

COMPUTER NETWORKS  
PRACTICAL FILE  
(CO 306)



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# Experiment - 1

**AIM-** To find out the class to which ip address belong..

## Description -

Internet Protocol hierarchy contains several classes of IP Addresses to be used efficiently in various situations as per the requirement of hosts per network. Broadly, the IPv4 Addressing system is divided into five classes of IP Addresses. All the five classes are identified by the first octet of IP Address.

- **Class A:** The first class or Class A IP address has its first octet in the range **1-127** since the first bit is always zero.
- **Class B:** The second class or Class B IP address has its first octet in the range **128-191**.
- **Class C:** It contains the first octet in the range of **192-223**.
- **Class D:** The first octet is in the range of **224-239**.
- **Class E:** This class of IP addresses are just meant for research purpose and have the first octet in the range **240-255**.

## Code -

```
#include <bits/stdc++.h>

using namespace std;

int main(){
    char ip[15];
    cout<<"Enter IP address: ";
    cin>>ip;

    stringstream sin(strtok(ip, "."));
    int x;

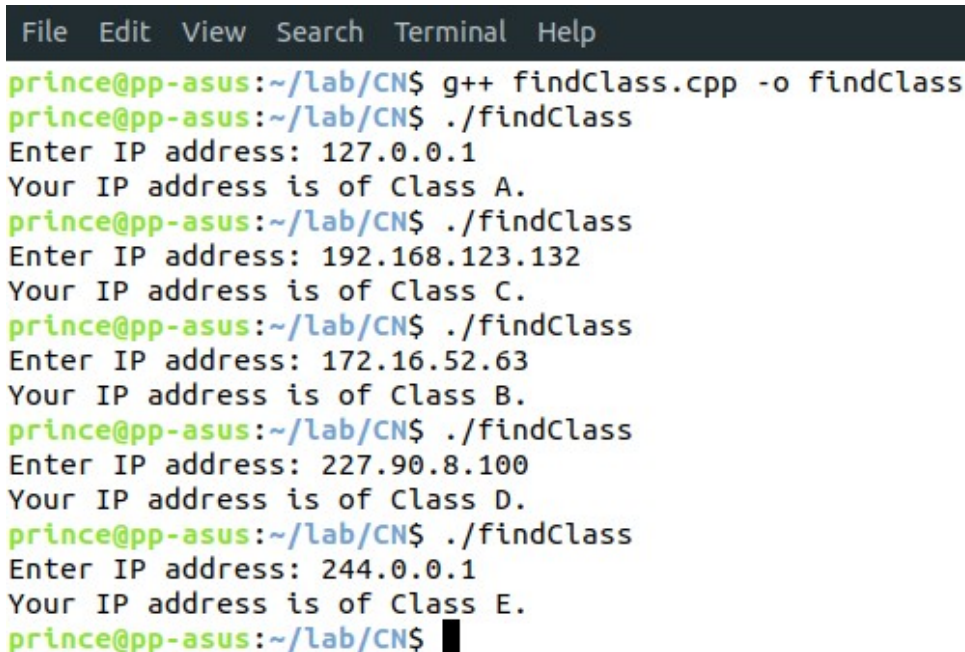
    sin>>x;
    cout<<"Your IP address is of Class ";
    if (x >= 0 && x <128){
        cout<<'A';
```

```

}else if(x<192){
    cout<<'B';
}else if(x<224){
    cout<<'C';
}else if(x<240){
    cout<<'D';
}else if(x<=256){
    cout<<'E';
}else{
    cout<<"Wrong IP";
}
cout<<'.'<<endl;
return 0;
}

```

## Output -



```

File Edit View Search Terminal Help
prince@pp-asus:~/lab/CN$ g++ findClass.cpp -o findClass
prince@pp-asus:~/lab/CN$ ./findClass
Enter IP address: 127.0.0.1
Your IP address is of Class A.
prince@pp-asus:~/lab/CN$ ./findClass
Enter IP address: 192.168.123.132
Your IP address is of Class C.
prince@pp-asus:~/lab/CN$ ./findClass
Enter IP address: 172.16.52.63
Your IP address is of Class B.
prince@pp-asus:~/lab/CN$ ./findClass
Enter IP address: 227.90.8.100
Your IP address is of Class D.
prince@pp-asus:~/lab/CN$ ./findClass
Enter IP address: 244.0.0.1
Your IP address is of Class E.
prince@pp-asus:~/lab/CN$ █

```

**Learnings** - We learnt about the different classes of IP address and how they are represented. We also learnt how to distinguish one class of IP address from the other based on the representation.