Exercises of Networking and Internet

IMPORTANT: IF YOU HAVE TO PREPARE THE REGULAR EXAM, YOU HAVE TO CONSIDER ALL THE EXERCISES (BOTH 1ST MID TERM AND 2ND MID TERM).

Mid Term Evaluation Exercises

Circuit Switching https://gaia.cs.umass.edu/kurose_ross/interactive/circuit_switching.php

Computing the one hop transmission delay
https://gaia.cs.umass.edu/kurose_ross/interactive/one-hop-delay.php

Computing end to end delay https://gaia.cs.umass.edu/kurose_ross/interactive/end-end-delay.php

End to end throughput and bottleneck links
https://gaia.cs.umass.edu/kurose_ross/interactive/end-end-throughput-simple.php

IP Stack and protocol layers https://gaia.cs.umass.edu/kurose_ross/interactive/layers.php

HTTP Get message https://gaia.cs.umass.edu/kurose_ross/interactive/http-get.php

HTTP Response Message https://gaia.cs.umass.edu/kurose_ross/interactive/http-response.php

DNS Basics https://gaia.cs.umass.edu/kurose_ross/interactive/dns.php

DNS Iterative vs Recursive Query
https://gaia.cs.umass.edu/kurose_ross/interactive/dns_query.php

DNS and HTTP Delays
https://gaia.cs.umass.edu/kurose_ross/interactive/DNS_HTTP_delay.php

DNS - Iterative vs Recursive Query - Recursive Type
https://gaia.cs.umass.edu/kurose_ross/interactive/dns_query.php

Car - Caravan Analogy https://gaia.cs.umass.edu/kurose_ross/interactive/caravan.php

Computing an Internet Checksum
https://gaia.cs.umass.edu/kurose_ross/interactive/internet_checksum.php

Browser Caching https://gaia.cs.umass.edu/kurose_ross/interactive/browser_caching.php

Electronic Mail and SMTP https://gaia.cs.umass.edu/kurose_ross/interactive/smtp.php

TCP Sequence and Ack Numbers with Segment Loss
https://gaia.cs.umass.edu/kurose_ross/interactive/tcp_segloss.php

Computing TCP Timeout and RTT Value
https://gaia.cs.umass.edu/kurose_ross/interactive/TCP_RTT.php

UDP Multiplexing and Demultiplexing
https://gaia.cs.umass.edu/kurose_ross/interactive/UDP_Mux_Demux.php

TCP Multiplexing and Demultiplexing
https://gaia.cs.umass.edu/kurose_ross/interactive/TCP_Mux_Demux.php

2nd Mid-Term Evaluation Exercises

Packet scheduling (FIFO)
https://gaia.cs.umass.edu/kurose_ross/interactive/scheduling.php

Nat https://gaia.cs.umass.edu/kurose_ross/interactive/nat.php

Longest Prefix Matching
https://gaia.cs.umass.edu/kurose_ross/interactive/longestprefix.php

IPV6 tunnelling https://gaia.cs.umass.edu/kurose_ross/interactive/ip_tunneling.php

Dijkstra https://gaia.cs.umass.edu/kurose_ross/interactive/dij.php

Dijkstra advanced https://gaia.cs.umass.edu/kurose_ross/interactive/dij_advanced.php

Bellman Ford https://gaia.cs.umass.edu/kurose_ross/interactive/disVector.php

Two dimensional parity https://gaia.cs.umass.edu/kurose_ross/interactive/2d_parity.php

Multiple Access Protocols - Collisions Aloha
https://gaia.cs.umass.edu/kurose_ross/interactive/collisions.php

Multiple Access Protocols - Collisions Slotted Aloha
https://gaia.cs.umass.edu/kurose_ross/interactive/collisions.php

Multiple Access Protocols - Collisions CSMA
https://gaia.cs.umass.edu/kurose_ross/interactive/collisions.php

Link Layer Addressing and Forwarding
https://gaia.cs.umass.edu/kurose_ross/interactive/link_layer_addressing.php

CDMA - Basics https://gaia.cs.umass.edu/kurose_ross/interactive/cdma.php

CDMA - Advanced https://gaia.cs.umass.edu/kurose_ross/interactive/cdma_advanced.php

4G Handover https://gaia.cs.umass.edu/kurose_ross/interactive/4g_handover.php