ABSTRACT

In Growth of computer networking with the various technique is used to implement into real world. One of them is used by Network simulator software such as Packet Tracer 5.0 by Cisco, Inc. Packet tracer is the powerfull network simulator, by Packet tracer most of routing protocol can be simulated. In a Testlab for example. The following lists its features:

1. Network Address Translation (NAT)

   Cisco defines these terms as follows:

   - Inside local address - The IP address assigned to a host on the inside network. This is the address configured as a parameter of the computer's OS or received via dynamic address allocation protocols such as DHCP. The address is likely not a legitimate IP address assigned by the Network Information Center (NIC) or service provider.
   - Inside global address - A legitimate IP address assigned by the NIC or service provider that represents one or more inside local IP addresses to the outside world.
   - Outside local address - The IP address of an outside host as it appears to the inside network. Not necessarily a legitimate address, it is allocated from an address space routable on the inside.
   - Outside global address - The IP address assigned to a host on the outside network by the host's owner. The address is allocated from a globally routable address or network space.

2. Dynamic Host Configuration Protocol (DHCP)

An Application layer protocol that works dynamically to provide an IP address, subnet mask, domain name, and a default gateway to network clients. To obtain configuration information for operation in internet protocol. This protocol reduce system administration workload. Allowing network to add device with little or no manual intervention.

This final project is designed implementing static routing protocol, NAT and DHCP Server by Packet Tracer 5.0 network simulator as mentioned above.