0000 0000  .. N..... k....
0000040: 0000 206b 0000 0000 0000 206b 0000 0000  .. k..... k....
0000050: 0000 206b 0000 0000 0000 206b 0000 0000  .. k..... k....

0002000: 0000 206b 0000 0000 0000 206b 0000 0000  .. k..... k....
0002010: 0000 206b 0000 2018 0000 0000 0000 0001  .. k.. .....
0002020: 000f 736d 616c 6c5f 6469 722f 632e 7478  ..small_dir/c.tx
0002030: 7400 0020 3500 0000 0000 0000 0200 0f73  t.. 5.....s
0002040: 6d61 6c6c 5f64 6972 2f62 2e74 7874 0000  mall_dir/b.txt..
0002050: 2052 0000 0000 0000 0003 000f 736d 616c  R.....smal
0002060: 6c5f 6469 722f 612e 7478 7400 0000 8000  l_dir/a.txt....
0002070: 0000 0000 0024 6f00 0000 0000 0024 6f00  ....$o.....$o.
    
```

The doctable (part 1):

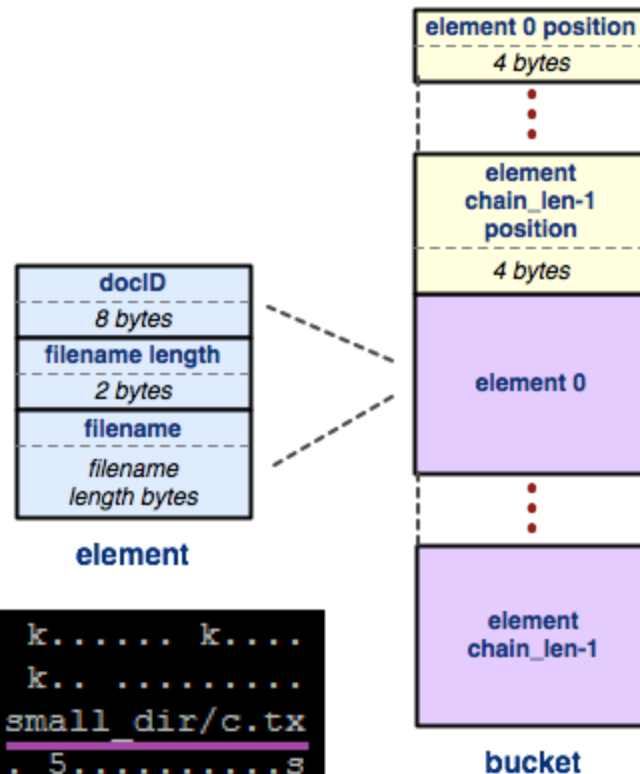
Num buckets ( Chain len Bucket offset )\*

# Hex View



The doctable

# Hex View



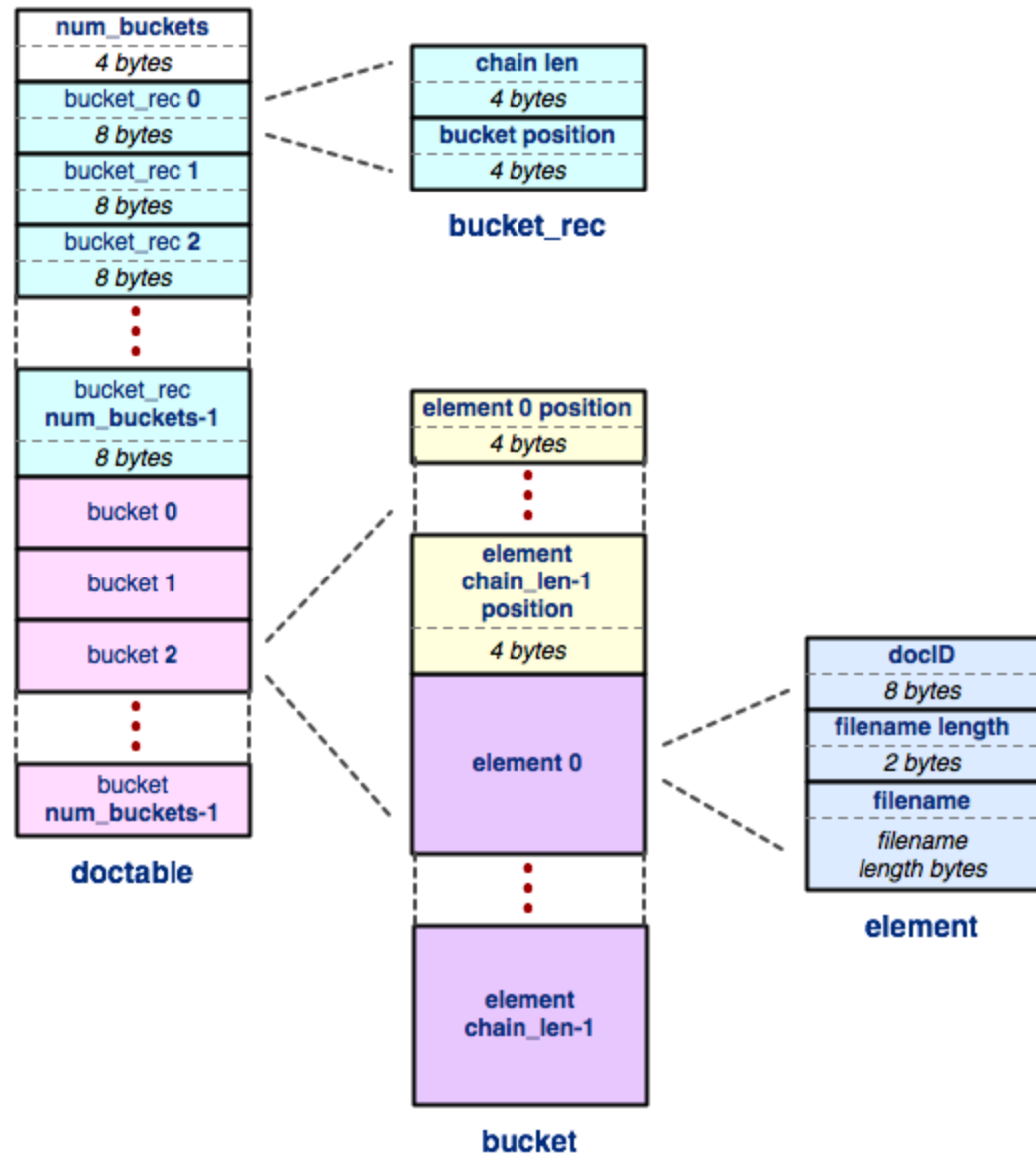
```

0002000: 0000 206b 0000 0000 0000 206b 0000 0000  .. k..... k....
0002010: 0000 206b 0000 2018 0000 0000 0000 0001  .. k.. .....
0002020: 000f 736d 616c 6c5f 6469 722f 632e 7478  ..small_dir/c.tx
0002030: 7400 0020 3500 0000 0000 0000 0200 0f73  t.. 5.....s
0002040: 6d61 6c6c 5f64 6972 2f62 2e74 7874 0000  mall_dir/b.txt..
  
```

The doctable (part 2):

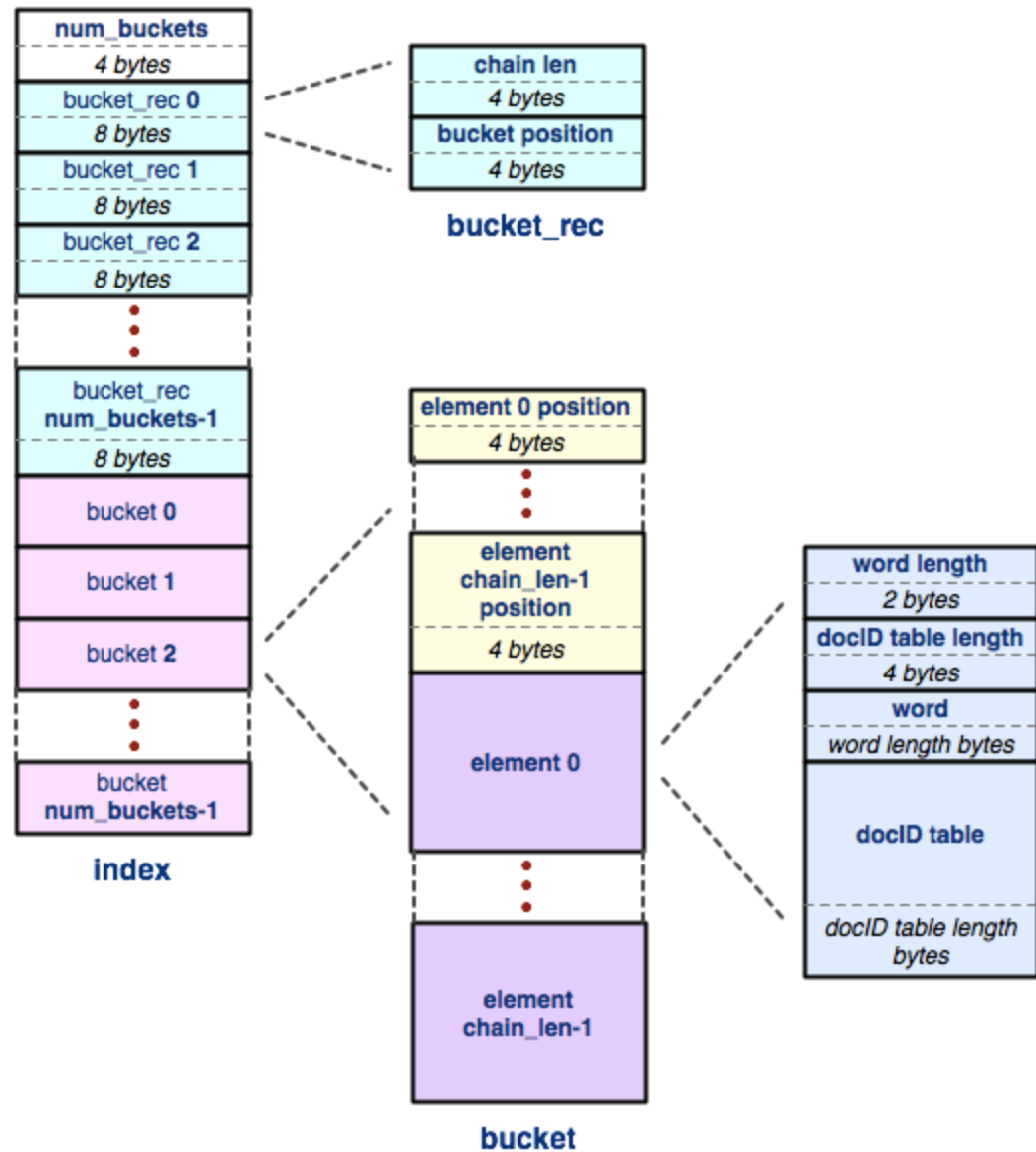
( (Element offset)<sup>n</sup> ( DocID    Filename len    Filename )<sup>n</sup> )\*

# Hex View



The doctable

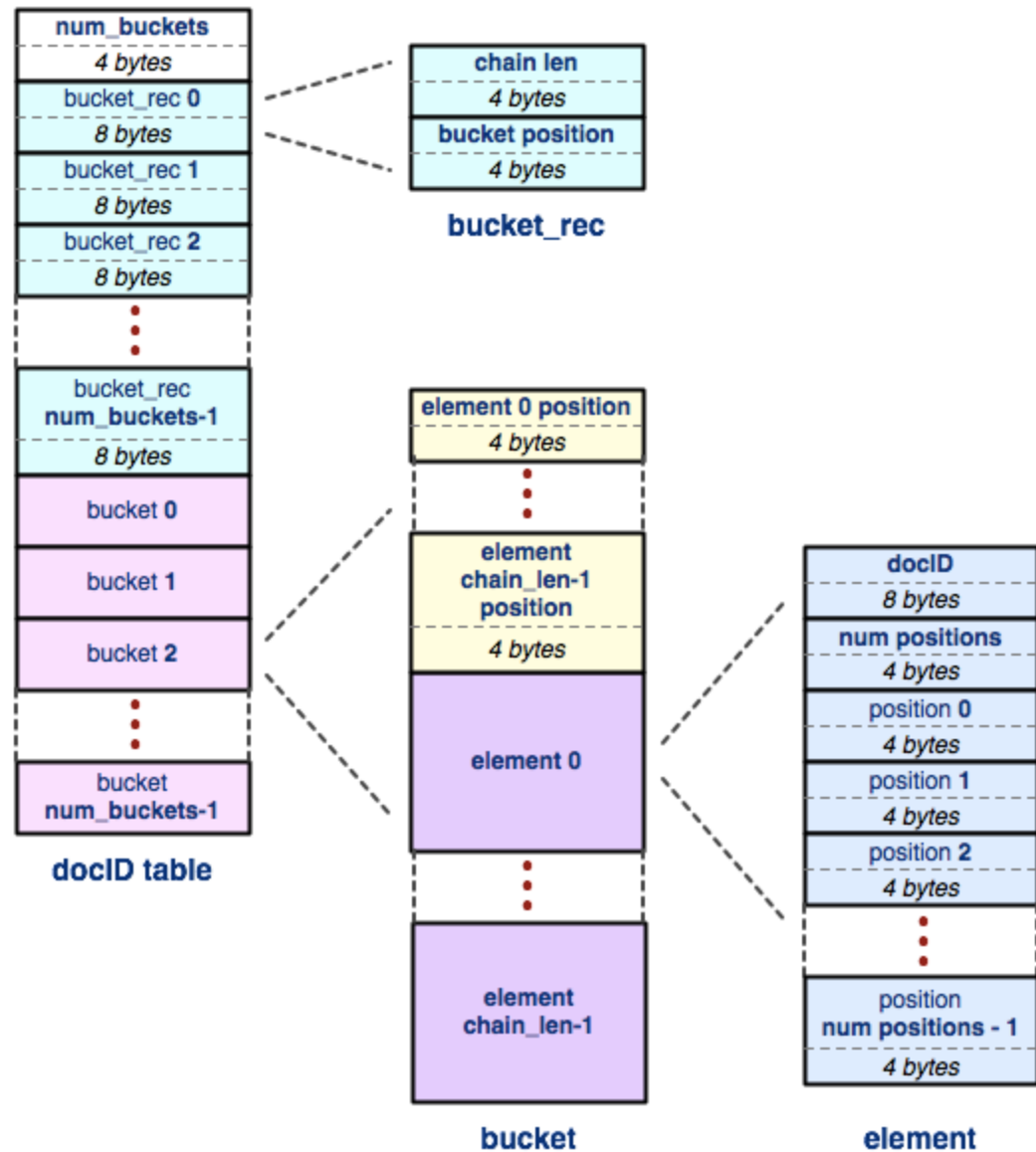
# Hex View



The index



# Hex View



The docID table

# Inheritance Constructors/Destructors

- The derived class:
  - Does not inherit any constructors.
  - MUST call their base class constructor.
    - Omission == calling the default constructor.
- Constructors resolve from base to derived.
- Destructors should be virtual !

# Section Exercise

```
class B {  
public:  
    B(int *k) : k_(k) { out("B::cons"); }  
    void p() { out("B::p"); }  
    virtual void q() { out("B::q"); }  
    void operator=(B &rhs) { out("B::="); }  
    ~B() { out("B::~"); }  
protected:  
    int *k_;  
};  
class Der : public B {  
public:  
    Der() : B(new int(9)) { out("Der::cons"); }  
    void p() { out("Der::p"); }  
    virtual void q() { out("Der::q"); }  
    void operator=(Der &rhs) { out("Der::=" ); }  
    ~Der() { delete k_; out("Der::~"); }  
};
```

```
void out(string s) { cout << s << endl; }  
  
void main() {  
    B base(nullptr), *baseptr;  
    Der der;  
  
    base = der;  
    base.p();  
    base.q();  
  
    baseptr = (B *) new Der;  
    baseptr->p();  
    baseptr->q();  
  
    der.p();  
    der.q();  
    delete baseptr;  
}
```

# Section Exercise

```
void main() {  
    B base(nullptr), *baseptr;  
    Der der;  
  
    base = der;  
    base.p();  
    base.q();  
  
    baseptr = (B *) new Der;  
    baseptr->p();  
    baseptr->q();  
  
    der.p();  
    der.q();  
    delete baseptr;  
}
```

- B::cons
- B::cons
- Der::cons
  
- B::=
- B::p
- B::q
  
- B::cons
- Der::cons
- B::p
- Der::q
  
- Der::p
- Der::q
- B::~
  
- Der::~
- B::~
- B::~