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Final Project Proposal

The internet has become essential for many individuals throughout the world for many years and must be protected. The field of protecting this network is defined as pathways computer networks may be attacked and how to ensure security of the entire system. One of the many ways to test vulnerabilities and attack pathways is by analyzing ports. Ports are values utilized as identification for TCP, UDP, and other protocols. By searching for open ports, we may be able to learn the possible open targets for infiltration.

The plan for this code is to set up a socket connection with a host IP address like a localhost or web host. It will search for a wide pool of open ports on the host and return them. It will print this information with the ports' service name and current time. The number of ports to be searched will begin with 49,151 which includes registered ports and well-known ports and may decrease with testing. There will be a connection timeout value set to make sure this test does not take a long duration. The duration of the test and number of analyzed ports will be reported at the end.

The next procedure after scanning the ports on a host will be to secure and close the ports. This will prevent any malware from infecting a network as other tests are conducted. Port scanning is only part of the beginning of cyber attacks.