CS1555 Assignment 7
Siming Zheng siz11
Martin Kennedy
12/6/17

Qutestion1:

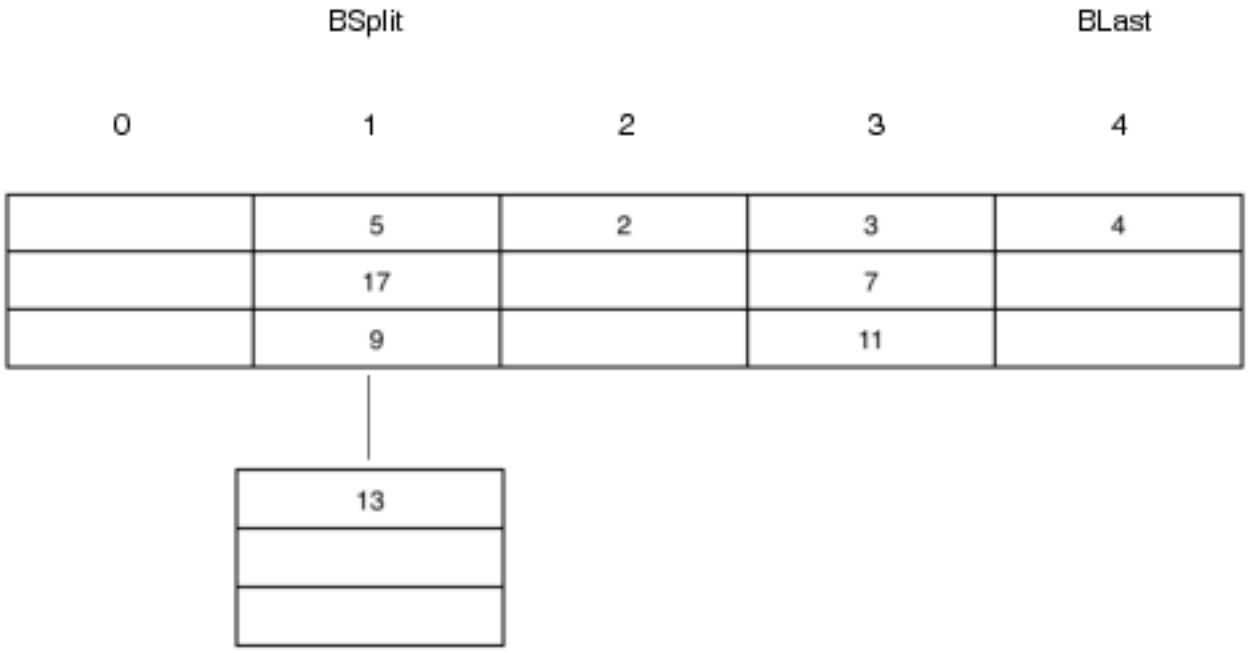
(a)
1) Insert 2, 3, 5, 7, 11, 17, 9, 13, 4. 13 mod 4 = 1, put into overflow bucket.

BSplit BLast

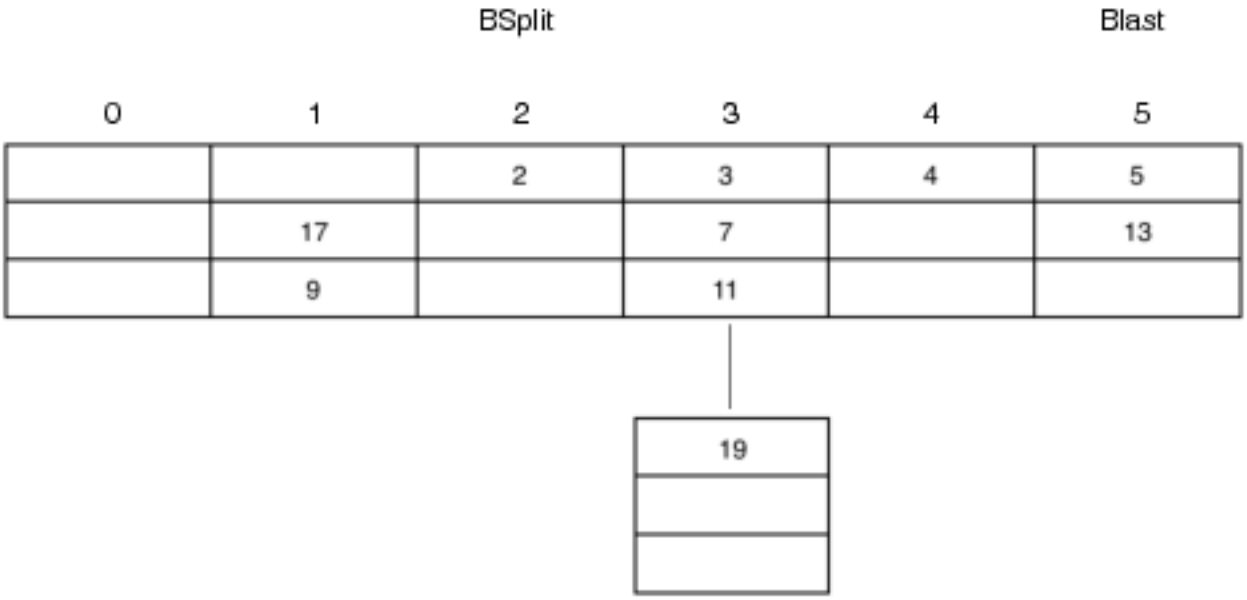
0	1	2	3
4	5	2	3
	17		7
	9		11

13

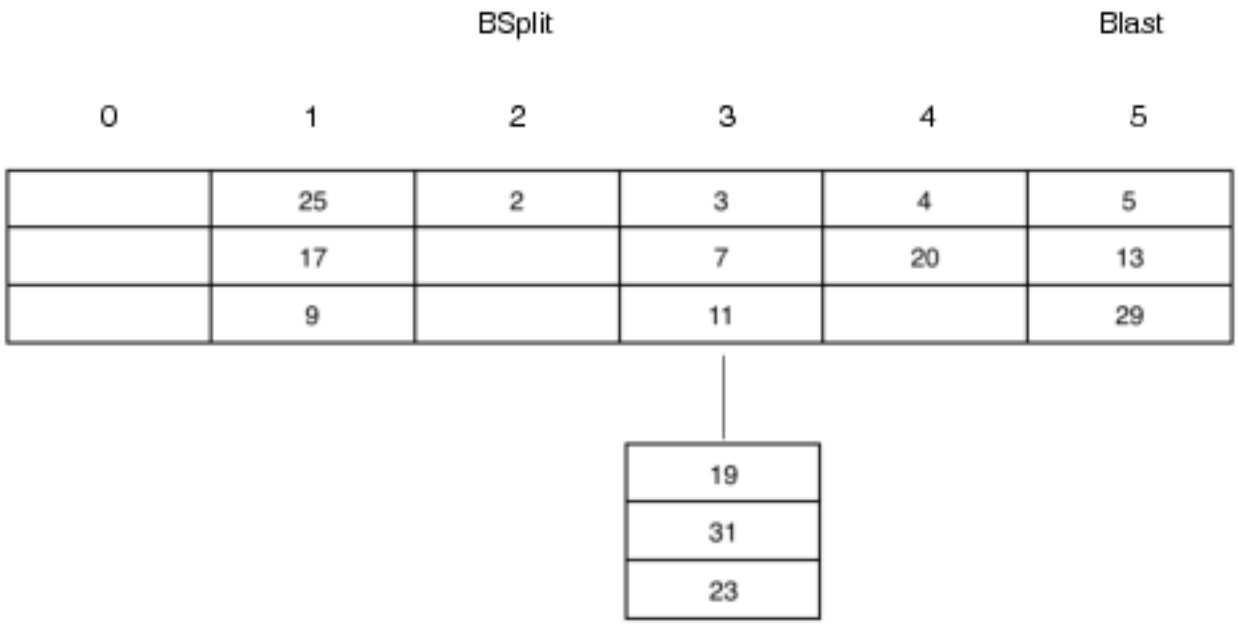
2) Insert 19, 19 mod 4 = conflict with bucket[3]. Split bucket[0], add bucket[4] 4 mod 8 = 4, put 4 into bucket[4], increment BSplit. 19 still in conflict with bucket 3.



3) Split bucket[1], add bucket[5], {5,13} mod 8 = 5, put 5 and 13 into bucket[5]. Overflow bucket for bucket[1] is freed. New overflow bucket is added due to 2 consecutive splits for 19 in conflict to bucket[3]. Put 19 into overflow bucket for bucket[3].



4) Insert 20, 29, 31, 25, 23. 20 mod 4 = 0, bucket[0] has split, 20 mod 8 = 4, and so on.



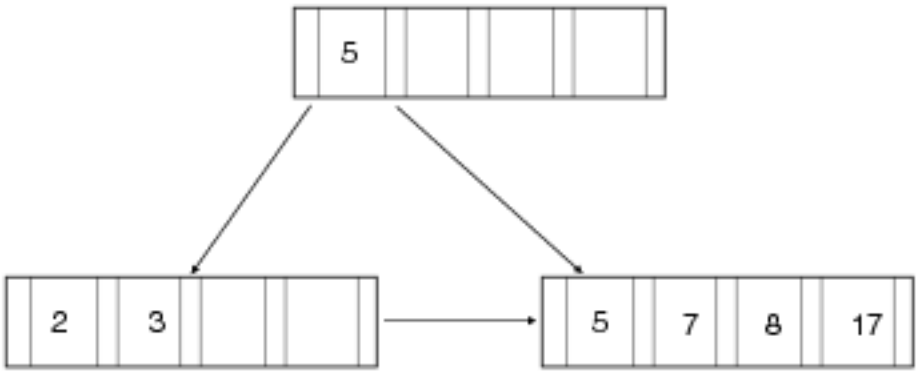
(b)
5) Delete 7, 23, 31

BSplit Blast

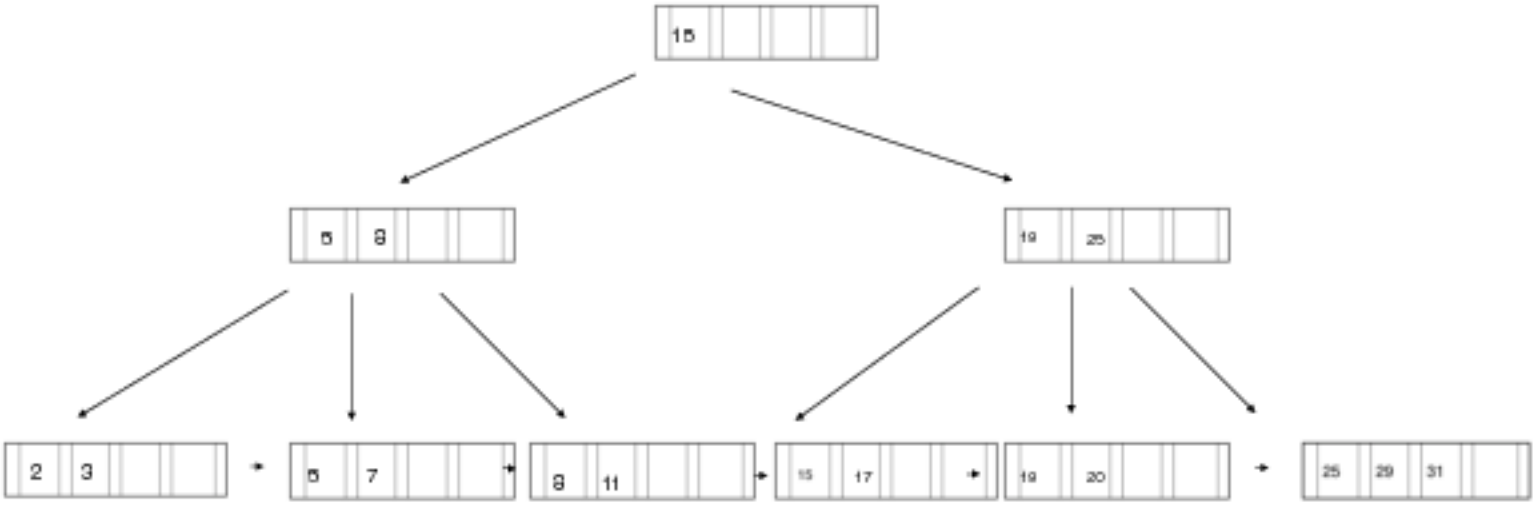
0	1	2	3	4	5
	25	2	3	4	5
	17		19	20	13
	9		11		29

Question 3, B+ Tree

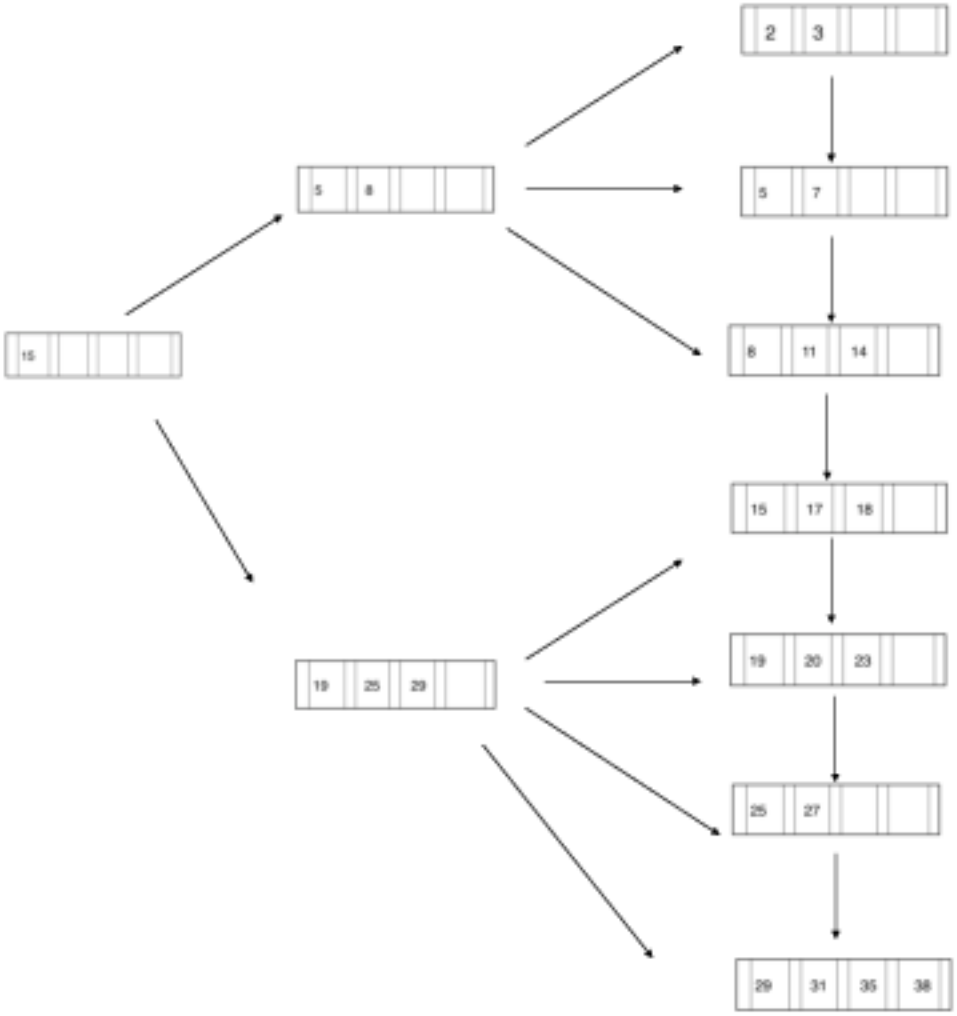
(1) Insert 2, 3, 5, 7, 8, 17



(2) Insert 15, 19, 11, 20, 29, 31, 25



(3) Insert , 23, 18, 14, 38, 27, 35

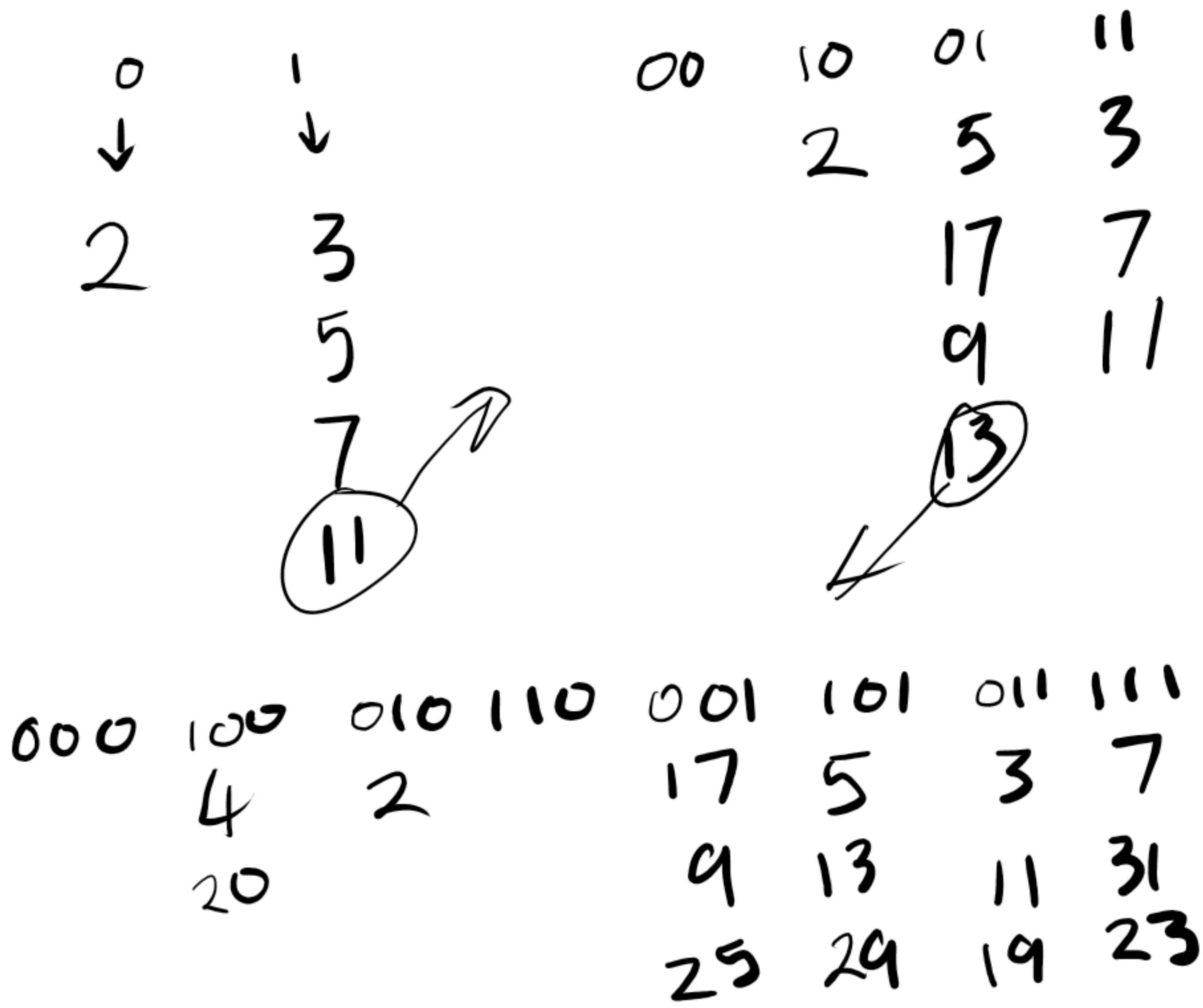


Question 5

(a) H1, H4 are conflict equivalent

(b) H2, H3, H4 are conflict serializable

Q2) Psendokey is just key.



This document produced using GIMP