LAB 2

#1

$x = 0xFC12$

hex mask $0x5$

0010

1111 AND

0010 → $0x2$ hex result

$y = 0xCAFE$

hex mask $0x5$

1110 → 1111 AND → 1110 → $0x6$ hex result

#2

FC12

NO Bit (15)

1111 1100 0001 0010

mask = 1 (0x1)

mask << 15 (0x8000)

~ mask (0x7FFF)

x & mask to clear NO Bit

0111 1100 0001 0010

$= 0x7C12$

CAFE

NO bit 15

1100 1010 1111 1110

mask = 1 0x1

mask << 15 0x8000

~mask = 7FFFF

y & mask = 0100 1010 1111 1110

4 A F E

#3

CAFE

1100 (12) 1010 1111 1110

mask = 1 0x1

mask << 12 0x1000

mask | y to set the bit @ 12

1101 1010 1111 1110

$0x$ D A F E

#4

0x12 0xFE

LO bytes

x 1111 1100 0001 0010

y 1100 0101 1111 1111

(A) (X)

$x = 1110\ 1100$

$x = 0xEC$

(B) $y = EC \wedge FE$ (x, y)

1110 1100

(X) 1111 1110

0001 0010

1 2

$y = 0x12$

(C) x 1110 1100

y 0001 0010 (X)

1111 1110

$x = F\ E$ ✓

#5

(A) mask for 192.168.5.130/24

255.255.255.0

network prefix mask ↑

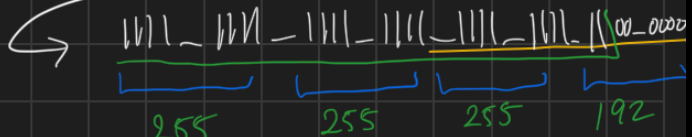
result = 192.168.5.0

Host max = 0.0.0.255

result = 0.0.0.130

(B) masks for 192.168.2.4/26

network prefix max = 26 bits



255 255 255 192

Host mask = 6 bits

0 . 0 . 0 . 63

Result of NPM = 192.165.2.0

4 is less than 92 so it is received.

Host mask result = 0.0.0.4

#8

5046

0101_0000_0100_0110

Year: 9 → 15 → 40 + 1980

Month: 5 → 8 → 2

Day: 0 → 4 → 6

→ Feb 2 2020

#9

49F9

0100_1001_1111_1001

Hr: 10 → 15 → 9

min: 5 → 10 → 15

sec x2: 0 → 4 → 25 x 2 = 50

9:15:50