Assignment Title:- Network Address Determiner

Assignment No:- 5

Date:-

Q) Write a Java program to determine the Network address and Broadcast address.

**Algorithm:**

**Step 1:** Take the IP Address as an input

**Step 2:** The first octet is picked up from the IP Address and by substringing from first element upto first ‘.’

**Step 3:** The first octet is used to determine the class of the IP Address

**Step 4:** If the IP is of class A then the remaining 3 octets are set to zero for Net Address and 255 for Broadcast Address respectively

**Step 5:** If the IP is of class B then the last 2 octets are set to zero for Net Address and 255 for Broadcast Address respectively

**Step 6:** If the IP is of class A then the last octet are set to zero for Net Address and 255 for Broadcast Address respectively

**Code:**

import java.util.\*;

class Soln

{

void main\_func(String ip)

{

int first\_oct=Integer.parseInt(ip.substring(0,ip.indexOf('.')));

if(first\_oct>=0 && first\_oct<=127)

{

String net=first\_oct+".0.0.0";

String bdc=first\_oct+".255.255.255";

System.out.println("Net Id "+net);

System.out.println("Broadcast Id "+bdc);

}

else if(first\_oct>=128 && first\_oct<=191)

{

int c=0;

int i;

for(i=0;i<ip.length();i++)

{

if(ip.charAt(i)=='.')

{

c++;

}

if(c==2)

{

break;

}

}

String octs=ip.substring(0,i)+".0.0";

String bdc=ip.substring(0,i)+".255.255";

System.out.println("Net Id "+octs);

System.out.println("Broadcast Id "+bdc);

}

else if(first\_oct>=192 && first\_oct<=223)

{

int ind=ip.lastIndexOf('.');

String oct=ip.substring(0,ind)+".0";

String bdc=ip.substring(0,ind)+".255";

System.out.println("Net Id "+oct);

System.out.println("Broadcast Id "+bdc);

}

}

}

public class NetId\_determiner

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

String ip=sc.nextLine();

Soln obj=new Soln();

obj.main\_func(ip);

}

}

**Output:**

