Controller Pseudocode

1. If ARP:
    a. Match the packet and send it to the flow table of the switch
    b. Flood the packet through the switch
2. Else if TCP or ICMP
    a. If the switch id is 1:
        i. If the port is 1 (packet received from host1):
            1. Match the packet and send it to the flow table of switch 1 so it knows what to do with the same packet if it comes across it again
            2. Send the packet out the port connected to core switch (send packet to core switch)
        ii. Else if the port is 11 (packet received from core switch)
            1. Match the packet and send it to the flow table of switch 1
            2. Send the packet out of port connecting to host 1 (send packet to host1)
    b. Else if switch id is 2:
        i. If the port is 2 (packet received from host2):
            1. Match the packet and send it to the flow table of switch 2
            2. Send the packet out the port connected to core switch
        ii. Else if the port is 21 (packet received from core switch)
            1. Match the packet and send it to the flow table of switch 2
            2. Send the packet out of port connecting to host 2
    c. Else if switch id is 3:
        i. If the port is 3 (packet received from host3):
            1. Match the packet and send it to the flow table of switch 3
            2. Send the packet out the port connected to core switch
        ii. Else if the port is 31 (packet received from core switch)
            1. Match the packet and send it to the flow table of switch 3
            2. Send the packet out of port connecting to host 3
    d. Else if switch id is 4:
        i. If source ip = untrusted host and protocol = ICMP:
            1. Match packet and send it to flow table of switch 4
            2. Drop packet
        ii. Else if destination ip = host1:
            1. Match packet and send it to flow table of switch 4
            2. Send packet out of port connected to switch 1
        iii. Else if destination ip = host2:
            1. Match packet and send it to flow table of switch 4
            2. Send packet out of port connected to switch 2

iv. Else if destination ip = host3:
    1. Match packet and send it to flow table of switch 4
    2. Send packet out of port connected to switch 3
v. Else if destination ip = server:
    1. If source ip = untrusted host:
        a. Match packet and send it to flow table of switch 4
        b. Drop packet
    2. Else:
        a. Match packet and send it to flow table of switch 4
        b. Send packet out of port connected to switch 5 (switch connecting core switch with server host)
vi. Else if destination ip = untrusted host:
    1. Match packet and send it to flow table of switch 4
    2. Send packet out of port connected to switch 1

e. Else if switch id is 5 (switch connecting to server):
    i. If port is 5 (packet received from server):
        1. Match the packet and send it to the flow table of switch 5
        2. Send the packet out the port connected to core switch
    ii. Else if the port is 51 (packet received from core switch)
        1. Match the packet and send it to the flow table of switch 5
        2. Send the packet out the port connected to server