

Subnet Calculator CLI

Objectives:

At the end of this episode, I will be able to:

1. Use Python to calculate basic subnet information.
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Snippets

main.py

```
from ipaddress import ip_interface
import argparse

def main():
    parser = argparse.ArgumentParser()

    parser.add_argument("-a", "--address", help="host address", required=True)
    parser.add_argument("-n", "--netmask", help="Network mask", required=True)

    args = parser.parse_args()
    iface = ip_interface(f"{args.address}/{args.netmask}")
    network = iface.network.network_address
    broadcast = iface.network.broadcast_address
    hostmask = iface.hostmask
    netmask = iface.netmask
    hosts = list(iface.network.hosts())
    minimum_host = min(hosts, default=None)
    maximum_host = max(hosts, default=None)
    print(
        f"""
Network:           {network}/{netmask}
Broadcast:         {broadcast}
Minimum Host:      {minimum_host}
Maximum Host:      {maximum_host}
Hosts per Network: {len(hosts)}
        """
    )

if __name__ == "__main__":
    main()
```

External Resources:

During this episode, you can reference the following external resources for supplementary tools and information:

- (S) [argparse Module Documentation](#)
- (S) [ipaddress Module Documentation](#)