CS 326-01 Files and Linked Lists

Q & A

In class examples

Files, File descriptors, stdin, stdout

readline

Example: head

Linked Lists

countc.c

```
int fd; char buf[512];
int rv
fd = open("foo.txt", 0);
rv=read(fd, buf, 512);
close(fd)
```

mode

success fd > 0

failure fd < 0

success rv = bytes read

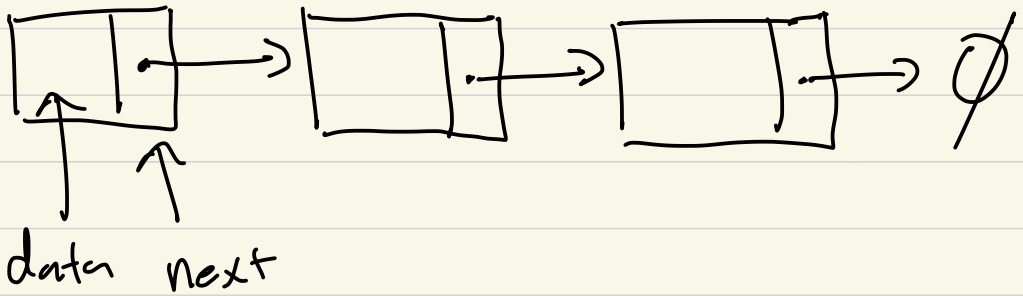
if rv == 0 no more data

failure rv < 0

Three default file descriptor

0	stdin
1	stdout
2	stderr

Linked Lists

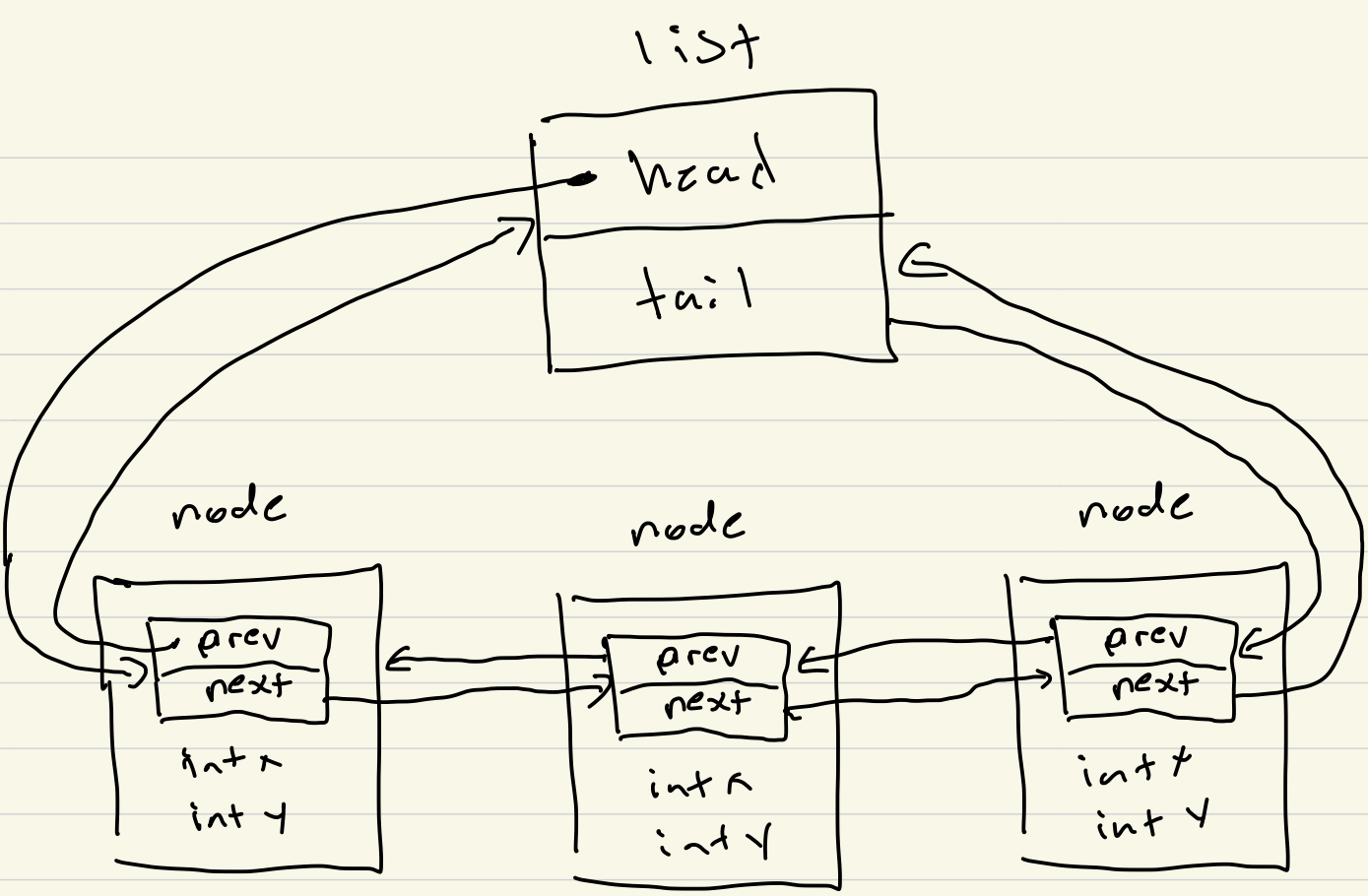



```
struct node {
    struct node *next;
    int x;
    int y;
};

struct node *head;
```

```
struct node n1, n2, n3;
struct node *n;

n = &n1;

n->x = 1;
n->y = 2;
n->next = &n2

n = n->next;

n->x = 3;
n->y = 4;
n->next = &n3

n = n->next;

n->x = 5;
n->y = 6;
n->next = 0;

head = &n1;
```

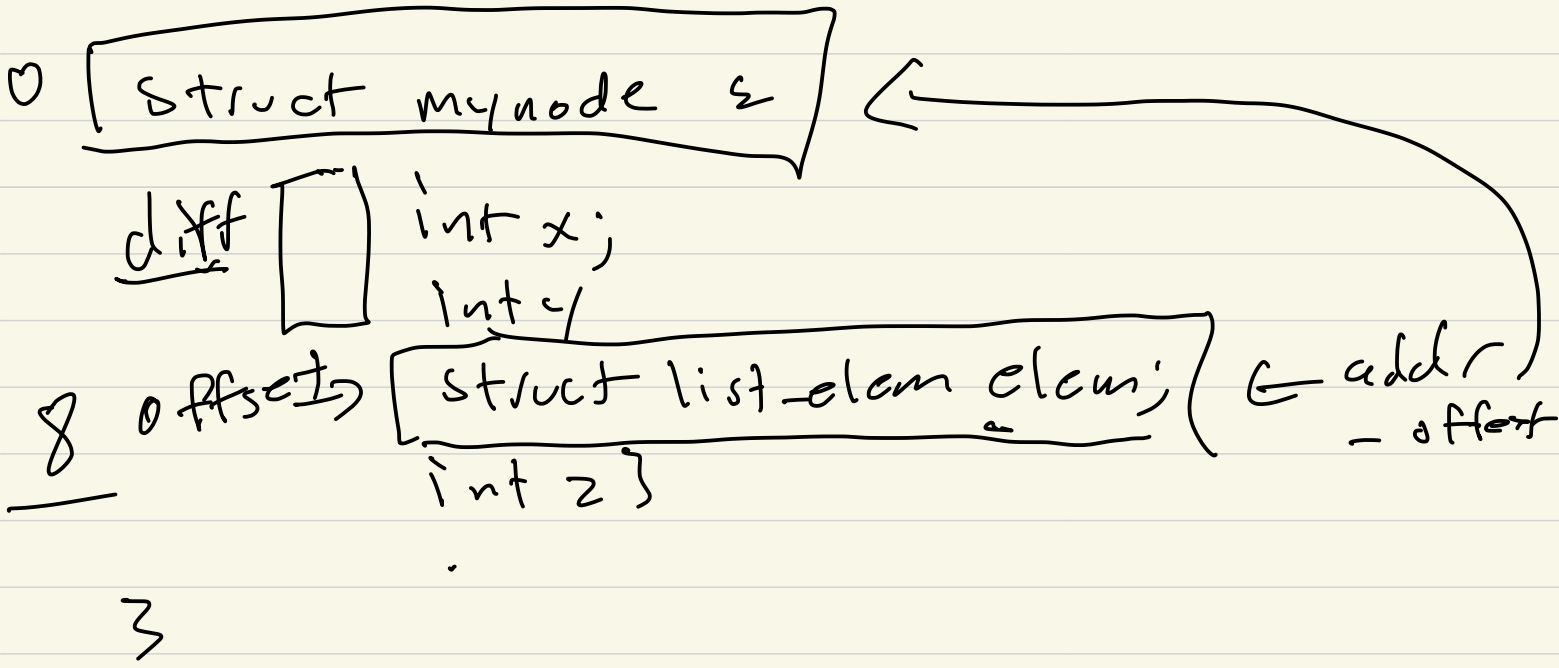
```
void node_add (struct node *head, struct node *n)
{
    go to end of list
    add n
}
```

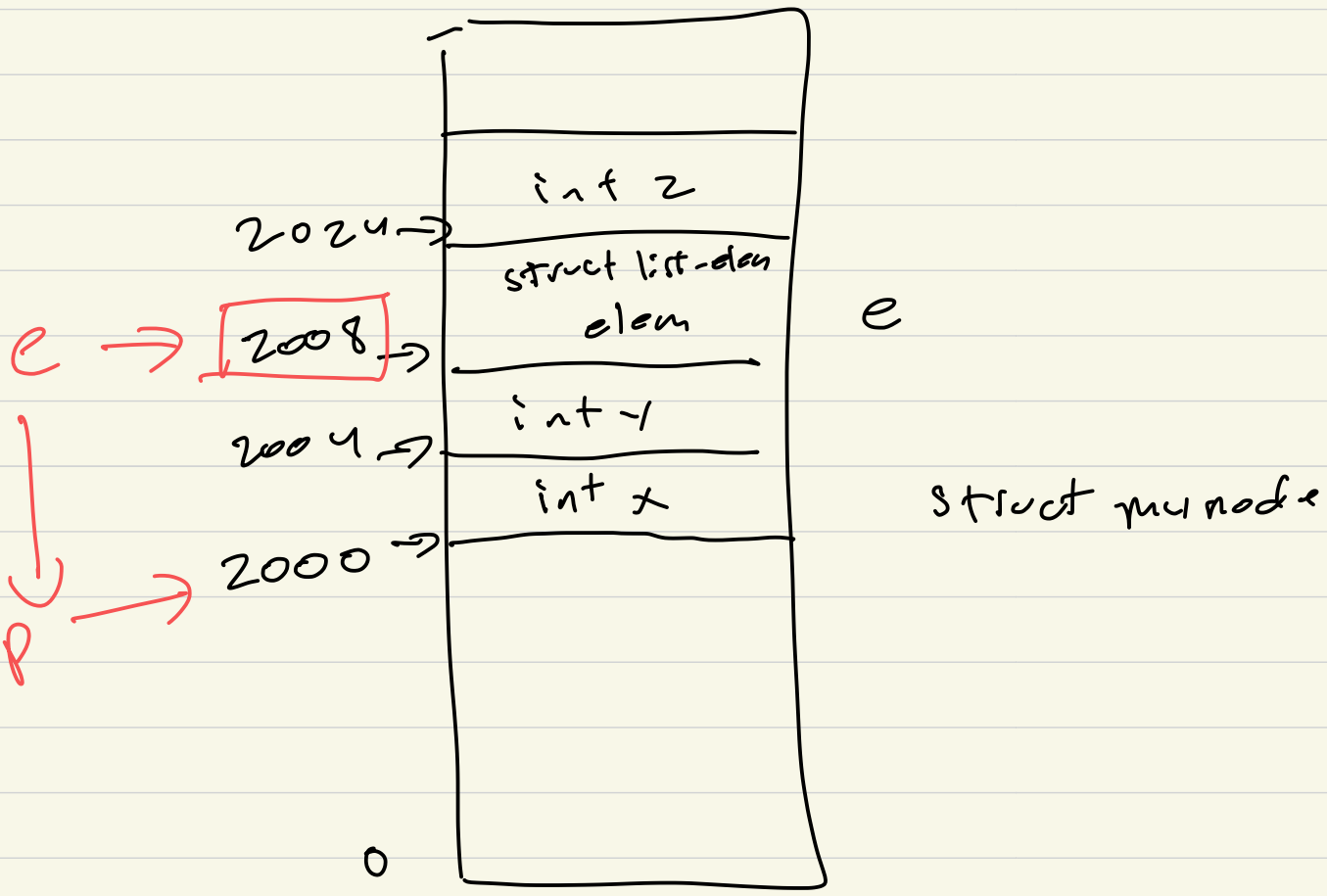
```
struct node {
    struct list_elem elem;
    int x;
    int y;
};

struct list node_list;
```



addr

```
Struct node {
    struct list_elem elem;
    int x;
    int y;

}
```


0
struct mynode {
diff
int x;
int y;
8
offset
struct list_elem elem;
int z }
addr
- offset
}


int z
2024
struct list_elem
elem
e
e
2008
int y
2004
int x
struct mynode
2000
p
0