

Q1. Is 192.168.129.51 inside the address range 192.168.128.1/22 ?

True

```
PS C:\Users\Rammya\OneDrive\Documents\224\lab2> go run src/ipanalyzer.go 192.168.128
.1/22 192.168.129.51
>>
true
```

Q2. How many addresses could be assigned to servers/hosts in the subnet 192.168.128.1/22 ?
1022

```
PS C:\Users\Rammya\OneDrive\Documents\224\lab2> go run src/ipanalyzer.go 192.168.128
.1/22
>>
Analysinf network: 192.168.128.1/22

Network address: 192.168.128.0
Broadcast address: 192.168.131.255
Subnet mask: 255.255.252.0
Number of usable hosts: 1022
```

Q3. You have been assigned the IP block 137.110.222.0/24. Your start-up requires subnets for four separate internal networks, each supporting at least 48 hosts.

Q3.1: Propose a subnetting scheme that satisfies these requirements.

```
PS C:\Users\Rammya\OneDrive\Documents\224\lab2> go run src/ipanalyzer.go 137.110.222
.0/26
>>
Analysinf network: 137.110.222.0/26

Network address: 137.110.222.0
Broadcast address: 137.110.222.63
Subnet mask: 255.255.255.192
Number of usable hosts: 62
```

Q3.2: What is the new subnet mask?

```
PS C:\Users\Rammya\OneDrive\Documents\224\lab2> go run src/ipanalyzer.go 137.110.222
.64/26
>>
Analysinf network: 137.110.222.64/26

Network address: 137.110.222.64
Broadcast address: 137.110.222.127
Subnet mask: 255.255.255.192
Number of usable hosts: 62
```

Q3.3: Clearly identify each subnet's network address, broadcast address, and range of usable IP addresses.

```
PS C:\Users\Rammya\OneDrive\Documents\224\lab2> go run src/ipanalyzer.go 137.110.222.0/26
>> go run src/ipanalyzer.go 137.110.222.64/26
>> go run src/ipanalyzer.go 137.110.222.128/26
>> go run src/ipanalyzer.go 137.110.222.192/26
>>
Analysinf network: 137.110.222.0/26

Network address: 137.110.222.0
Broadcast address: 137.110.222.63
Subnet mask: 255.255.255.192
Number of usable hosts: 62
Analysinf network: 137.110.222.64/26

Network address: 137.110.222.64
Broadcast address: 137.110.222.127
Subnet mask: 255.255.255.192
Number of usable hosts: 62
Analysinf network: 137.110.222.128/26

Network address: 137.110.222.128
Broadcast address: 137.110.222.191
Subnet mask: 255.255.255.192
Number of usable hosts: 62
Analysinf network: 137.110.222.192/26

Network address: 137.110.222.192
Broadcast address: 137.110.222.255
Subnet mask: 255.255.255.192
Number of usable hosts: 62
```