



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF INFORMATION TECHNOLOGY

III Year – I Semester		L	T	P	C
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COMPUTER NETWORKS & COMPILER DESIGN LAB					

Course Objectives:

- To learn and use network commands
- To learn socket programming
- To implement and analyze various network protocols
- To implement various parsers

Course Outcomes:

Upon Completion of the course, the students will be able to:

- Implement various protocols using TCP and UDP
- Compare the performance of different transport layer protocols
- Use simulation tools to analyze the performance of various network protocols
- Analyze various routing algorithms
- Implement error correction codes
- Implement parsers

List of experiments

- 1) Connect the computers in Local Area Network
- 2) Learn to use commands like tcpdump, netstat, ifconfig, nslookup and traceroute. Capture ping and traceroute PDUs using a network protocol analyzer and examine.
- 3) Implement Data Link Framing method - Character Count.
- 4) Implement Data link framing method - Bit stuffing and Destuffing.
- 5) Implement Error detection method - even and odd parity.
- 6) Implement on a data set of characters the three CRC polynomials – CRC 12, CRC 16 and CRC CCIP.
- 7) Implement Data Link protocols - Unrestricted simplex protocol
- 8) Implement data link protocols - Stop and Wait protoc
- 9) Simulate error correction code (like CRC).
- 10) Write a C program to recognize strings under 'a', 'a*b+', 'abb'.
- 11) Write a C program to test whether a given identifier is valid or not.
- 12) Write a C program to simulate lexical analyser for validating operators
- 13) Write a C program for constructing recursive descent parsing.
- 14) Write a C program to implement LALR parsing.
- 15) Write a C program to implement operator precedence parsing.

SOFTWARE:

1. C / C++ / Java / Python / Equivalent Compiler 30
2. Network simulator like NS2/Glomosim/OPNET/ Packet Tracer / Equivalent