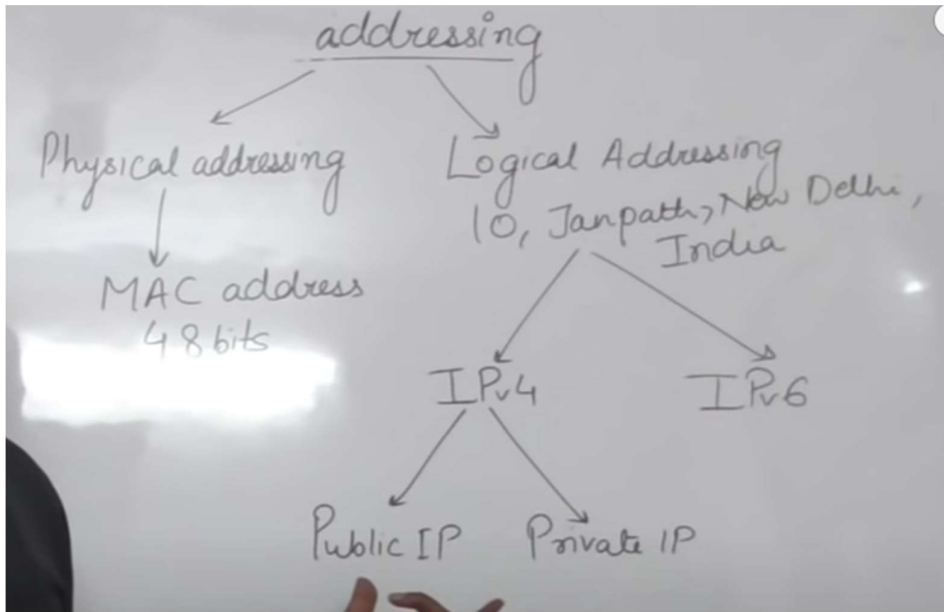


# Ip Addressing

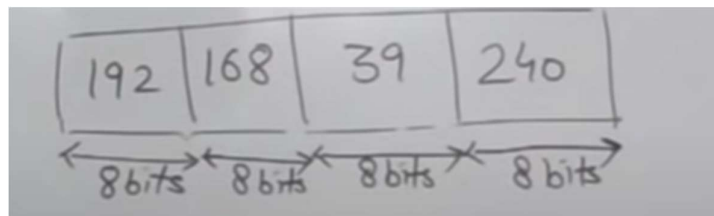
- There are two type of ip are **ipv4** and **ipv6**
- Ipv4 there are two type of ip are **public ip** and **private ip**.



- 32bit logical address hote hai eak ip mein

4 octet hote hai har eak ip mein , matlab 4 sein jada octet eak ip mein nahi ho sakte ,neeche vali pics mein jo ip kein nadir line khicha hai 4 vo har eak octate hai bas line ki jagah hum ip mein **1** laga dete hai samjhane kein liye mene line lagaya ha bas ,har eak octate **8 bit** ka hota hai . matlab  $8*4=32$

For e.x,

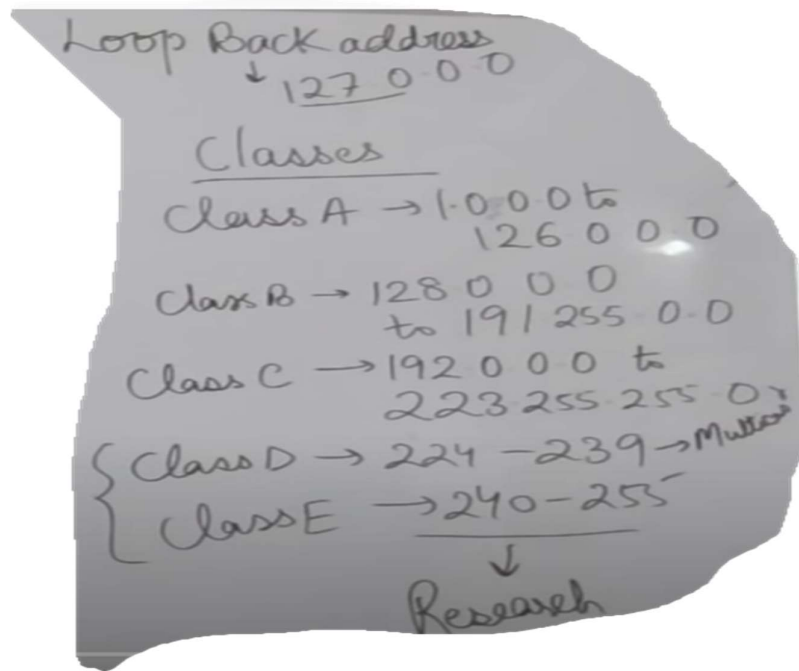


- Maximum value har eak octate mein 256 ho sakti hai bas usase jada nahi aur minimum 0 .but maximum hum 256 likhate nahi kyu ki hardum 1 ip garbage mein chali jati hai .isliye maximum 255 tak hum define karate hai .

For e.x.,

255.255.255.255 (correct ip)

255.255.255.25**6** (wrong ip)



-> **class A** hum tab use karte hai jab humko bahut jada ip ki requirement ho koi bahut bada infrastructure ho aur mujhe jada ip ki jarurat ho toh uske liye hum class A use karte hai ,uke baad **class B** jo hai vo class A sein kam hota hai aur **class c** mein agar humko kam ip ya chotte infrastructure ki jarurat hai tab use karenge .

-> **class D** hum tab use karenge jab humko multitask akrna ho

-> **class E** reserved hai

-> **127.0.0.0** vali ip reserved ip hoti hai is ip ko hum apaane cmd mein dal kar dekhenge toh isase ye pata chalega ki humare pass internet access ho raha ya nahi .

## CIDR VALUE

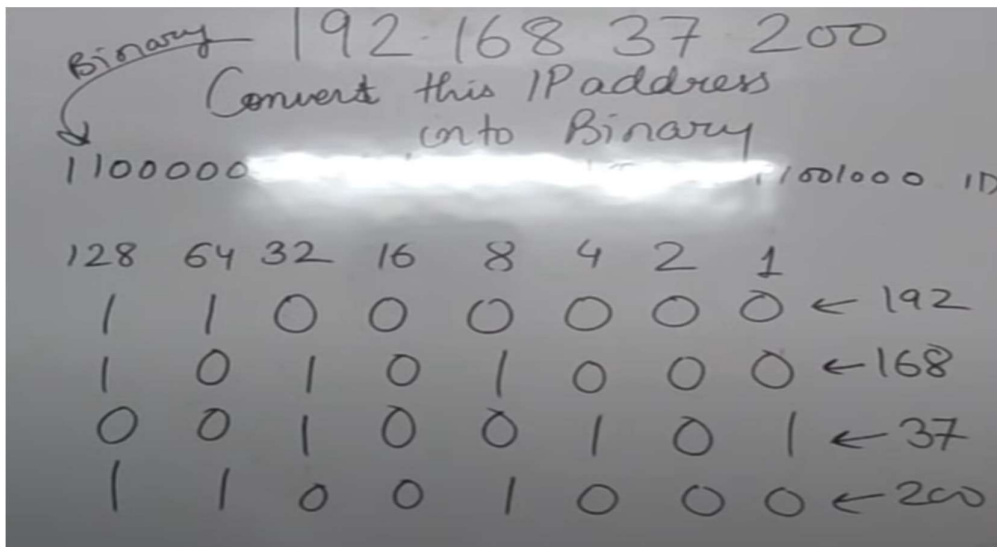
Class A = 8

Class B = 16

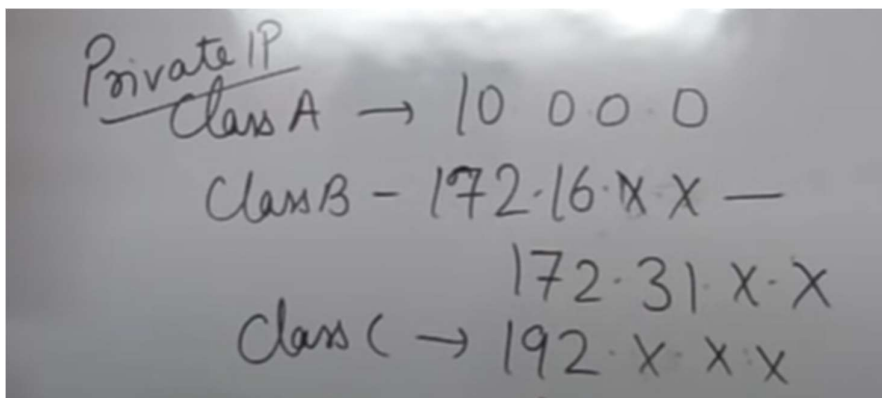
Class C = 24

Class D = 32

## CONVERT IP ADDRESS TO BINARY



### Private Ip:-



### Difference between public ip and private ip

- **Public ip** humko khreedani padti hai but **private ip** ko humein kharedane ki jarurat nahi padti.
- **Public ip** ke in through hum internet ko access kar sakte hai but **private ip** ke in through hum internet ko access nahi kar sakte.
- **Private ip** hum use karate hai locally agar humko kuch computer aapas mein connect karne hai toh uske liye hum private ip use karte hai, kisi college ya office mein ek dusare se in computer aapas mein connect karne ke in liye hum private ip ka use karte hai.

## Router

- ➔ Router ka kaam hi yahi hota hai ki 2 network kein beech mei communicate karana .