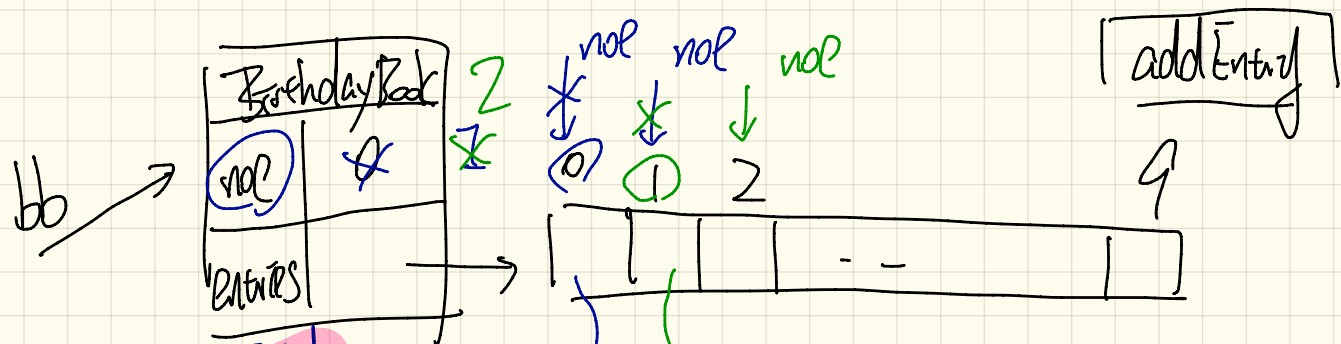


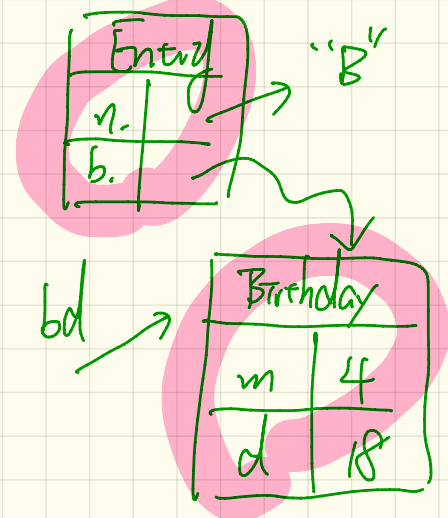
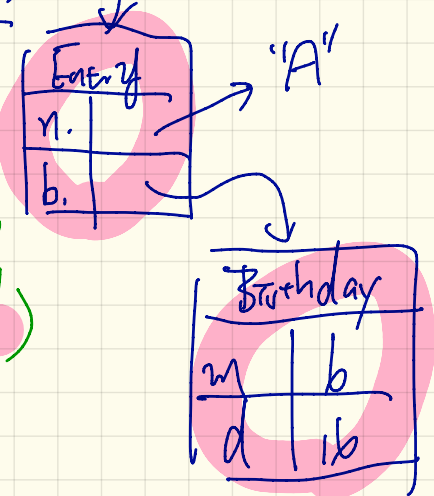
Building a Birthday Book App  
in Java



1 bb.add("A", b)

2 Birthday bd = new Birthday(4, 18);

bb.addEntry("B", bd)



1st iteration:  $ENTRIES[0] = ENTRIES[1]$

bb →

BirthdayBook	
noe	<del>2</del> / <del>5</del>
entries	→

~~bb.removeEntry("C")~~ noe  
~~bb.entries[2]~~ = ~~bb.entries[3]~~  
~~[3]~~ = ↓ ~~[4]~~



int index = index of (n)  
 for (int i = 0; i < noe - 1; i++)

entries[i] =  
 entries[i+1]

E	
n	"A"
e	

E	
n	"B"
e	

E	
n	"C"
e	

E	
n	"D"
e	

E	
n	"E"
e	

entries[noe-1] = null

BirthdayBook bb = new BirthdayBook();

noe -- 3

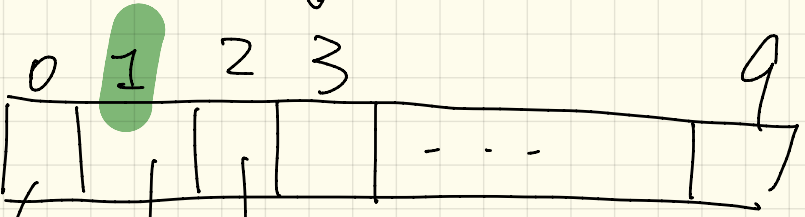
used to be at bb.entries[noe-1]

addEntry  
extended

bb →

Birthday Book	
no. of	3
ENTRIES	→

no. ↓



bb.addEntry("B", 4, 18)

E	
n.	"A"
b.	1

E	
n.	"B"
b.	1

E	
n.	"C"
b.	1

BZ	
m	<del>18</del>
d	<del>18</del>

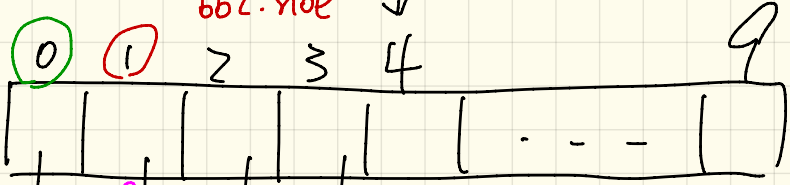
4 18

bb

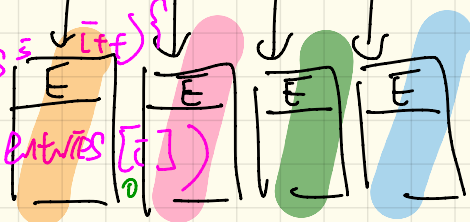
BB	
noe	4
entries	

bb. equals (bbz) noe  
 False ; bb.noe !=  
 bbz.noe

equals



for(int i=0; i < bb.entries; i++)  
 [this.entries[i].equals(other.entries[i])]  
 } bb



bb.equals(bbz)  
 this other

bbz

BB	
noe	3 4
entries	

noe noe  
 \* noe

