

```
C:\Users\김유진>python test.py -c index.txt 3
C:\Users\김유진>python test.py -i index.txt input.csv
C:\Users\김유진>python test.py -s index.txt 24
26
10
NOT FOUND
C:\Users\김유진>python test.py -r index.txt 26 70
26,1290832
37,2132
68,97321
```

index - Windows 메모장

파일(F) 편집(E) 서식(O) 보기(V) 도움말(H)

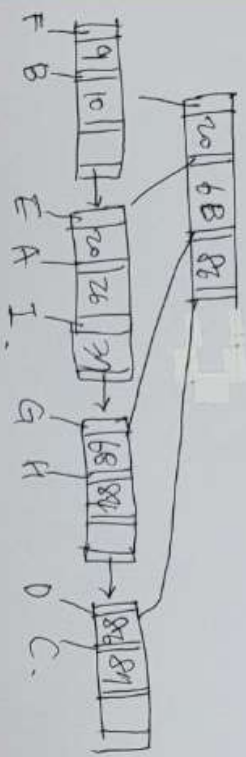
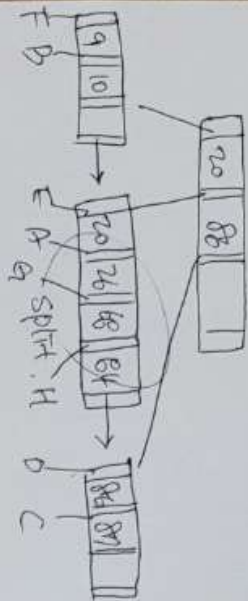
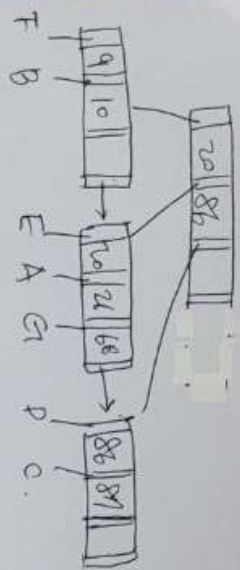
degree : 3

26 /

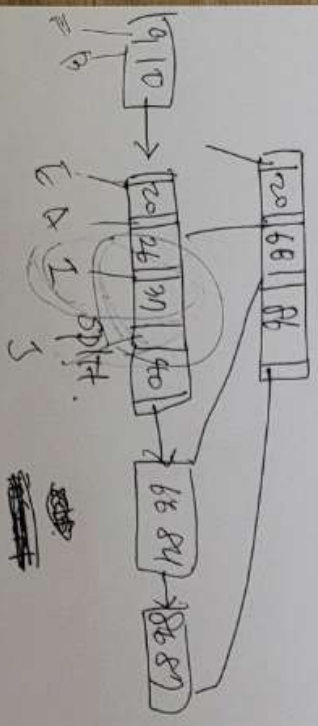
10 / 68 86 /

leaf:9 -> 10 20 -> 26 37 -> 68 84 -> 86 87 ->

value:87632 | 84382 57455 | 1290832 2132 | 97321 431142 | 67945 984796 |

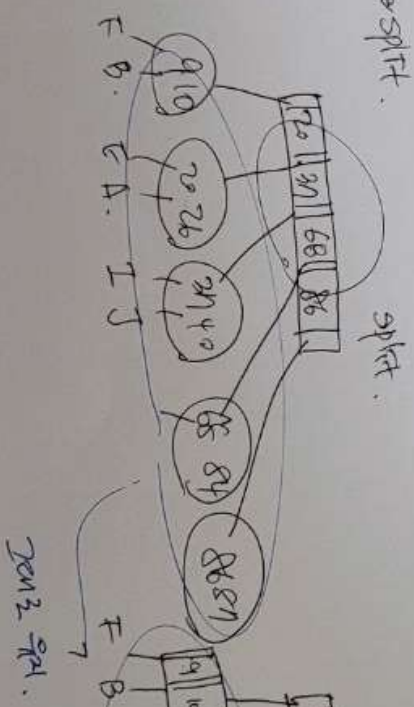


insert 40. → leaf 37 split & merge → split.

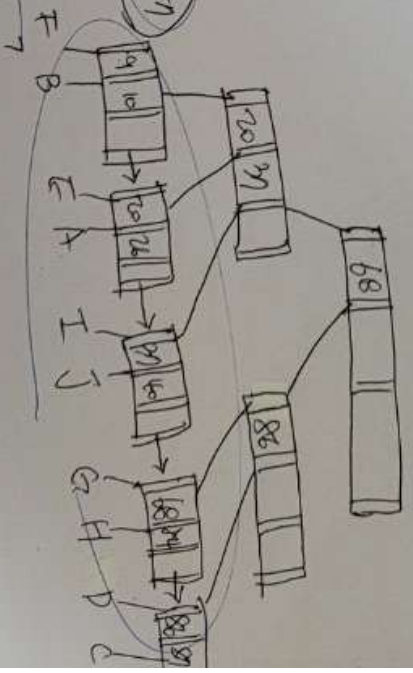


~~split~~
~~merge~~
~~split~~

- (split 때 중간 부분도 가 봐야 함.)
non-leaf node의 split은.
① 아래서 중간은 값을 받아 저장.
② mid 는 새로운 key로 사용.



재귀적.

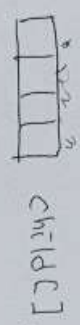
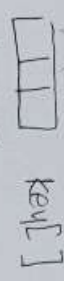


LE:



(이전, 다음 노드 가리키기)

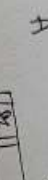
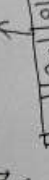
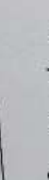
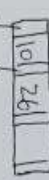
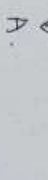
부모 노드 가리키기.



non-leaf child 노드를 가리키기.
leaf value를 가리키기.

child[4]는 다음 노드 가리키기.

input.csv
26 A
10 B
86 C
20 D
9 E
66 F
84 G
30 H
7 I



root = null 일때 insert

비노드에 key: 26, child: A

to insert

가운데에 bisect.insort (노드, key, 10)

value-index = bisect.bisect-left (노드, key, 10)

child[], insert (value-index, value)

//

//

split * degree + 1 IF len(self.key) > degree: split.

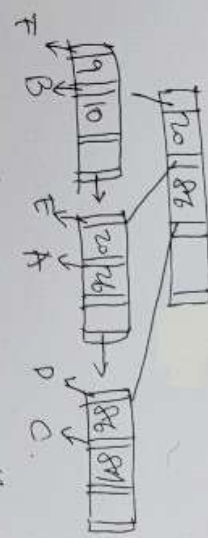
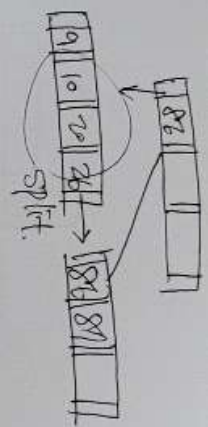
mid = degree / 2 + 1

newnode에 data 넣기.

가운데에 넣기 시작.

if < 노드 값: 비노드 key에 newnode, child [self, new]

else: self에 새 넣기 노드 = self



- H3를 key 앞에 있는 leaf에 넣기. 재귀에서 불러오기.
- 삽입할 값 찾아주는 것은.

root = null.

for k in root.key

if k > 10:

child-index = k

if i = 0.

for k in self.key

if k > 10:

child-index = i

else: i = i + 1.

leaf에 저장해 주라.

self.child[child-index]에 new 넣기.

- leaf에 저장

노드 값

노드 값

child-index = bisect.bisect.bisect-right()

append, child.insert (child-index, new)