Hello everyone! In this video, you will learn about the User Datagram Protocol and its uses in today's applications. UDP works on the transport layer and serves as the intermediary between the application layer and network layer like TCP protocol but with some differences. Let's understand the services provided by it and the differences from the TCP protocol. UDP plays a very important role in the TCP/IP protocol stack. It provides a process to process communication like TCP does, but in a connectionless way i. e. no connection is set up before data transfer. It also provides error control but not mandatorily like TCP. The protocol data unit is called the user datagram in UDP protocol. The UDP datagram has the simplest header of 8 bytes only. It has four fields, source port number, destination port number, total datagram length, and optional checksum. If the checksum is not calculated, it is set to zero. Here you can see some well-known port numbers, used by UDP applications such as 7,9,11, and 13 etc. Here are some more ports used by applications, taking the services of UDP. These services include Domain Name Service(DNS), TFTP, NTP etc. UDP is used on transport layer, where a protocol like TCP providing connection-oriented, reliable services with flow control and error control exists. However, UDP has its own set of applications. Let's discuss this. UDP is suitable for a process

that requires simple request-response communication with little concern for flow control and error control. Not used for a process such as FTP that needs to send bulk data, as sending the bulk data requires a connection-oriented and reliable service like UDP. UDP is suitable transport protocol for multicasting. Multicasting capability is embedded in the UDP software, but not in the TCP software. UDP is used for the management processes such as SNMPwhich require to exchange small amounts of data in request-response format. UDP is normally used for real-time applications such as video conferencing that cannot tolerate uneven delay between sections of a received message. Thank You.