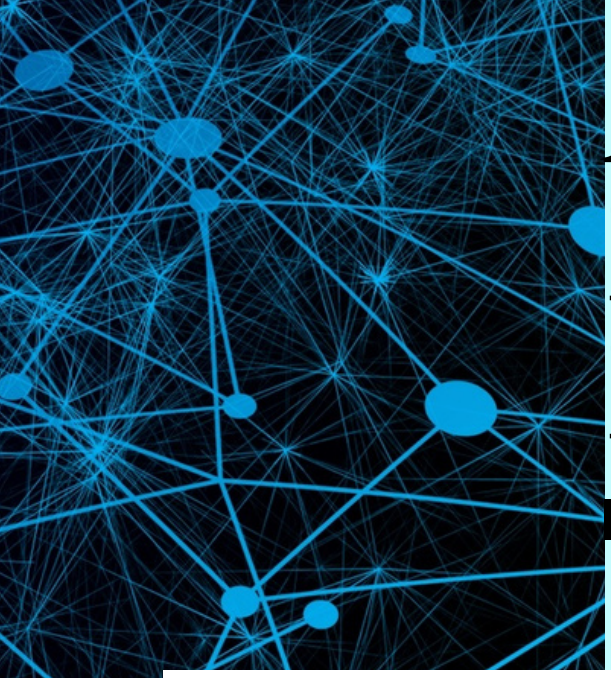

# Assignment 1 MOOC Course Report

# COMPUTER NETWORKS

## B19CS5030


BY
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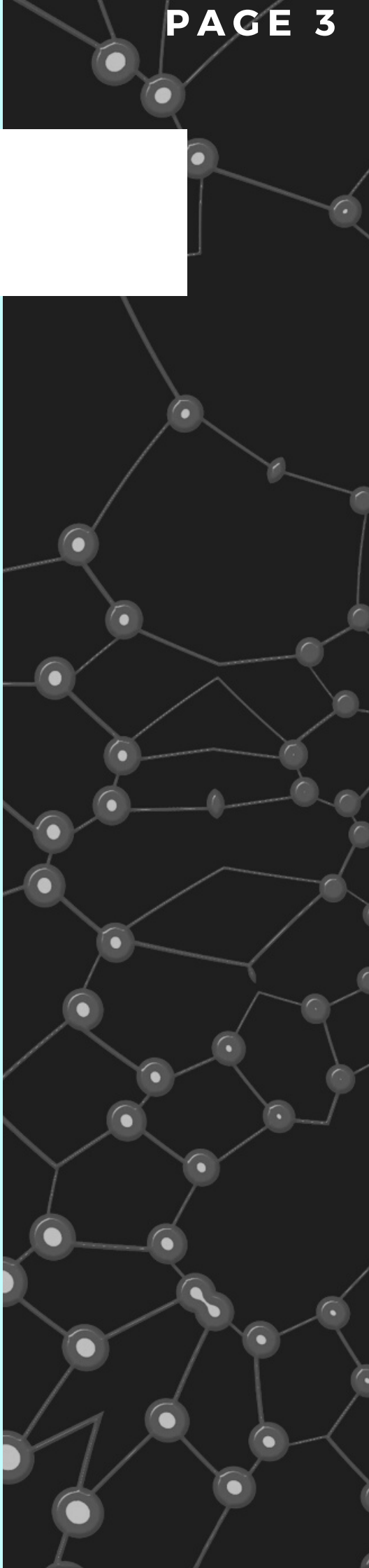
# About

Computer Networks Basics by Matt Constable is a short course that bargains about the essentials of Computer Networks through both hypothetical and Commonsense Learning. There are 4 modules, each comprising of talk notes, YouTube instructional exercises just as commonsense lab meetings. There are extra assets given to acquire information in comparing subjects and gathering conversations to help understudies to acquire lucidity regarding the matter.



# Course Contents

**Module 1: Networking Concepts**

- Study Materials
- YouTube Tutorials
- Practical Lab Sessions
- Mock Exam

**Module 2: Infrastructure**

- Study Materials
- YouTube Tutorials
- Practical Lab Sessions using Packet Tracer
- Application
- Mock Exam

**Module 3: Network Operations**

- Study Materials
- YouTube Tutorials
- Practical Lab Sessions
- Mock Exam

**Module 4: Network Security**

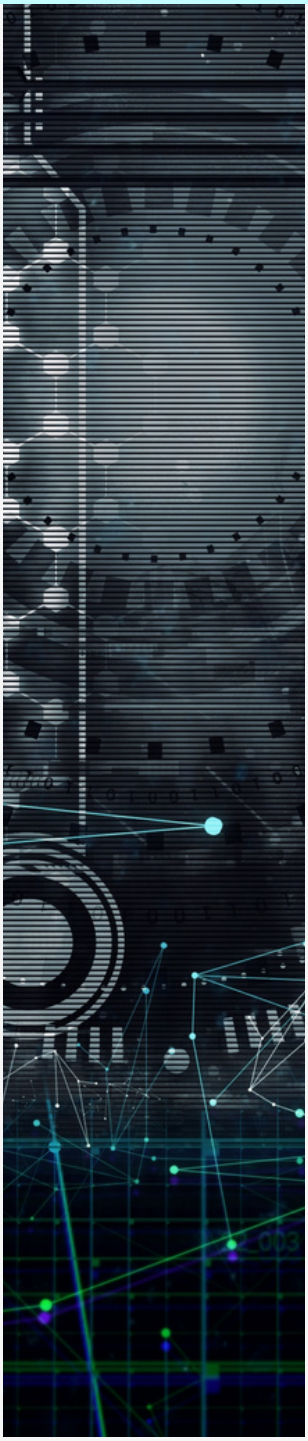
- Study Materials
- YouTube Tutorials
- Practical Lab Sessions
- Mock Exam

# Networking Concepts Module 1

In this module, we figure out how to interface with various systems to send and get data. We find out with regards to the 7 layers of the OSI model and the physical, programming, and specialized parts comparing to each layer like Switches, Routers, servers, customers,transmission media, passageways, Conventions, center point, and so on.
This module assists us with comprehension about various Organization Geographies with their benefits and disservices in true situation. Moreover we get a fundamental comprehension of Distributed computing administrations and it's fundamental ideas.

# INFRASTRUCTURE

## Module 2



In this module, we find out with regards to the Ethernet wiring framework and cabling arrangements. Through this module, we get to know the idea of Virtualization which is the method involved with joining equipment and programming network assets and organization functionalities into a virtual organization.
This module thoroughly analyzes the components of LAN and WAN while providing us with an outline of all the significant WAN Innovations in various fields.

# Network Operations Module 3

This module provides us with a comprehension of the activity and The executives of Organizations by administration suppliers which depend on to screen, oversee, and react to cautions on the organization's accessibility and execution. We find out with regards to different situations which may prompt information misfortune and the techniques through which we can play it safe and furthermore recuperate lost information, too, seeing how a Virtual Private Network (VPN) is better for higher security levels.

# Network SECURITY Module 4

Organization Security is an expansive point which covers different approaches and cycles adjusted to get a network.
In this module we find out about the different safety efforts a person also as organizations can take to forestall unapproved admittance to the organization utilizing access control, conduct analytics and application protections.
We momentarily find out with regards to Honeypot, Span, TASCACS+, Kerberos, and so forth, and diverse Key Encryption strategies.

# Conclusion

Computer networks operate using a varying set of hardware and software. All packet-switched networks use Transmission Control Protocol/Internet Protocol (TCP/IP) to establish a standard means of communication. Each endpoint in a network has a unique identifier that is used to indicate the source or destination of the transmission.

Identifiers include the node's IP address or Media Access Control (MAC) address. Endpoint nodes, which are used for routing purposes, include switches and routers, servers, personal computers, phones, networked printers and other peripheral computing devices, as well as sensors and actuators.

The Open Systems Interconnection (OSI) model defines how data is transferred between computers.

A network's capacity is how much traffic the network can support at any one time while still meeting service-level agreements (SLAs). Network capacity is measured in terms of bandwidth.

Bandwidth is quantified by the theoretical maximum number of bits per second (bps) that can pass through a network device.

Throughput is a measure of the actual speed of a successful transmission after accounting for factors like latency, processing power and protocol overhead.

# Certificate

## Certificate of Achievement

### Short Course: Computer Network Fundamentals

This is to certify that

**Krithik Gopinath**

has successfully completed the Short Course

**Computer Network Fundamentals**

Grade: Distinction (83/100)

Lecturer: Matt Constable

Completed: October 31, 2021

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