Innovative Pedagogical Activities

Course: Computer Networks Course Code: BTCOC602

Pedagogy refers to a student centered **teaching** and learning (SCL) approach where educators are reflective in their theory, practice and policy implementation in **teaching**/learning, resulting to positive impacts in the learners.

Having a well-thought-out **pedagogy** can improve the quality of your **teaching** and the way students learn, helping them gain a deeper grasp of fundamental material. Being mindful of the way we **teach** can help us better understand how to help students achieve deeper **learning**.

Keeping in mind the importance of pedagogical approach we designed a pedagogy activity for the students. Pedagogy activity was posted on whats app group & On Gnomio Moodle Site and sufficient time was given to the students to solve the activity.

Following are the day wise details of pedagogy activities conducted during the refresher program :

Pedagogy Activities Details:

Sr. No	Name of the Activity	Unit	WhatsApp/ Online/Gnomio	No of Students Successfully Completed
1.	Mind Map	1,2,3,6	Gnomio	51
2.	Crossword	1,2	Wahtsapp/Gnomio	56
3.	One Minute Paper	3,4	Online Google Meet	67
4.	WhatsApp Emoji Activity	1,2	WhatsApp	56
5.	Project Based Learning	All units	Gnomio	67
6.	Think Pair Share Activity	2	Google Meet	67

Innovative Tools: Gnomio Moodle as a LMS Tools, Quizziz.com, Google Form, Jam board, Epic Pen, animated Videos, PPT's, Google Meet

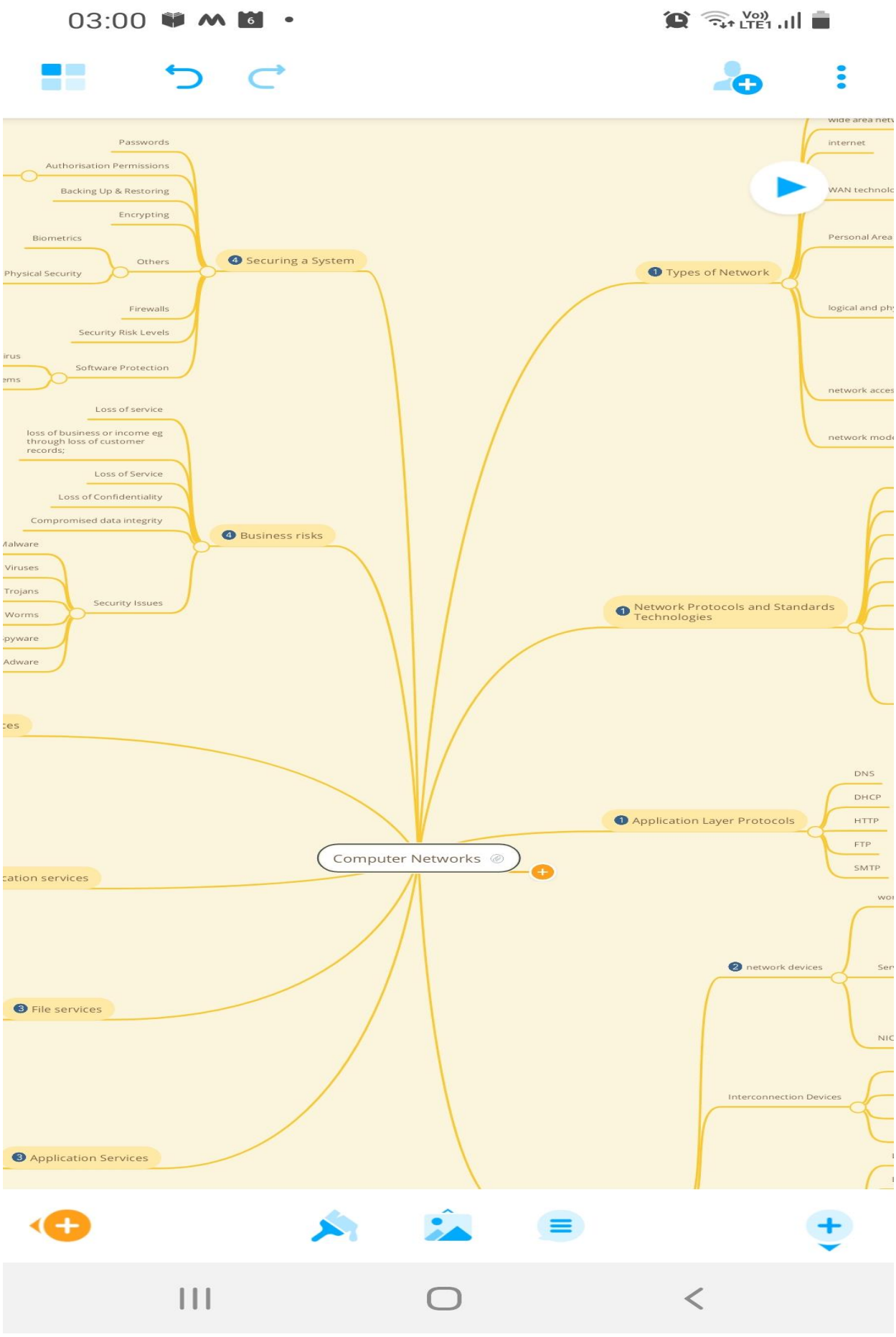
Activity No: 01

Name of the Activity: Min Map Activities (Unit-I, II, III,VI)

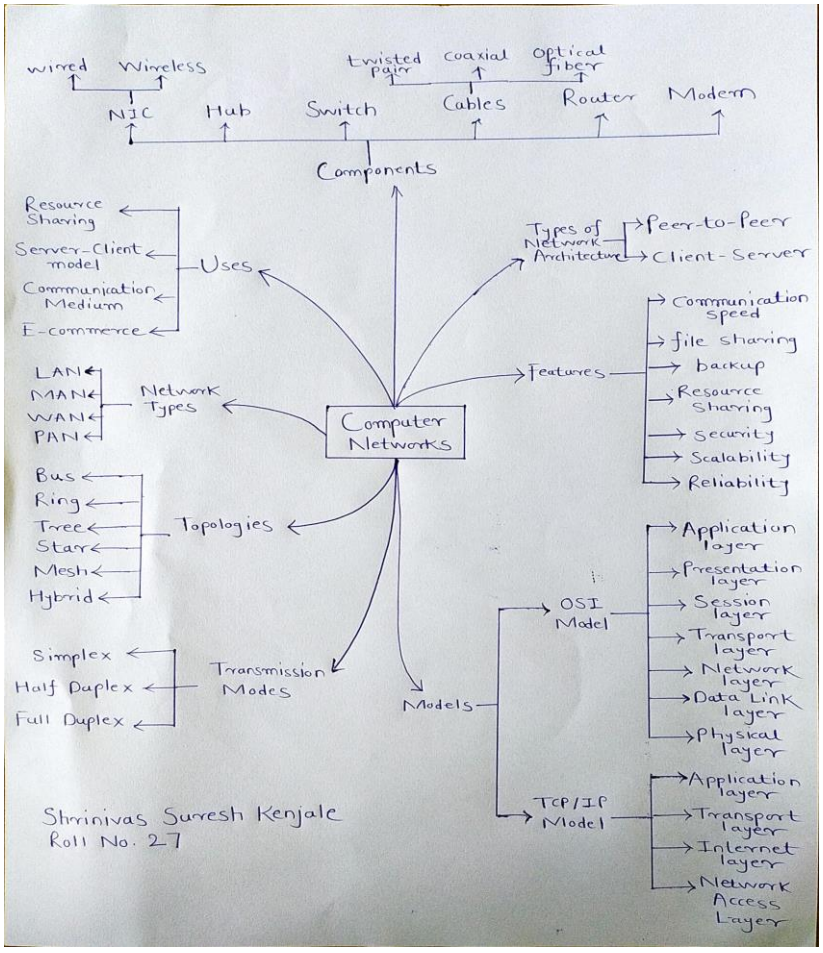
Mind mapping — a visual representation of information — is a versatile tool that can assist students with many aspects of their learning. It can help them map out new ideas, explore concepts in more detail and facilitate a better understanding of relationships and connections. It is an creative activity where the technical concepts can be explained and demonstrated in simplified fashion. A map or drawing or visual image is used to imagine the conceptual scenario of any topic with the scenarion faced in the real world. Number of analogies can be used to create a mind map of any technical concept.

Sample document were given on Gnomio Moodle for reference purpose.

Sample Document shared with the students

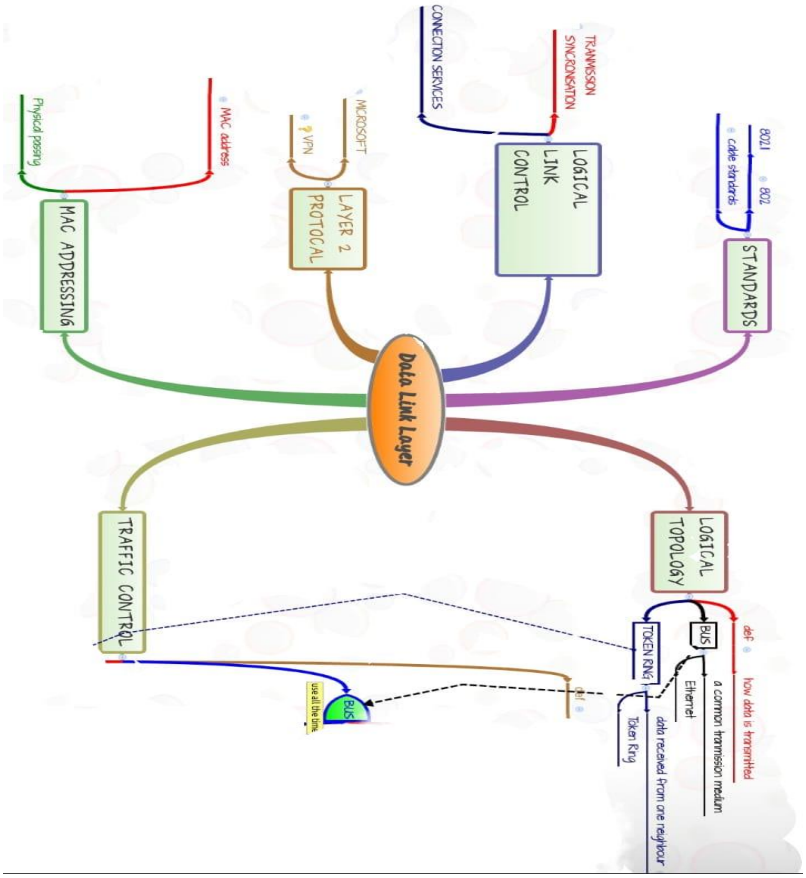


Students Responses: Sample Response of Mind Map activity on Unit-I

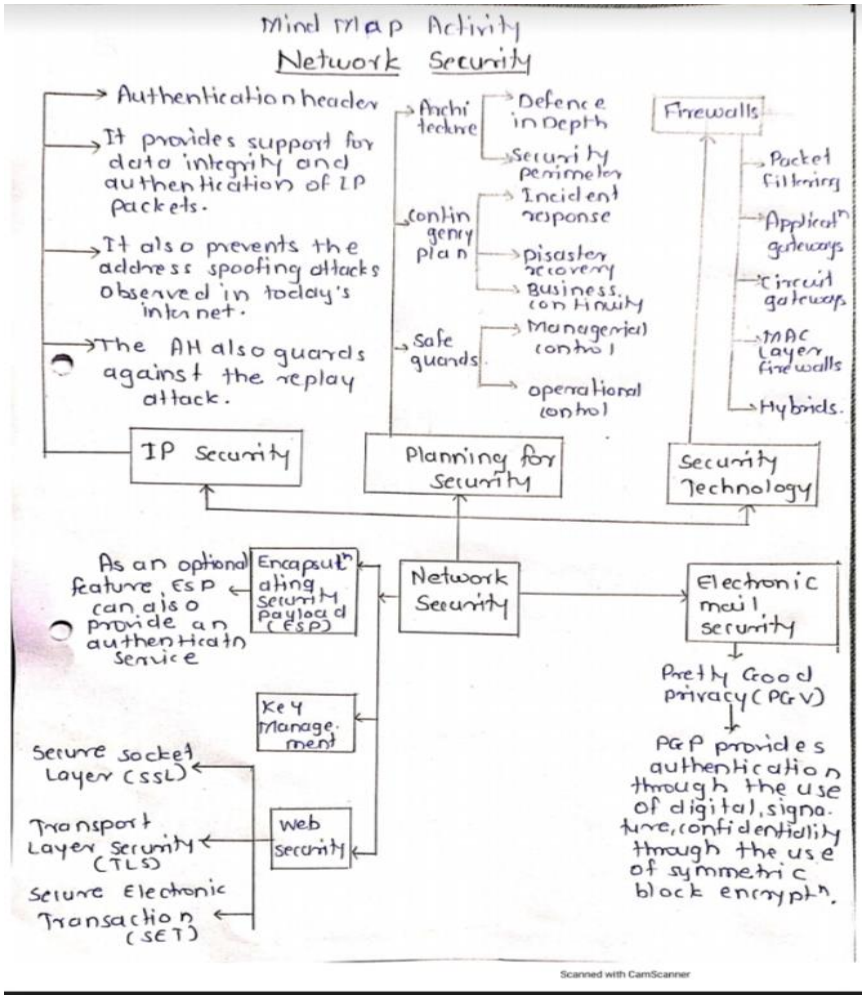


Sample Response of Mind Map activity on Unit-II

Sample Response of Mind Map activity on Unit-III



Sample Response of Mind Map activity on Unit-VI



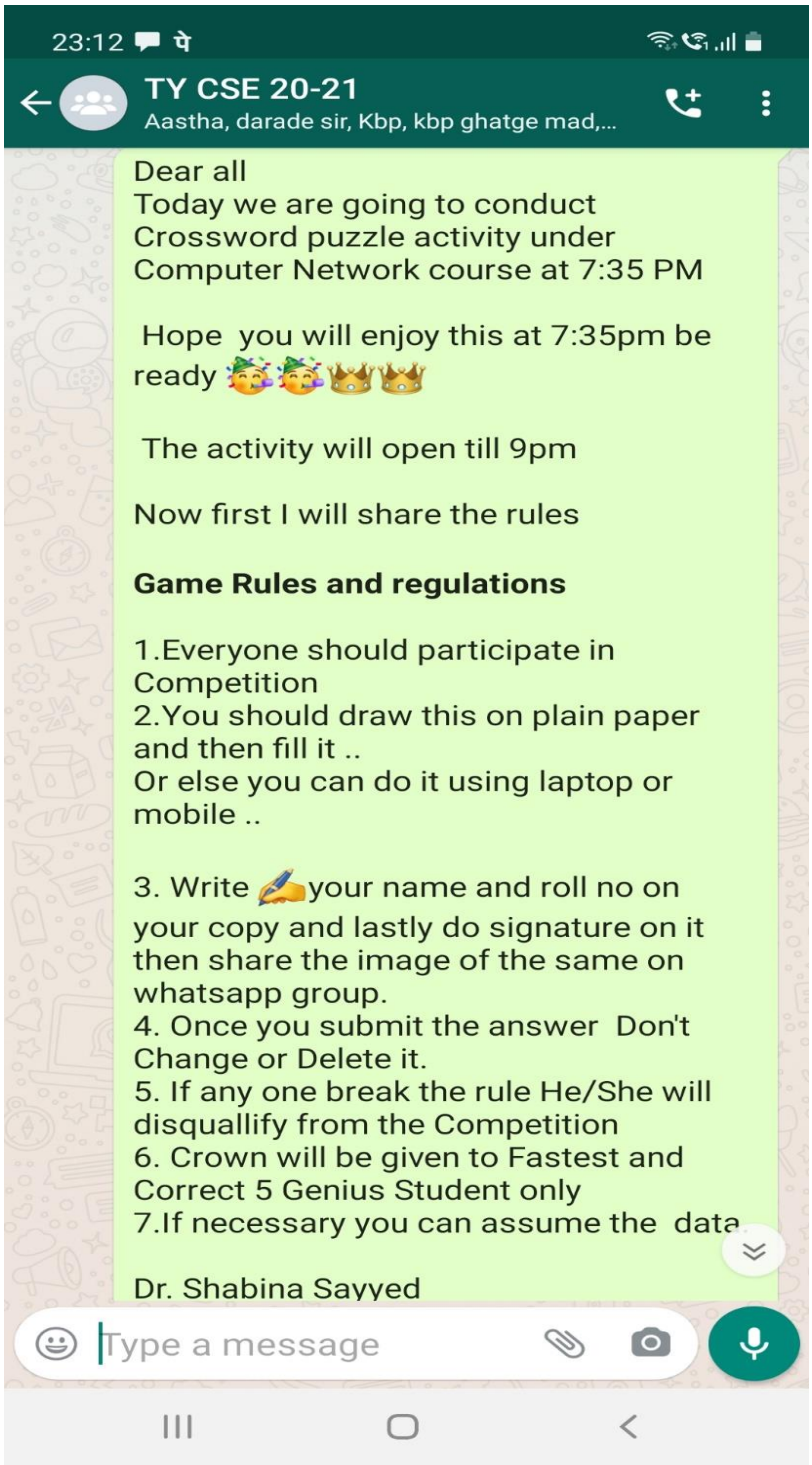
Activity No: 02

Name of the Activity: Crossword Activity (Unit-I)

Crossword Activity: A puzzle in which words that are the answers to clues are written into a pattern of numbered squares that go across and down. In this activity you have to refer the description and fill up the appropriate words in the Puzzle .

This activity was shared with students on WhatsApp group also instructed them to upload this on Gnomio moodle site.

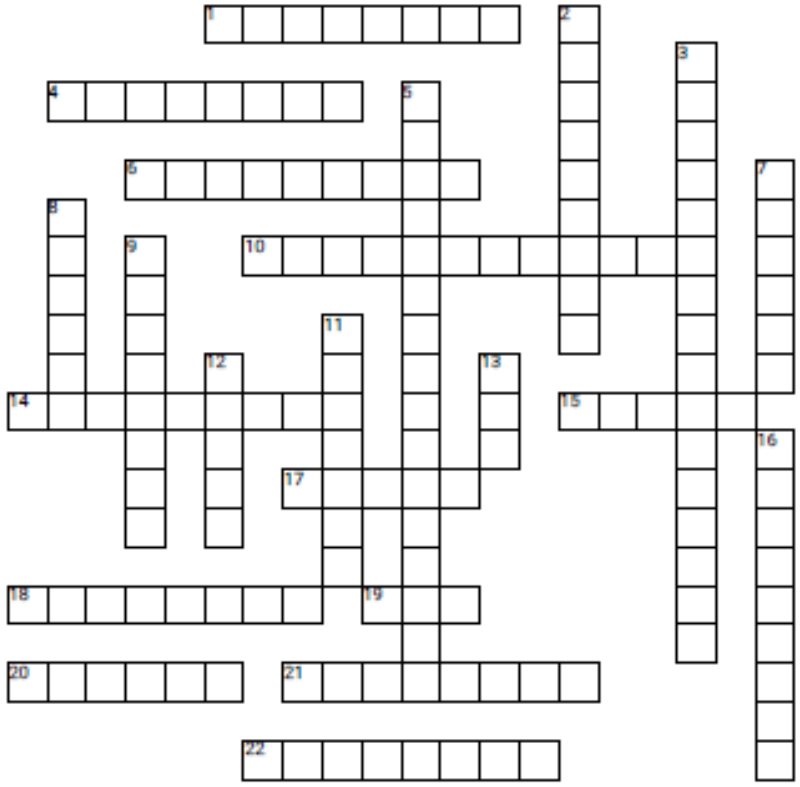
Notification about this activities along with the rules and regulations for solving this activity was shared with students on whatsApp group of third year students.



Students Sheet : This is the students sheet the students can draw this image on plain paper and they can submit it on gnomio moodle site or whatsApp group.

Name: _____ Date: _____ Period: _____

Networking Crossword



Across

1. What are any devices that connect network environments that are not alike?

4. What indicates your computer's virtual location in a network?

6. What is the data rate supported by a network connection or interface?

10. What physically copnnects computers to one another in a network?

14. What sends out a message to all devices on the same network segment?

15. What is SMTP's (Simple Mail transfer Protocol) most common form?

17. What are devices that change digital data into analog for transmission over analog network medium and then back to digital at the receiving end?

18. What is the part of a company's network that allows access to nonemployees?

19. What are a group of computers in a small geographic area a part of?

20. What is a computer that is not a server and is used by individuals?

21. What acts as a security guard between the internet and a network?

22. What is used to connect multiple devices on the same network within a building or campus?

Down

2. What sends signals over different frequencies at once?

3. What kind of network cable is most commonly used?

5. What is a special electronic circuit inside any computer attached to a network?

7. What is used to centralize data and share it or save it in a network?

8. What is a device that can connect multiple network segments?

9. What is the part of a company's network that allows access to employees?

11. What are two or more computers connected by a wireless radio connection so that they can exchange information a part of?

12. What is another name for 1 byte?

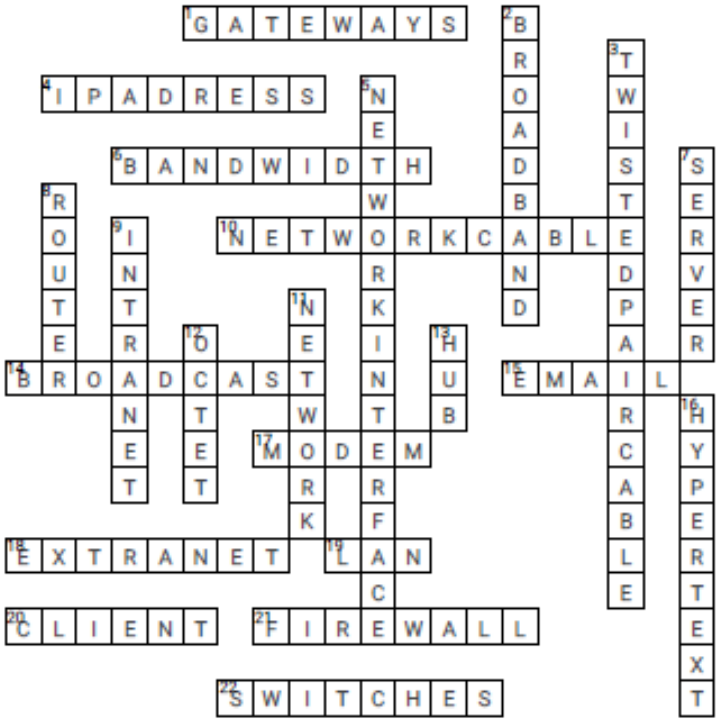
13. What is the most basic networking device that connects multiple computers or network devices together?

16. What does HTTP stand for

Answer Sheet:

Name: _____ Date: _____ Period: _____

Networking Crossword



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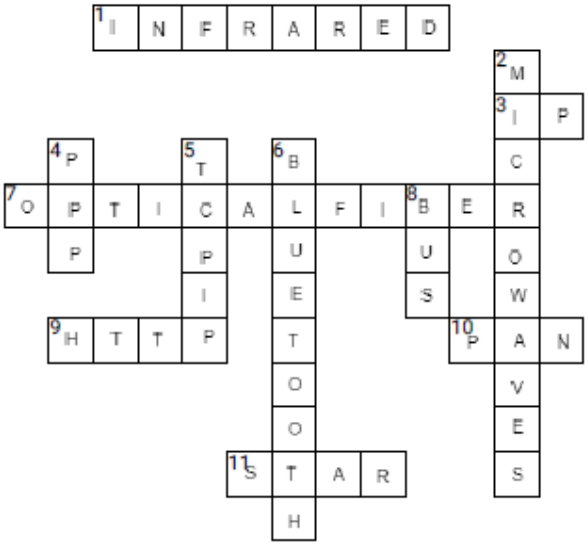
Sample Response of Crossword activity on Unit-I

Name: Sangram Khandagale Date: 12/05/2021

COMPUTER NETWORKS



Activity No: 03

Name of the Activity: One Minute Paper

The Minute Paper is a very commonly used classroom assessment technique. It really does take about a minute and, while usually used at the end of class. The students were fully utilised this techniques for solving their doubts and queries .

Sample Response of Crossword activity on Unit-III

Rayat Shikshan Sanstha's
Karmaveer Bhaurao Patil College of Engineering, Satara

Academic Year: 2020-2021 Semester-II

Name of the Program: Computer Science and Engineering **Program Code: 627005**
Name of the Course: Computer Networks **Course Code: BTCOC602**
Class: Third Year

Date of Session:

The Minute Paper Technique

Topic: Data link layer

(Concise, well planned sentences, please answer the two questions below:

1. What are the two {Three, Four, Five} Most Significant {Central, Useful, Meaningful, Surprising, Disturbing} things you have learned during this session?

Ans: Data Link Layer Design Issues, Service provided to network layer Framing, Error Control, Flow Control, Error Detection and Correction, error correcting codes error detecting codes.

2. What Questions remain uppermost in your mind?

Ans: Which technique is used in data link layer that allows two stations working at different speeds to communicate with each other

3. Is there anything you did not understand?

Ans:. No

Name of Student: Neha Chavan

Roll No: CS2018009

Sample Response of Crossword activity on Unit-IV

Rayat Shikshan Sanstha's

Karmaveer Bhaurao Patil College of Engineering, Satara

Academic Year: 2020-2021 Semester-II

Name of the Program: Computer Science and Engineering. **Program Code: 627005**

Name of the Course: Computer Networks **Course Code: BTCOC602**

Class: Third Year

Date of Session:

The Minute Paper Technique

Topic: Network Layer and Congestion Control& Congestion Control and QOS

(Concise, well planned sentences, please answer the two questions below:)

1. **What are the two {Three, four, five} Most Significant {Central, Useful, Meaningful, Surprising, Disturbing} things you have learned during this session?**

Ans: IPv4/ IPv6, Routers and Routing Algorithms distance vector link state. TCP UDP and sockets. Congestion control and QOS, Packet-scheduling, Traffic shaping, integrated Services.

2. **What Questions remain uppermost in your mind?**

Ans: The question remains uppermost is that how is the network layer and computer works.

3. **Is there anything you did not understand?**

Ans: No

Name: Vaishnavi Devendra Devi

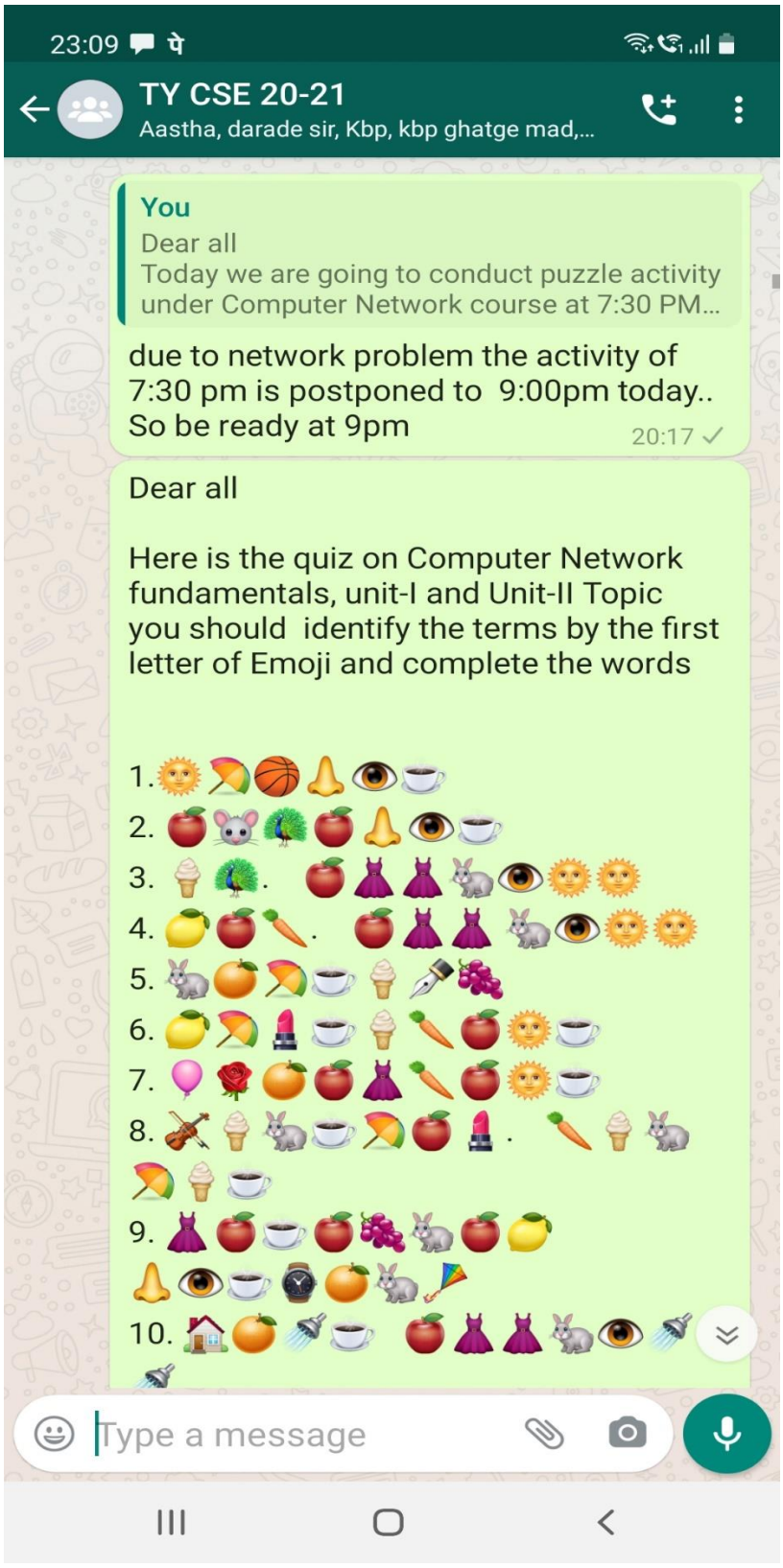
Roll No: 13

Activity No: 04

Name of the Activity: WhatsApp Emoji Activity.

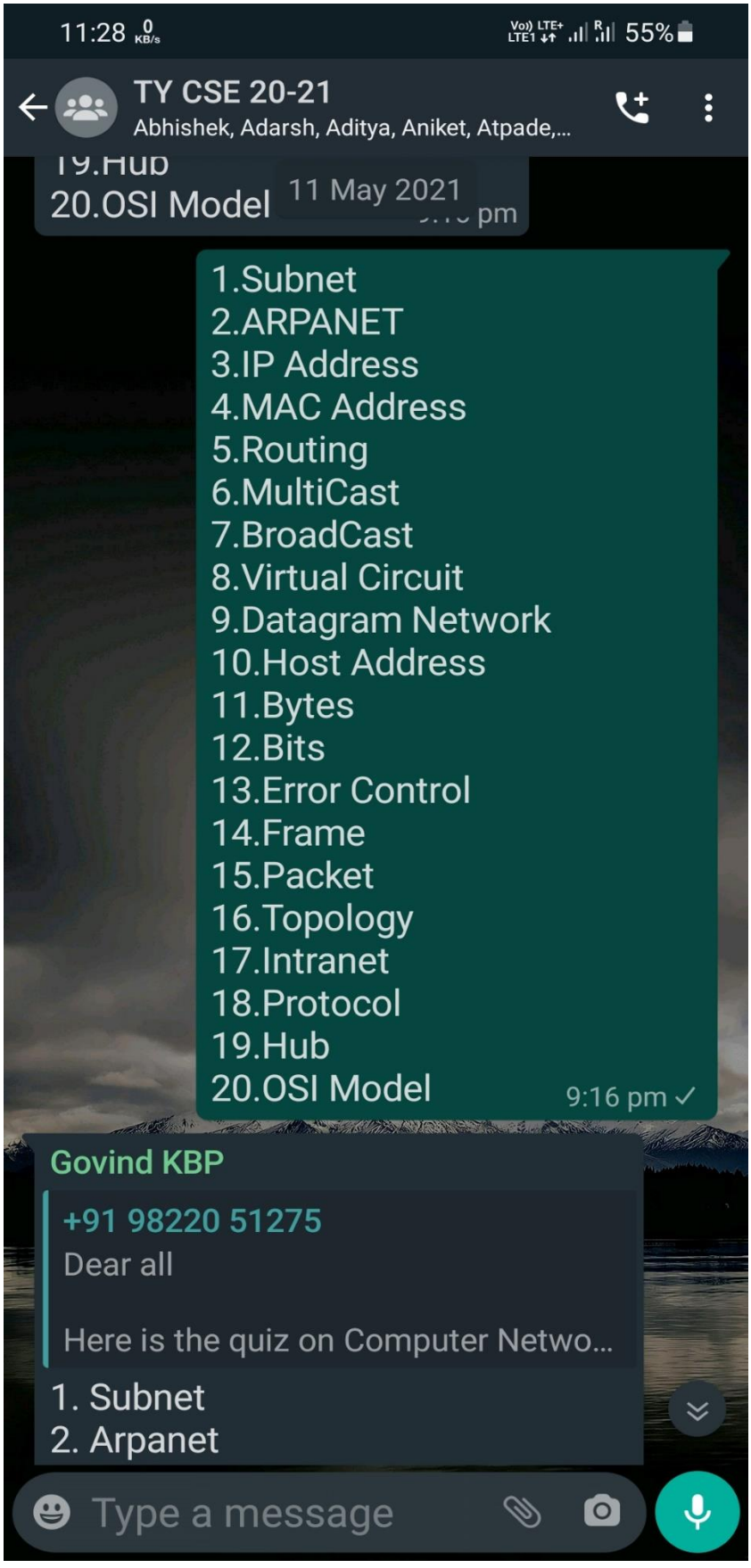
The students has to identify the terms by the first letter of Emoji and complete the words.

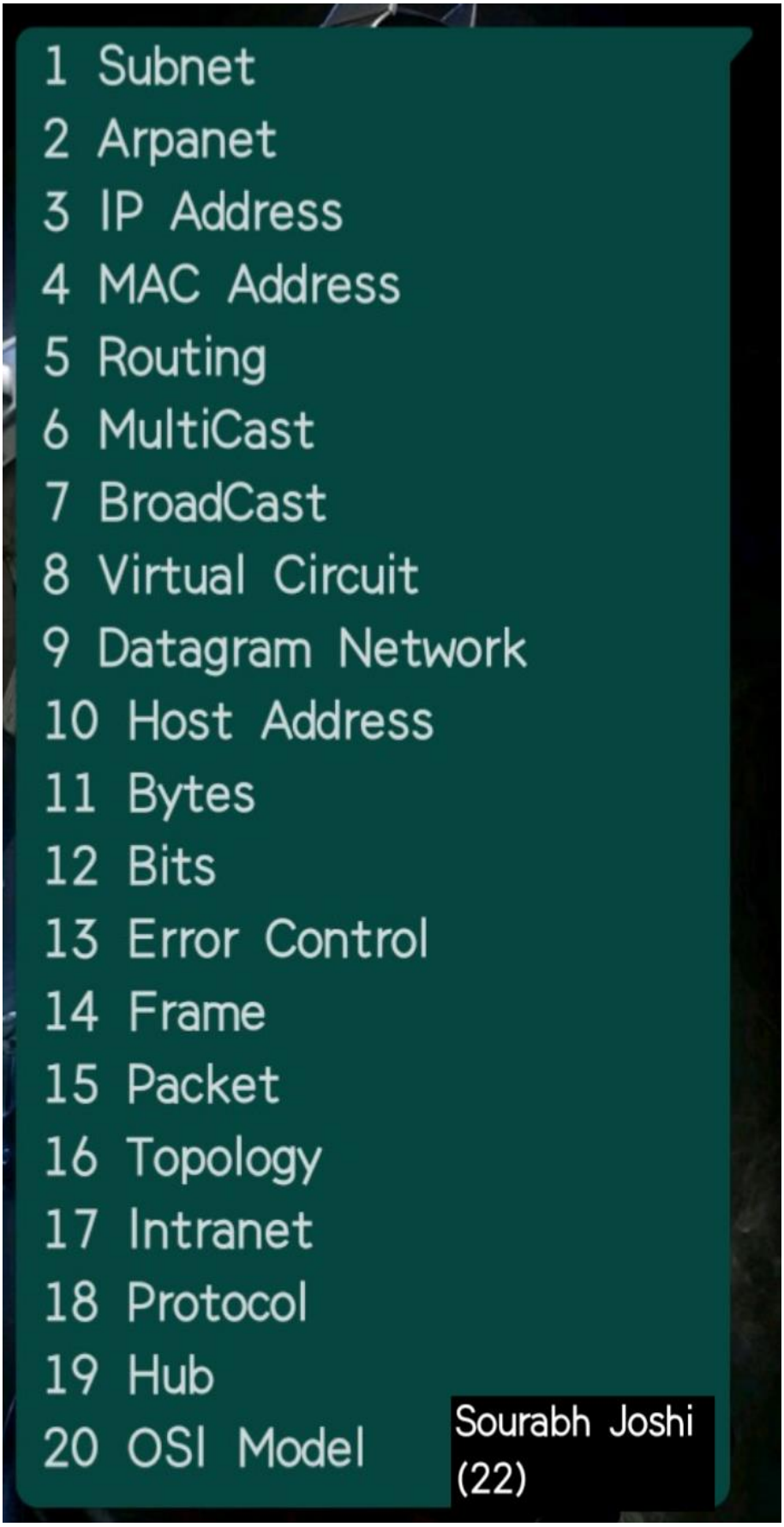
Notification of WhatsApp Emoji Activity along with the rules for solving this puzzle activity.



23:10 पे
TY CSE 20-21
Aastha, darade sir, Kbp, kbp ghatge mad,...
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17
18
19
20
21:05
Now start this activity 👆👆
21:05
You have to identify all 20 emoji's and then post it on group
21:06
Type a message

Sample Responses of WhatsApp Emoji Activity on Unit-I & II



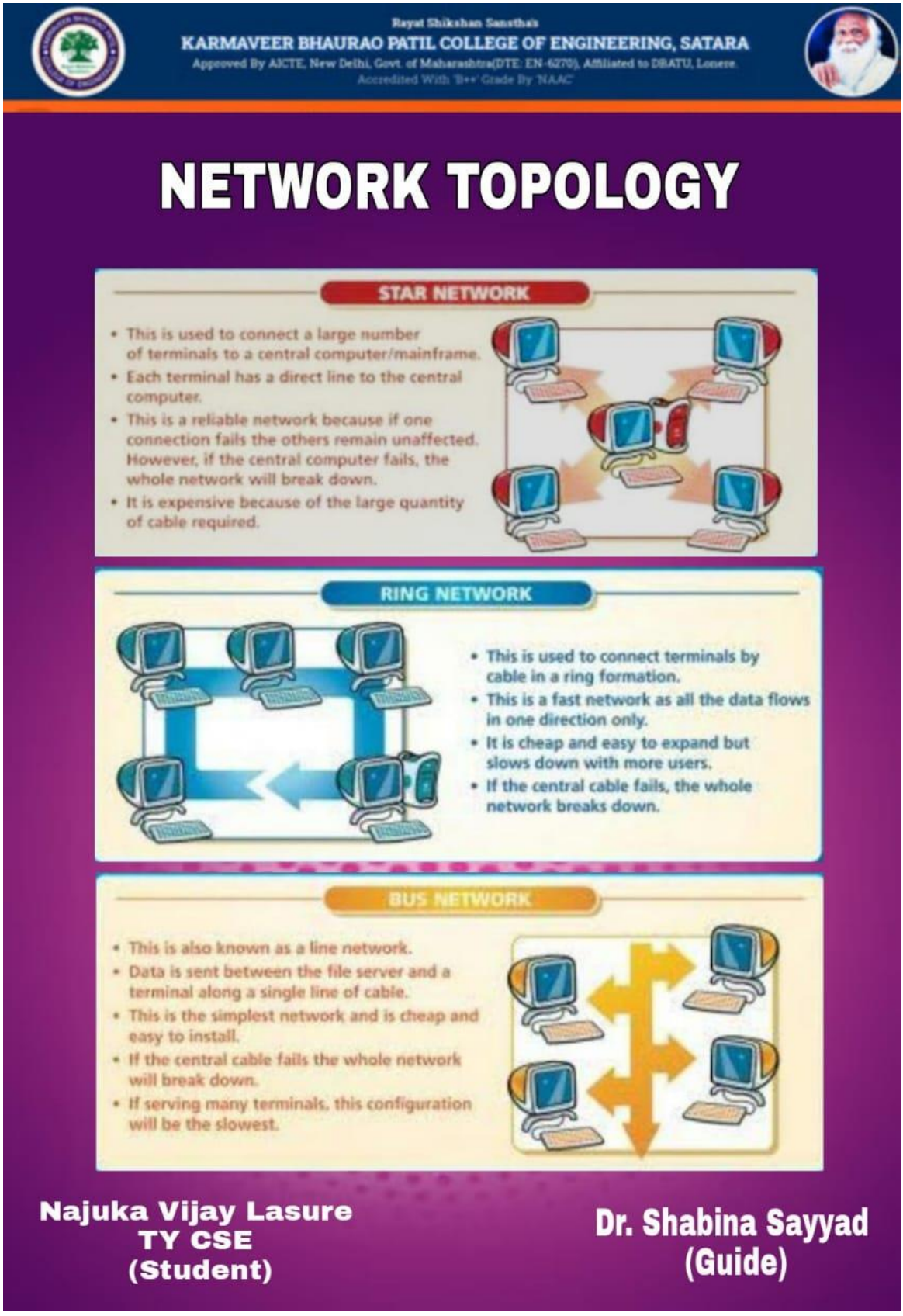

1 Subnet
2 Arpanet
3 IP Address
4 MAC Address
5 Routing
6 MultiCast
7 BroadCast
8 Virtual Circuit
9 Datagram Network
10 Host Address
11 Bytes
12 Bits
13 Error Control
14 Frame
15 Packet
16 Topology
17 Intranet
18 Protocol
19 Hub
20 OSI Model
Sourabh Joshi (22)

Activity No: 05

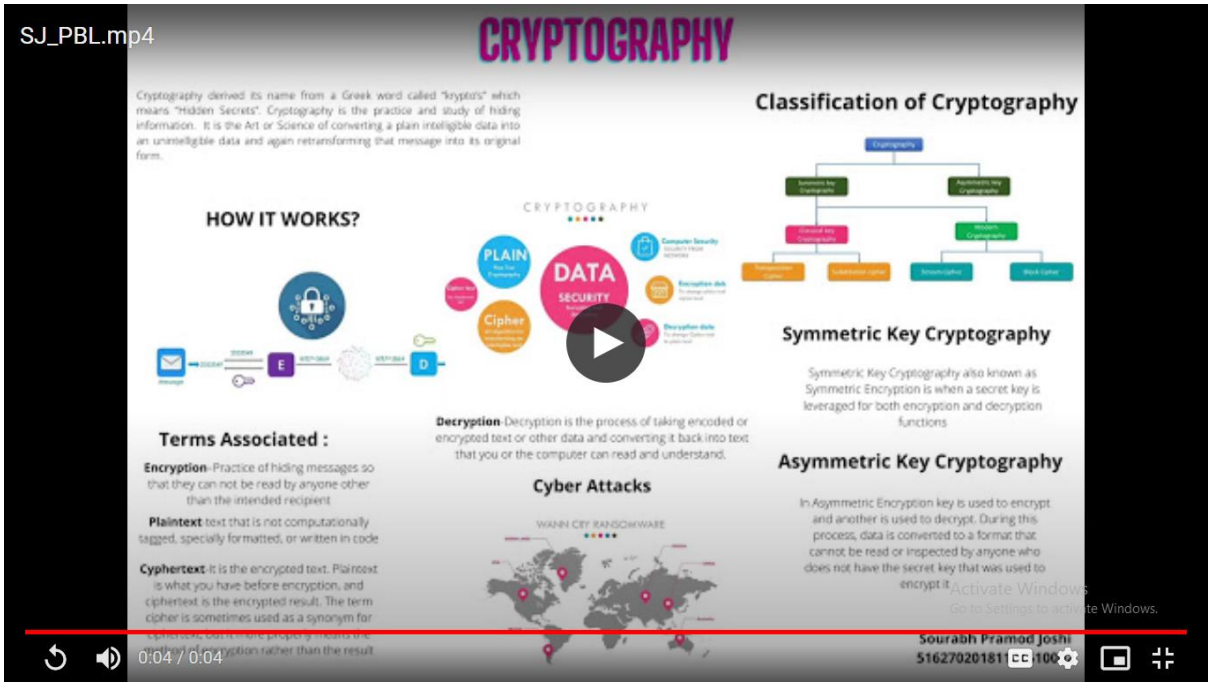
Name of the Activity: Project Based Learning

Project-based learning is a student-centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems.

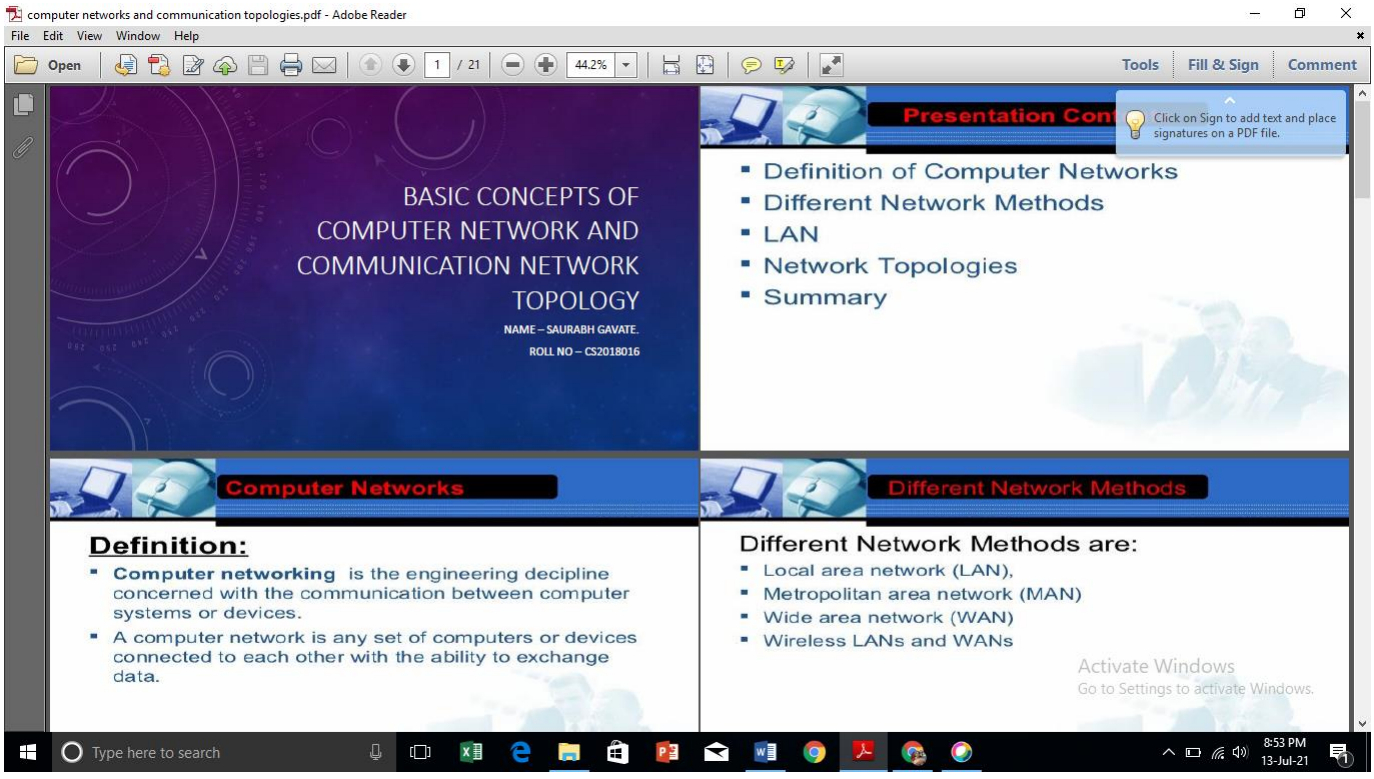
Sample Responses of Project Based Learning Activity- Poster Presentation



Sample Responses of Project Based Learning Activity- Video Presentation



Sample Responses of Project Based Learning Activity- Power Point Presentation



Session plan for conducting the Think Pair Share Activity on Google Meet

Rayat Shikshan Sanstha's

Karmaveer Bhaurao Patil College of Engineering, Satara

Program: Computer Science and Engineering	**Course:** Computer Networks
Class: T.Y. (CSE)	**Course Code:**
Unit No.: 2	**Lecture No**.: 4
Duration: 1 Hr.	Date: 24/3
Objective: To elaborate the concept of wireless LAN using Example	
Outcomes: Students get a clear understanding of wireless LAN	

Session Plan

Time	Teacher Activity	Student Activity	Teaching Tool / Assessment Method / Resource used
20 min.	Conducting discussion on Wireless LAN	Listening and noting down	Lecture method alongwith PPT
20min.	Discussion on various types of Wireless LAN	Participating in Discussion on various types of Wireless LAN and sharing their opinion	Think – Pair - Share
15 min.	Summarizing output of discussion	Listening and noting down	Lecture method alongwith PPT
5 min.	Summarizing the lecture	Listening and noting down	

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Dr. Shabina Sayyed
Course Coordinator