Wireless Networks

Assignment-2

Submitted By

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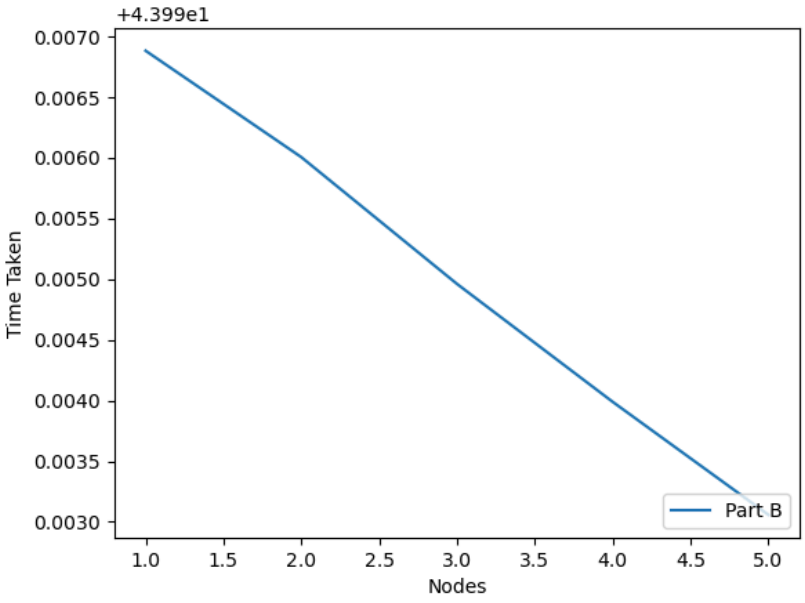
Part A

Using Third.CC as a reference, Created a Topology of N Wifi devices and a 2-Device P2P Connection, with one of the P2P Nodes serving as the AP for the wifi devices, Also created subnets for the devices as asked in the question.

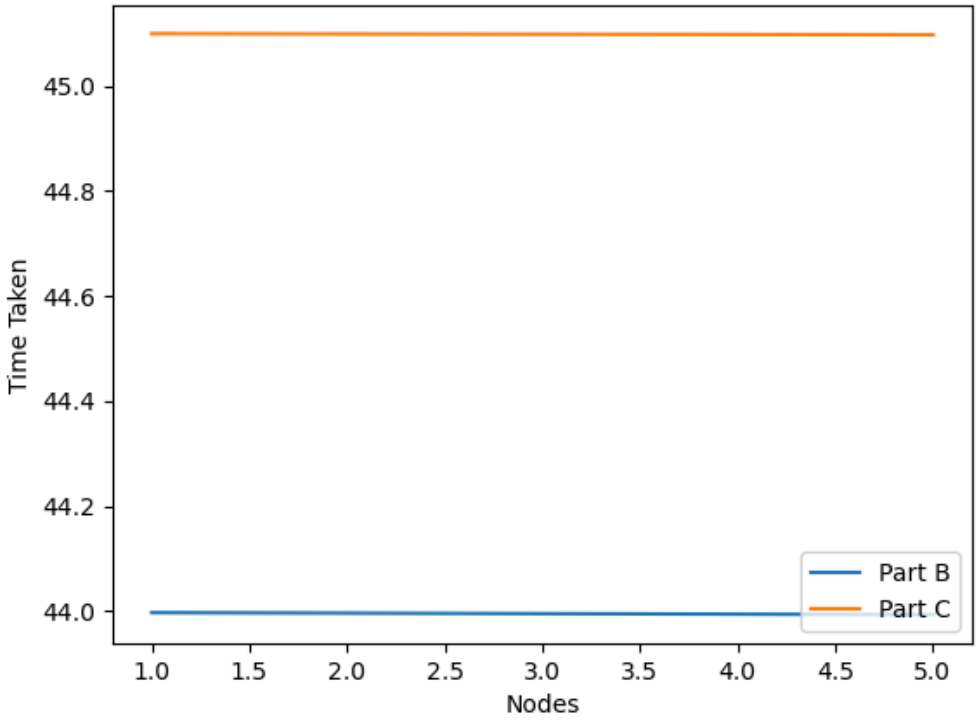
Part B

Replaced the UDPecho applications with BulkSend, ran the associated PCAP files using Pandas, and created a graph to showcase the effects of distance from the AP (by and large negligible), on the nodes.



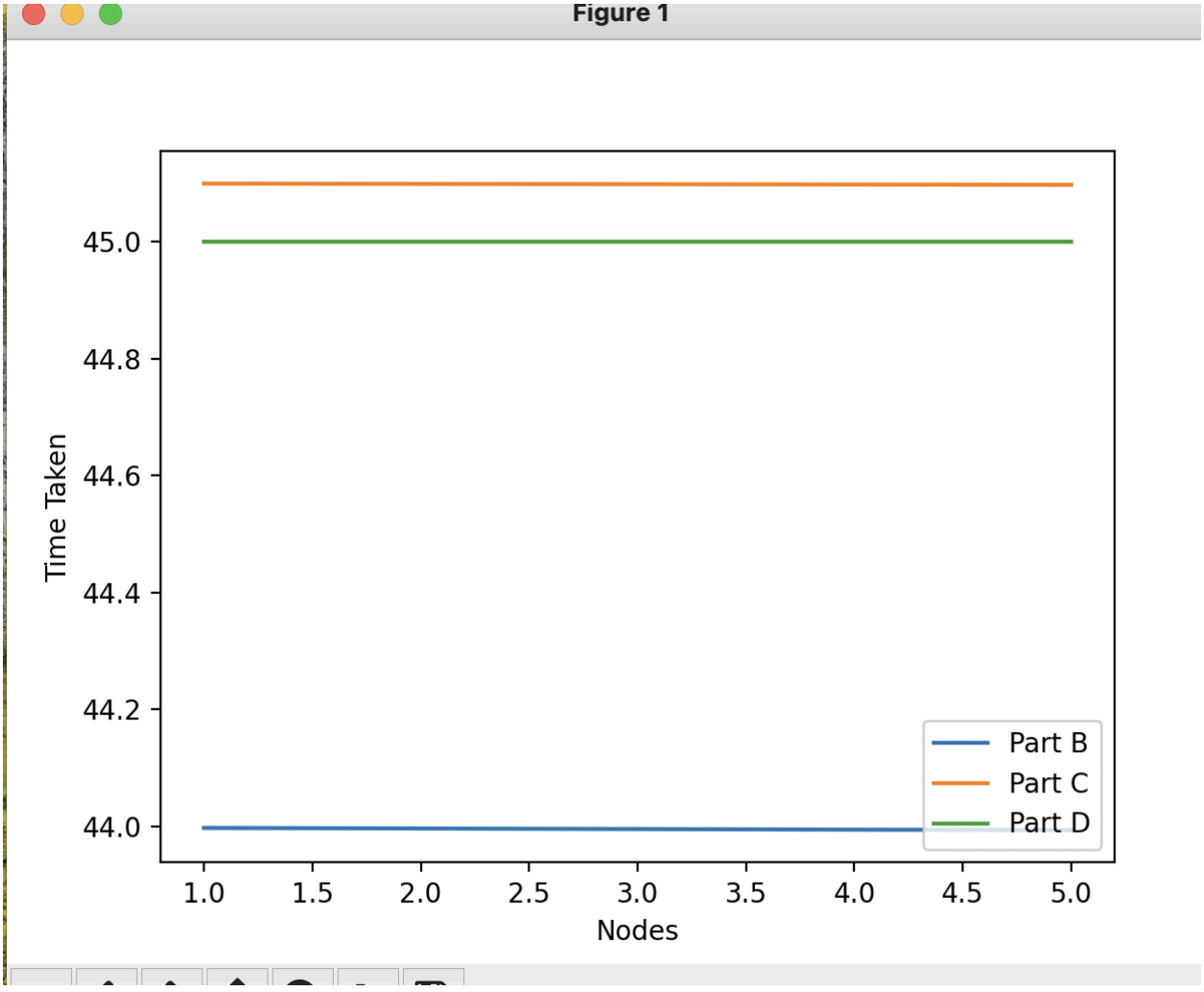
Part C

Started a simultaneous upload from the nodes to the server using an OnOffApplication, which slowed down the downloading process a fair bit, as is seen here.



Part D

Turned on the MinstrelHTManager, which despite added path loss (log distance prop) and fading (nakagami-m), managed the rate to ensure better performanc than Part-C, though considerably minute.



Part-E

For some reason, my capture for Part-E was identical to

that for Part-D, which is somewhat counterintuitive, since RTS/CTS is supposed to reduce collisions and help make better time among other things.