Gandhinagar Institute of Technology
A Report on
"Webinar - Introduction to CS4G Netsim"
(Mobile and Wireless Technology Club - MWTC)
(20th March 2021, Saturday)

Webinar at a Glance:
- Date: 20-03-2021, Time: 10:00 to 11:30 am, Venue: Google Meet platform.
- Expert session on Computer Vision by Prof Mitul Maniar & Prof. Jatin Chakravarti
- Around 20 students from EE and EC department attended the webinar and discussed about the trends and opportunities in the field of computer vision.

Objective of the event:
Mobile and Wireless Technology Club (MWTC) of Gandhinagar Institute of Technology (GIT) is established to strengthen the practical aspects in Mobile and wireless technology which is one of the most advanced and emerging field. Mobile and Wireless Technology Club (MWTC) organizes various co-curricular activities and workshops in order to groom the students and make them aware of latest technologies and trends regarding communication world.

Activities during the event:
Under the aegis of Mobile and Wireless Technology Club (MWTC), Electronics and Communication department organized a webinar on 'Introduction to CS4G Netsim' on 20th March 2021 with online Google Meet Platform. The expert session was conducted by Prof Mitul Maniar & Prof. Jatin Chakravarti for the students of EC, EE, CE & IT stream. Around 20 students participated in this online session during 10:00 to 11:30 am and learned about CS4G Netsim

CS4G Netsim, a web-based game intended to teach the basics of network routing and how common attacks are performed against it by hackers. Netsim is implemented in the form of a network simulator, with levels depicting how common protocols operate, and accompanying tutorial text explaining the protocol or level. Users craft network packets, with a focus on manipulating the header fields, and inject them into the network via computers they control. Goals of the tool include spoofing a source address to steal data, or inducing a smurf attack to perform a distributed denial of service.

Prof Mitul Maniar explained the importance of computer networking, routing in daily lives and in professional lives, irrespective of the profession. Various examples helped the students grasp the fundamental concept of networks and how widespread and deeply rooted it is in our lives. The session progresses with viewing various network basic fundamentals like ping, modem, routers, and then moving on to advanced topics like what are network attacks and how can they be simulated in CS4G Netsim and what all can be deduced from the running network scenarios.

Outcomes of the event:

Computer vision is a field of artificial intelligence that trains computers to interpret and understand the visual world. Using digital images from cameras and videos and deep learning models, machines can accurately identify and classify objects — and then react to what they "see." Through this webinar students understood how we come across computer vision in our everyday lives and learn how to overcome any project challenges.

Feedback from students:

I am thankful to the MWTC club for organizing expert session on network simulation. I gained technical knowledge about networks. Through discussions, I come to know about minute details of such a simple yet sophisticated and widespread technology. Hope to see more such sessions being arranged.

- Smriti Singh
6th CE (180120107164)

Recent trend is all about networking, specially since work from home is a major thing in Industry. So hands on knowledge of such topics is much needed.
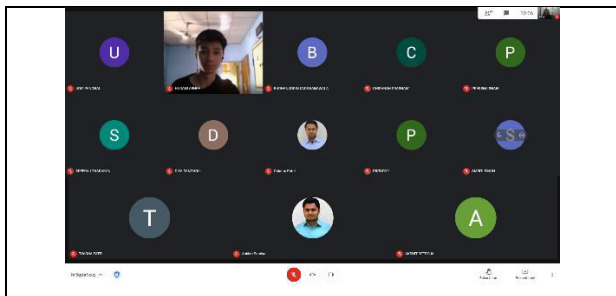
- Sreeraj Thakkaran
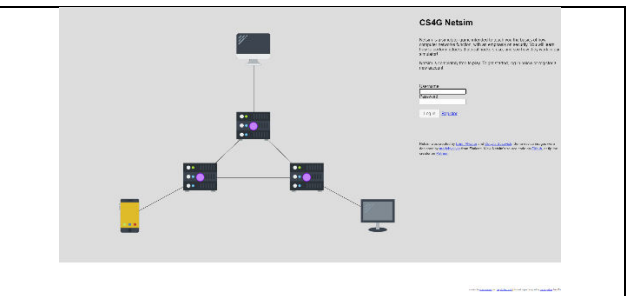6th EC (180120111010)

Feedback from faculty:

The expert talk organized by MWTC was very effective for encouraging students to develop skills required by the industry. Such expert session helps to create an environment where experience of faculty can guide the current students to get prepared for the challenges they are going to face after graduation.

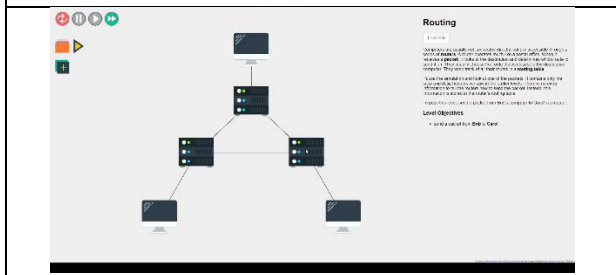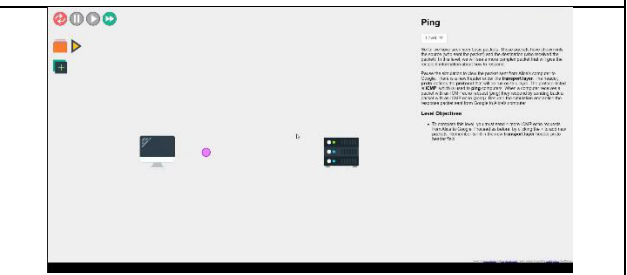- Prof. Ashish Pandya
Asst. Prof, EC Department

Photo Gallery:

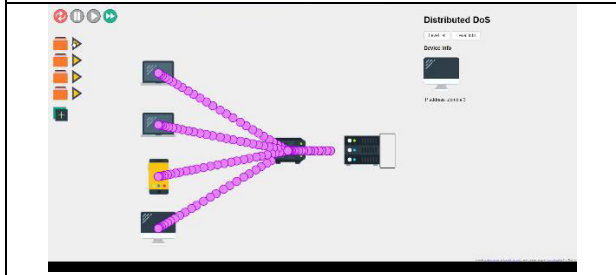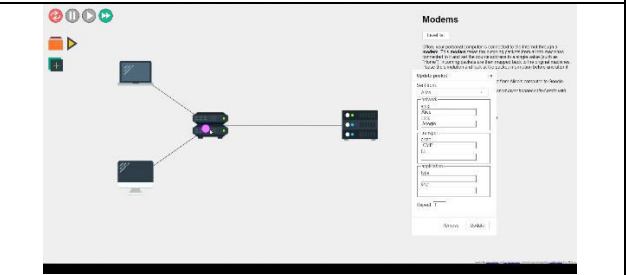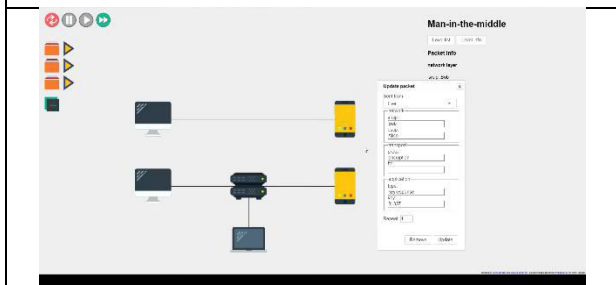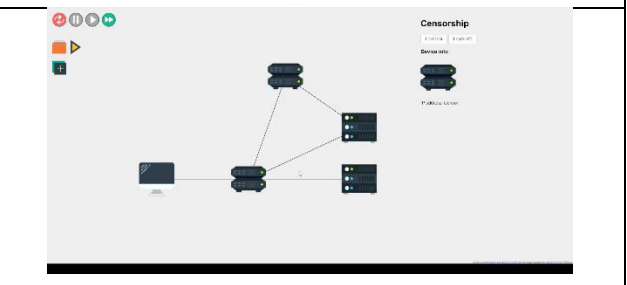|	
Prof. Mitul Maniar conducting the online session on CS4G Netsim	CS4G home screen
Routing hands-on in progress	Hands-on for Ping in progress
Visualization of Distributed Denia-of-Service Attack	Explaining how modems work
Viewing Man-in-the-Middle attack in progress on virtual network	Overview of how Censorship on the network is implemented and what are its mitigations