import java.io.\*;  
import java.net.InetAddress;  
public class Subnet1 {  
  
    public static void main(String[] args) throws IOException {  
     
        System.out.println("ENTER IP:");  
        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));  
        String ip = br.readLine();  
        String checkclass = ip.substring(0, 3);  
  
  
  
        int cc = Integer.parseInt(checkclass);  
        String mask = null;  
        if(cc>0)  
        {  
            if(cc<=127)  
            {  
                mask = "255.0.0.0";  
        System.out.println("Class A IP Address");  
        System.out.println("SUBNET MASK:\n"+mask);  
            }  
            if(cc>=128 && cc<=191)  
            {  
                mask = "255.255.0.0";  
        System.out.println("Class B IP Address");  
        System.out.println("SUBNET MASK:\n"+mask);  
            }  
            if(cc>=192 && cc<=223)  
            {  
                mask = "255.255.255.0";  
        System.out.println("Class C IP Address");  
        System.out.println("SUBNET MASK:\n"+mask);  
            }  
        if(cc>=224 && cc<=239)  
            {  
        mask = "255.0.0.0";  
                System.out.println("Class D IP Address Used for multicasting");  
            }  
            if(cc>=240 && cc<=254)  
            {  
        mask = "255.0.0.0";  
                System.out.println("Class E IP Address Experimental Use");  
            }  
        }  
        
  
        String networkAddr="";  
    String lastAddr="";  
        String[] ipAddrParts=ip.split("\\.");  
        String[] maskParts=mask.split("\\.");  
  
        for(int i=0;i<4;i++){  
        int x=Integer.parseInt(ipAddrParts[i]);  
        int y=Integer.parseInt(maskParts[i]);  
        int z=x&y;  
        networkAddr+=z+".";  
    int w=z|(y^255);  
    lastAddr+=w+".";  
        }  
     
    System.out.println("First IP of block: "+networkAddr);  
    System.out.println("Last IP of block: "+lastAddr);  
   }  
  
}  
  
/\*OUTPUT  
:~$ javac Subnet1.java  
:~$ java Subnet1  
ENTER IP:  
226.35.65.23  
Class D IP Address Used for multicasting  
First IP of block: 226.0.0.0.  
Last IP of block: 226.255.255.255.  
:~$ java Subnet1  
ENTER IP:  
192.168.100.5  
Class C IP Address  
SUBNET MASK:  
255.255.255.0  
First IP of block: 192.168.100.0.  
Last IP of block: 192.168.100.255.  
:~$  
\*/