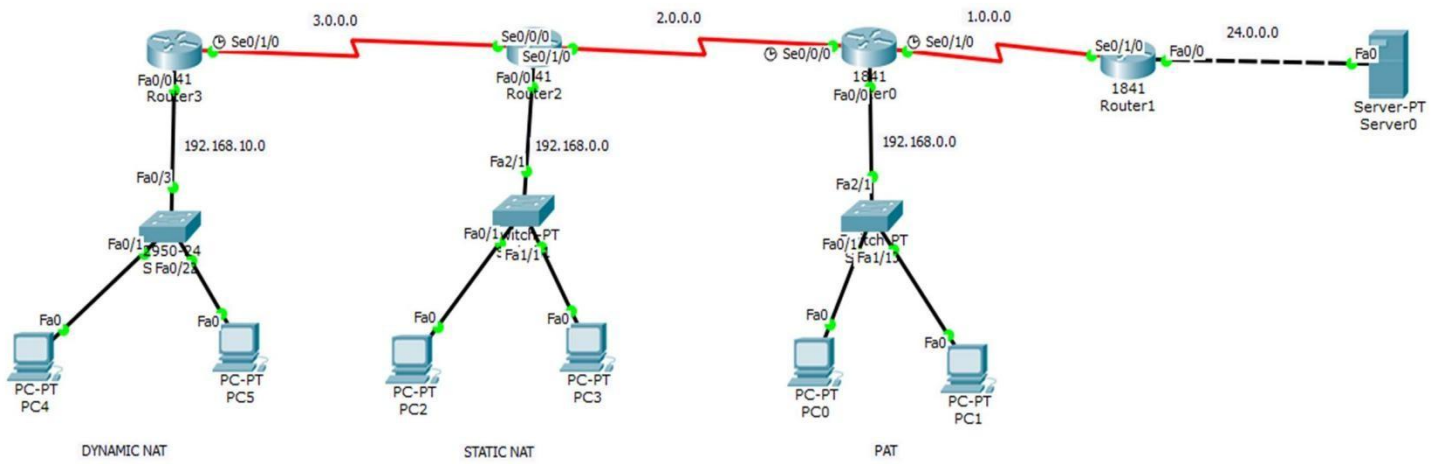Name: Nirjala Dattatray Naik
Roll No: T512022

STATIC NAT

Basic Configurations: -

```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int f0/0
Router(config-if)#ip add 192.168.0.1 255.255.255.0
Router(config-if)#ip nat inside
Router(config-if)#no shutdown


Router(config-if)#int s0/1/0
Router(config-if)#ip add 1.0.0.1 255.0.0.0
Router(config-if)#ip nat outside
Router(config-if)#no shutdown

Router(config-if)#router rip
Router(config-router)#network 1.0.0.0
Router(config-router)#network 2.0.0.0
Router(config-router)#exit
```

Static nat config :-

```
Router(config)#ip nat inside source static 192.168.0.3 2.0.0.2
Router(config)#ip nat inside source static 192.168.0.2 2.0.0.3
```

Nat translations:-

```
Router>show ip nat translation
Pro  Inside global     Inside local      Outside local     Outside global
icmp 2.0.0.2:10        192.168.0.2:10    24.0.0.2:10       24.0.0.2:10
icmp 2.0.0.2:5         192.168.0.3:5     24.0.0.2:5        24.0.0.2:5
icmp 2.0.0.2:6         192.168.0.3:6     24.0.0.2:6        24.0.0.2:6
icmp 2.0.0.2:7         192.168.0.3:7     24.0.0.2:7        24.0.0.2:7
icmp 2.0.0.2:8         192.168.0.3:8     24.0.0.2:8        24.0.0.2:8
icmp 2.0.0.2:9         192.168.0.2:9     24.0.0.2:9        24.0.0.2:9
---  2.0.0.2           192.168.0.3       ---               ---
```

DYNAMIC NAT

Same Basic Configuration as static nat.

Dynamic Nat config:-

```
Router(config)#access-list 1 permit 192.168.10.2 0.0.0.0
Router(config)#access-list 1 permit 192.168.10.3 0.0.0.0
Router(config)#access-list 1 deny any
Router(config)#ip nat pool lab 3.0.0.5 3.0.0.10 netmask 255.0.0.0
Router(config)#ip nat inside source list 1 pool lab
```

Nat translations: -

```
Router>show ip nat translation
Pro  Inside global     Inside local     Outside local     Outside global
icmp 3.0.0.5:5         192.168.10.2:5   24.0.0.2:5        24.0.0.2:5
icmp 3.0.0.5:6         192.168.10.2:6   24.0.0.2:6        24.0.0.2:6
icmp 3.0.0.5:7         192.168.10.2:7   24.0.0.2:7        24.0.0.2:7
icmp 3.0.0.5:8         192.168.10.2:8   24.0.0.2:8        24.0.0.2:8
icmp 3.0.0.6:1         192.168.10.3:1   24.0.0.2:1        24.0.0.2:1
icmp 3.0.0.6:2         192.168.10.3:2   24.0.0.2:2        24.0.0.2:2
icmp 3.0.0.6:3         192.168.10.3:3   24.0.0.2:3        24.0.0.2:3
icmp 3.0.0.6:4         192.168.10.3:4   24.0.0.2:4        24.0.0.2:4
```

PAT

Same Basic Configuration as static nat.

Pat configurations: -
```
Router(config)#access-list 1 permit 192.168.10.3 0.0.0.0
Router(config)#access-list 1 permit 192.168.10.2 0.0.0.0
Router(config)#access-list 1 deny any
Router(config)#ip nat inside source list 1 interface s0/1/0 overload
```

Nat translations:-

```
Router>show ip nat translation
Pro  Inside global     Inside local     Outside local     Outside global
icmp 1.0.0.1:1         192.168.0.3:1    24.0.0.2:1        24.0.0.2:1
icmp 1.0.0.1:2         192.168.0.3:2    24.0.0.2:2        24.0.0.2:2
icmp 1.0.0.1:3         192.168.0.3:3    24.0.0.2:3        24.0.0.2:3
icmp 1.0.0.1:4         192.168.0.3:4    24.0.0.2:4        24.0.0.2:4
icmp 1.0.0.1:5         192.168.0.2:5    24.0.0.2:5        24.0.0.2:5
icmp 1.0.0.1:6         192.168.0.2:6    24.0.0.2:6        24.0.0.2:6
icmp 1.0.0.1:7         192.168.0.2:7    24.0.0.2:7        24.0.0.2:7
icmp 1.0.0.1:8         192.168.0.2:8    24.0.0.2:8        24.0.0.2:8
```