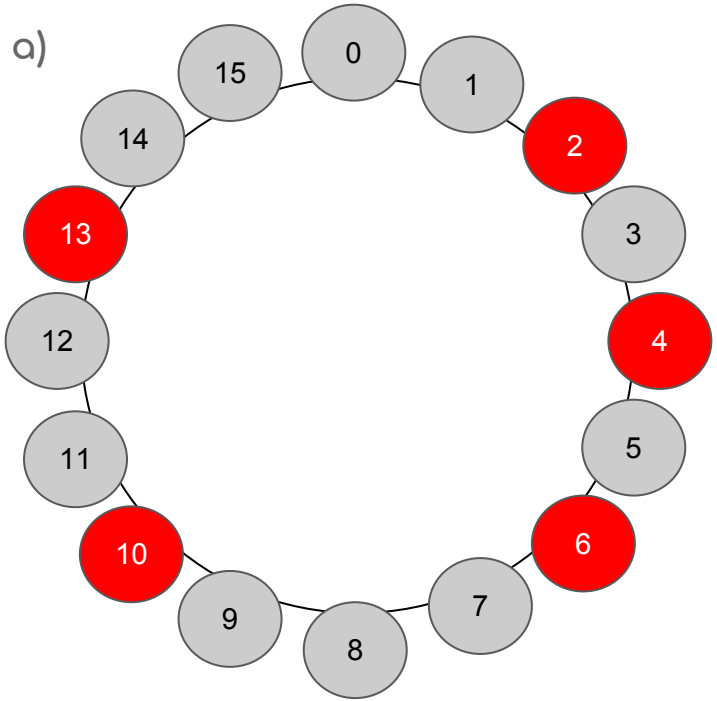
a)



1+4+1+6+2+10+10 % 16 = **2**
4+1+6+2+10+10 % 16 = **1**
1+6+2+10+10 % 16 = **13**
6+2+10+10 % 16 = **12**
2+10+10 % 16 = **6**
10+10 % 16 = **4**
10 % 16 = **10**

n = number of nodes **[16]**
m = bytes needed for key **[4]**
i = i >1 && < m

start: $(id + 2^{i-1}) \% n$
int: (id^i, id^{i+1}) if its last (id^i, id^i)
succ: id of next node

b)

Node 2

start	interval	succ
3	(3,4)	4
4	(4,6)	6
6	(6,10)	10
10	(10,10)	13

Node 4

start	interval	succ
5	(5,6)	6
6	(6,8)	10
8	(8,12)	10
12	(12,12)	13

Node 6

start	interval	succ
7	(7,8)	10
8	(8,10)	10
10	(10,14)	13
14	(14,14)	2

Node 10

start	interval	succ
11	(11,12)	13
12	(12,14)	13
14	(14,12)	2
2	(2,2)	4

Node 13

start	interval	succ
14	(14,15)	2
15	(15,1)	2
1	(1,5)	2
5	(5,5)	6

c)

Iterative

Recursive

d)

Iterative

Recursive