# TAN TAO UNIVERSITY

## SPRING2022

## CS440: Computer Network

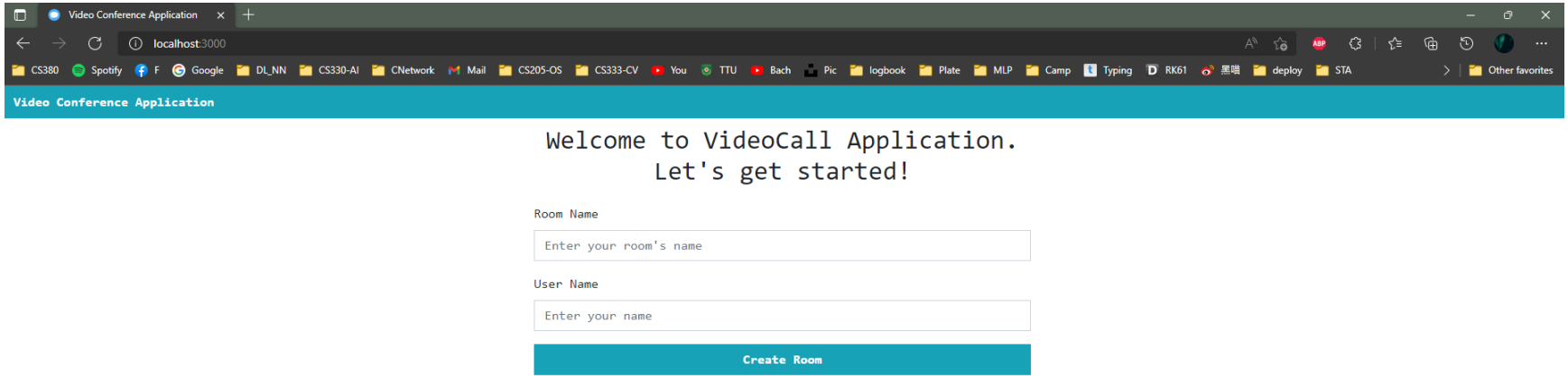
### Final Project: Building a Video Conference Application

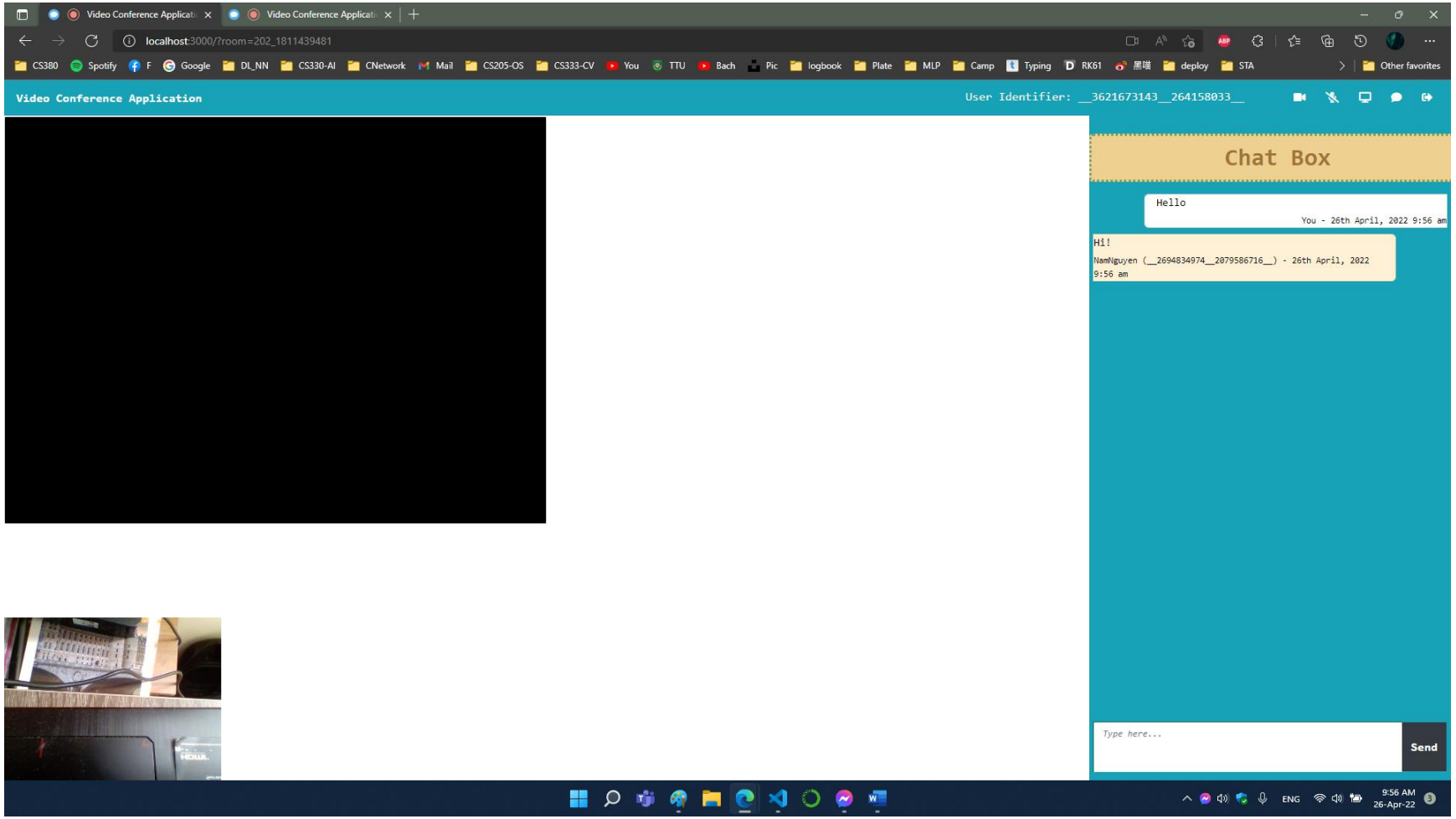
**Instructor: Pro. Nguyen Xuan Ha**

*1902060 Vuong Thao Nguyen*

# Project Overview

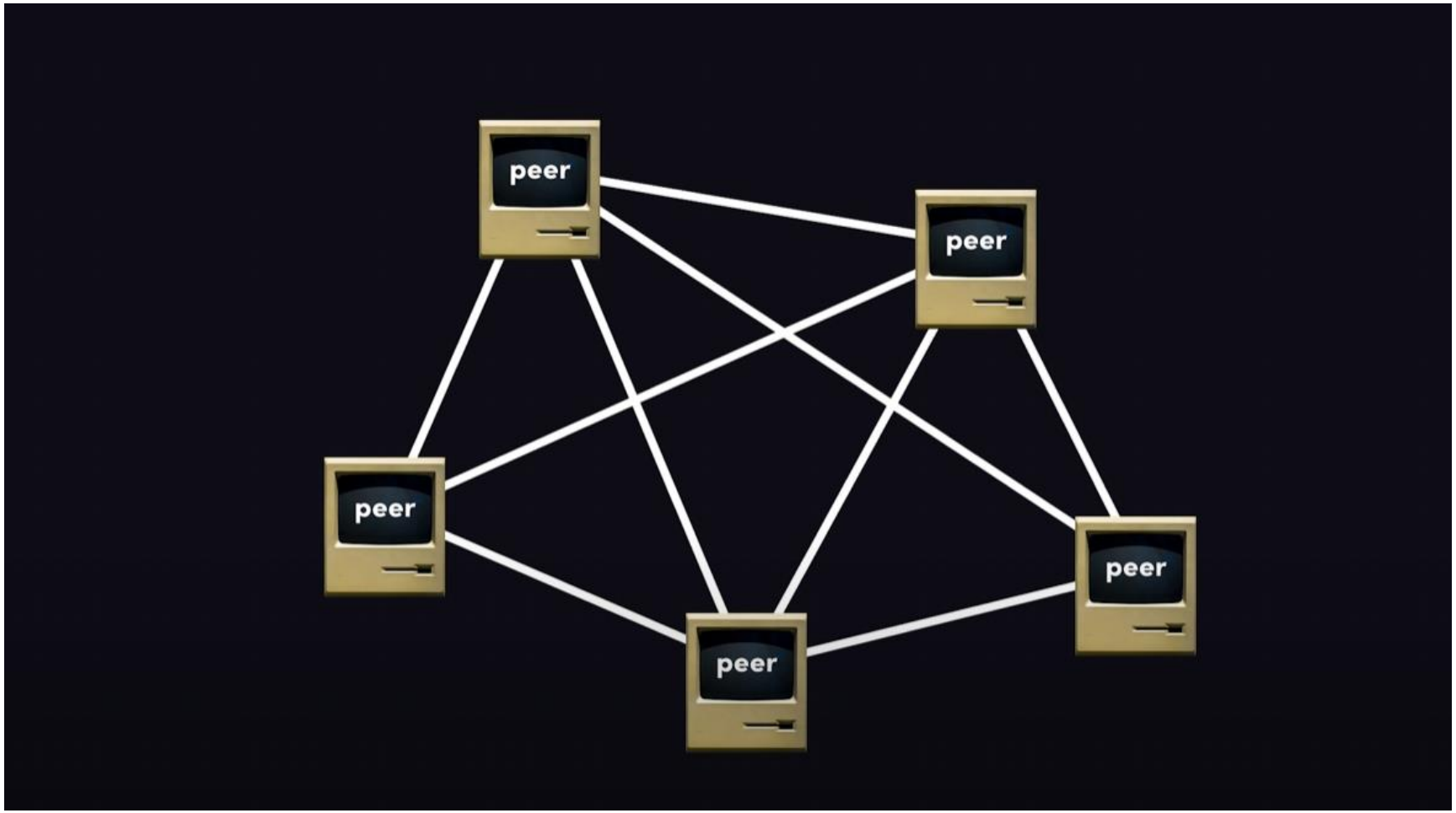
## Library and Framework: Nodejs, Socket io, and WebRTC




Video Conference Application
User Identifier: __3621673143__264158033__
Chat Box
Hello
You - 26th April, 2022 9:56 am
Hi!
NamNguyen (__2694834974__2079586716__) - 26th April, 2022 9:56 am
Type here...
Send

## WebRTC (Web Real Time Communication)

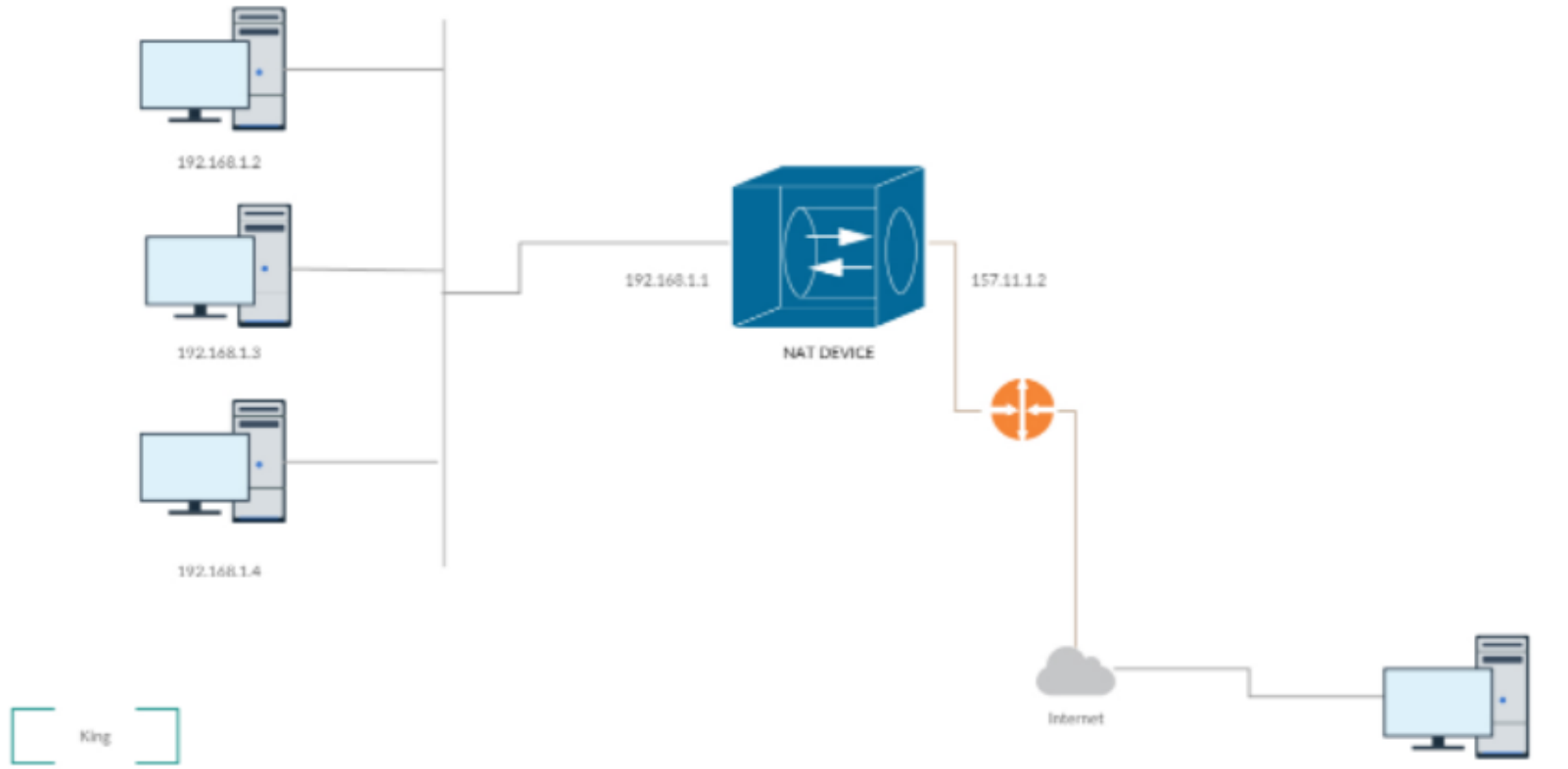
- A P2P communicating protocol that supports sending audio, video and data in real time

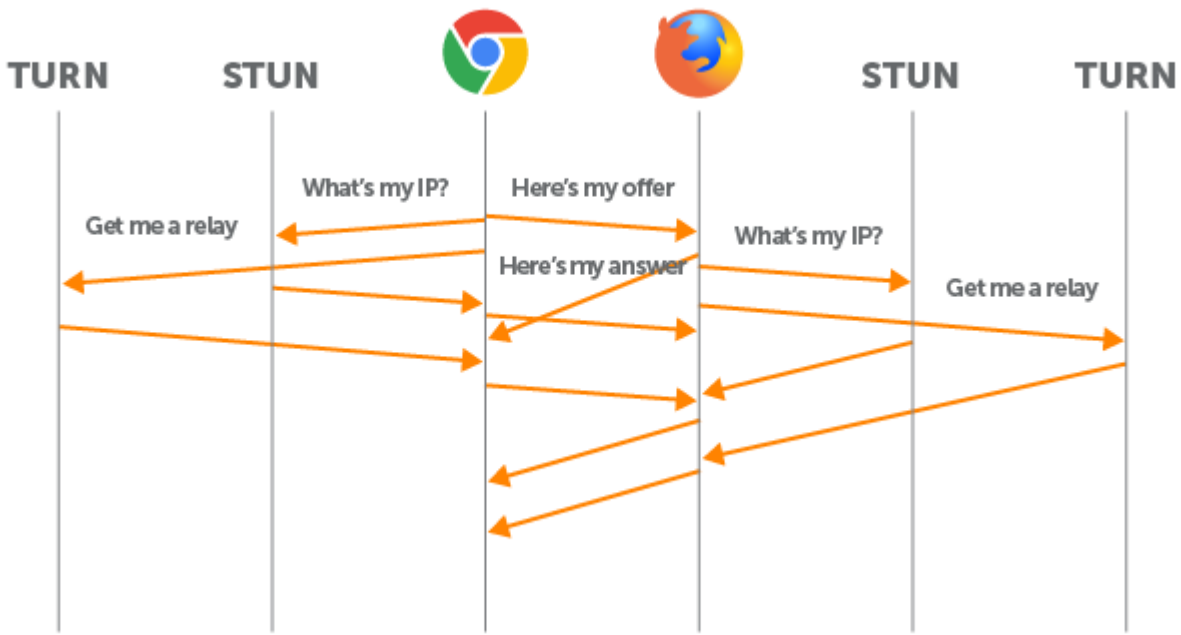


session description protocol
v= (protocol version number)
o= (originator and session identifier)
s= (session name)
OFFER
m= (media name and transport address)
i=* (media title or information field)
c=* (connection information)
b=* (zero or more bandwidth information lines)
k=* (encryption key)
a=* (zero or more media attribute lines)
Player 1

Signaling server: for the two device to securely connecting to each other (exchange connection data)

Player 1
NAT
Player 2


192.168.1.2
192.168.1.3
192.168.1.4
192.168.1.1
NAT DEVICE
157.11.1.2
Internet
10.9.8.7
King


TURN
STUN
STUN
TURN
What's my IP?
Here's my offer
Get me a relay
What's my IP?
Here's my answer
Get me a relay

ICE CANDIDATES
IP/PORT
Player 1
Player 2

# Live Demo

# Code Review