

Bonus point assignment – week 6

Remember that bitwise java application you've made in week 2? Expand that application so that you can also calculate a network segment as explained in the PowerPoint slides of week 6. Use the bitwise & AND operator. You need to be able to input two Strings. An IP address and a subnet.

IP: 192.168.1.100 and subnet: 255.255.255.224 for /27

Example: 192.168.1.100/27

Calculate the network segment

IP Address: 11000000.10101000.00000001.01100100

Subnet Mask: 11111111.11111111.11111111.11100000

Network Addr: 11000000.10101000.00000001.01100000

This gives 192.168.1.96 in decimal as the network address.

For a /27 subnet, each segment (or subnet) has 32 IP addresses (2^5). The range of this network segment is from 192.168.1.96 to 192.168.1.127.

Paste source code here, with a screenshot of a working application.

```
import nl.saxion.app.SaxionApp;

public class Application implements Runnable {

    public static void main(String[] args) {
        SaxionApp.start(new Application());
    }

    public void run() {
        SaxionApp.println("eerste octet1");
        int ipoctet1 = SaxionApp.readInt();
        SaxionApp.println("eerste octet 2 ");
        int ipoctet2 = SaxionApp.readInt();
        SaxionApp.println("eerste octet3");
        int ipoctet3 = SaxionApp.readInt();
        SaxionApp.println("eerste octet4");
        int ipoctet4 = SaxionApp.readInt();
        SaxionApp.println("eerste subnet octet1");
        int subnet1 = SaxionApp.readInt();
        SaxionApp.println("eerste subnet octet 2 ");
        int subnet2 = SaxionApp.readInt();
```

```

SaxionApp.printLine("eerste subnet octet3");
int subnet3 = SaxionApp.readInt();
SaxionApp.printLine("eerste subnet octet4");
int subnet4 = SaxionApp.readInt();
int sm1 = ipoctet1 & subnet1;
int sm2 = ipoctet2 & subnet2;
int sm3 = ipoctet3 & subnet3;
int sm4 = ipoctet4 & subnet4;
SaxionApp.printLine("ipadres: " + ipoctet1 + "." + ipoctet2 + "." + ipoctet3 + "." + ipoctet4);
SaxionApp.printLine("subnet: " + subnet1 + "." + subnet2 + "." + subnet3 + "." + subnet4);
SaxionApp.printLine("netwerok id : " + sm1 + "." + sm2 + "." + sm3 + "." + sm4);

}
}

```

