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Class of each IP address

I work as a network administrator at a large corporation, and one of my responsibilities is to monitor the network traffic and identify any potential security threats. To do this, I need to know the class of each IP address that is connected to the network. Using a program to find the class of an IP address, I am able to quickly determine whether a particular address is a part of a private or public network, which helps me to take appropriate action in case of any security breach.

Hint: In an IP address 192.168.50.60 you have four parts separated by a dot, so in this case 192 is first part, 168 is second part, 50 is third part and 60 is fourth part, so you need to extract first part from IP address and accordingly you need to print the class of it according to the range given.

Note: 0-127 (Class A)

128-191 (Class B)

192-224 (Class C)

225-239 (Class D)

Above 240 (Class E)

C (gcc 4.8.3) ▼



▶ Compile & Run

O/P »

```

1  #include <stdio.h>
2  #include<string.h>
3  #include<stdlib.h>
4
5  // note : to concatenate a character of length 1 to 'str1' use "strncat(str1,
6  // note : atoi() convert string to int form '101' -> 101
7
8  int main(){
9      char IP[15];
10     scanf("%s",&IP);
11
12     // algo
13     // step 1 : fetch the 1st octet and store in octet1
14     char octet1[3] = "";
15     int i;
16     for(i = 0; i < sizeof(IP)/sizeof(char); i++){
17         if(IP[i] != '.'){
18             char ch = IP[i];
19             strncat(octet1,&ch,1); // note : we can not do strncat[octet1,&IP
20         }
21
22         else break;
23     }
24
25
26     // step 2 : our octet1 is in form '128' convert this to int from i.e 128
27     int octet = atoi(octet1);
28
29
30     // step 3 : find class
31     if(octet < 127)
32         printf("Class A IP Address");
33     else if(octet >= 128 && octet <= 191)
34         printf("Class B IP Address");
35     else if(octet >= 192 && octet <= 224)
36         printf("Class C IP Address");
37     else if(octet >= 225 && octet <= 239)
38         printf("Class D IP Address");

```

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