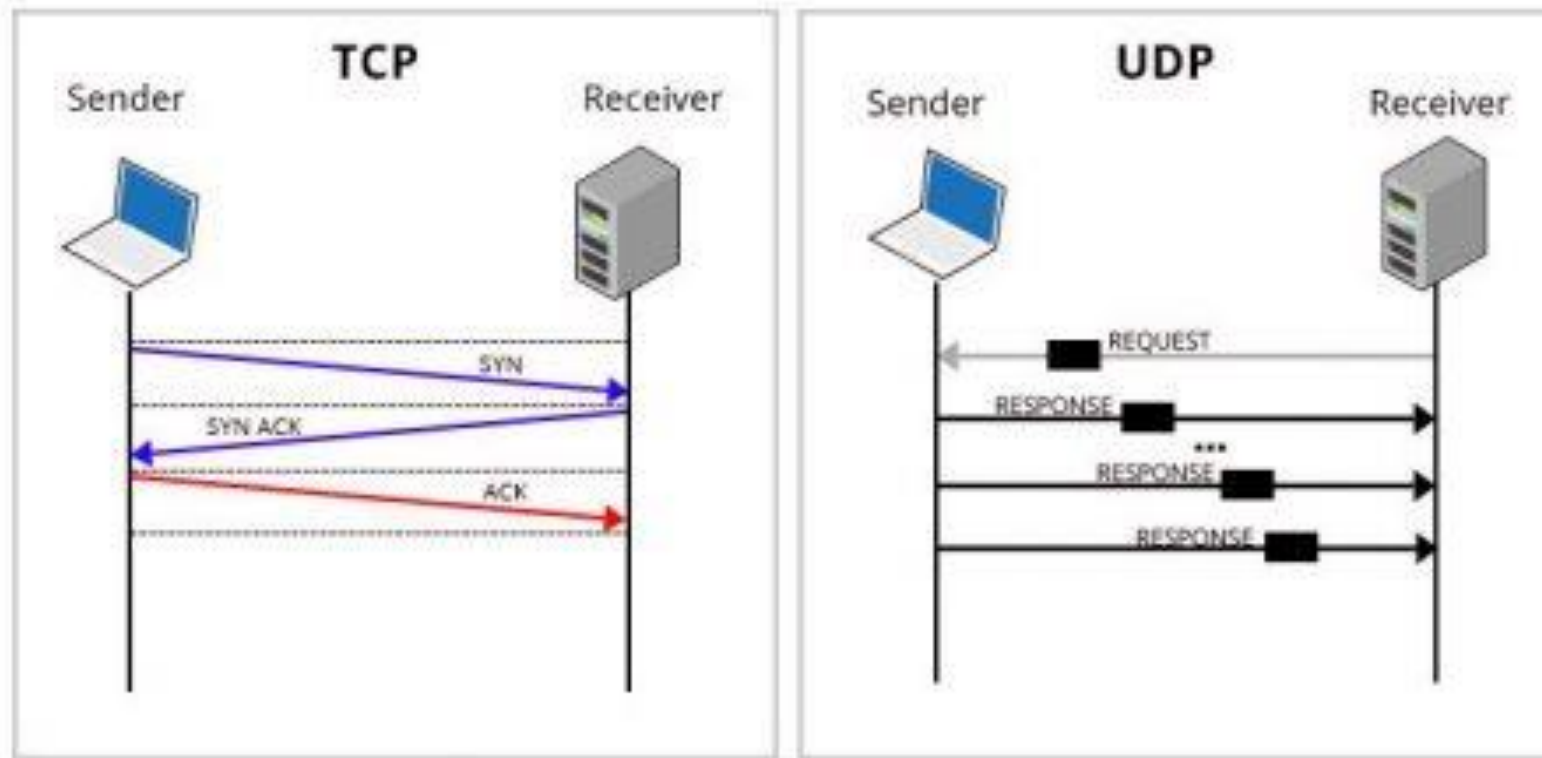


# Mini Project 1

# Goal

- Build a UDP simulation to familiar with the ns-3 platform and architecture
  - How to build a topology
  - How to simulate a application
- Familiar with NetAnim for simulation

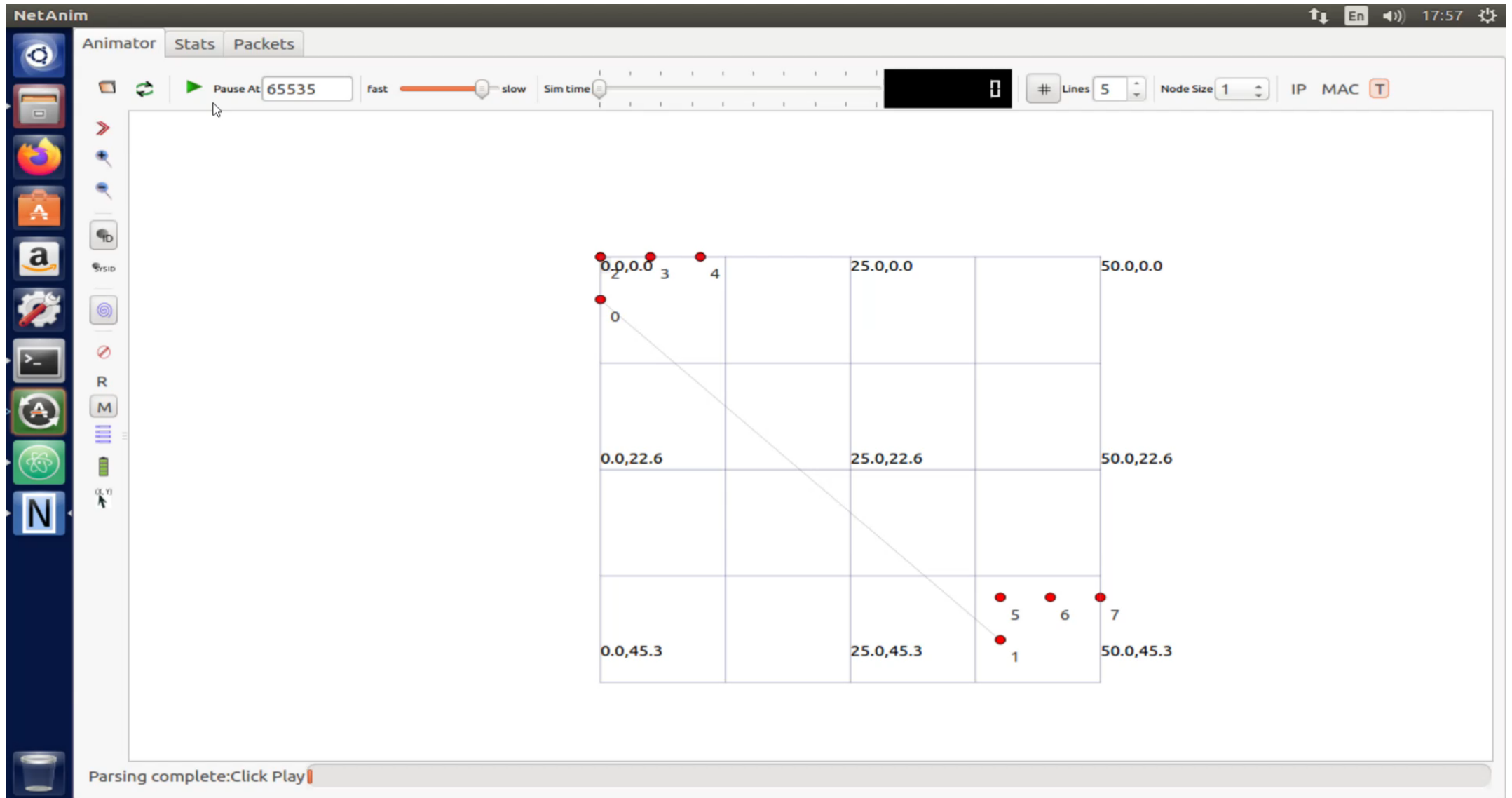


# TO-DO

- Install ns-3 on ubuntu
- Reference code “first.cc” and “third.cc” (ns-3.26/examples/tutorial/)
  - Create two WLAN with WiFi
    - 1 AP for each WLAN
    - 3 nodes for each WLAN
  - Create p2p channel between two WiFi AP
  - Using UdpEchoHelper to build applications
    - All STA nodes from WLAN1 can transmit packet to all STA nodes from WLAN2
- Present simulation by NetAnim



# Demo



# Grading Policy

---

- Install ns-3 on Ubuntu successfully (10%)
- Finish Project 1 (50%)
  - Topology - PointToPointHelper, YansWiFiChannelHelper, YansWiFiPhyHelper, WifiHelper, WifiMacHelper, MobilityHelper, InternetStackHelper, Ipv4AddressHelper
  - Application - UdpEchoServerHelper, UdpEchoClientHelper, Ipv4GlobalRoutingHelper
  - Animation - NetAnim
  - Explain your main ideas by commenting out the code
- Report (40%)
  - Write down
    - What you do
    - Your observation (.pcap file, animation and etc)
    - Result
    - What you learn

# Submission

---

Please upload your miniproject1 to eLearn.

**Deadline: 2020-10-08(Thu.) 23:59**

- Program
  - Your source file must be named as “<Student\_ID>\_project1.cc”.
- Report
  - The report filename must be “<Student\_ID>\_project1.pdf”.

Note: “Plagiarism Avoidance”

- Discussion is encouraged. However, plagiarism is not allowed. We will use, e.g., “Moss” for similarity comparison and 0 points will be given if plagiarism.