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Software Design with Artificial Intelligence For Cloud Computing

Year 4

Screenshots of Progression Lab 1

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## V. Capturing Events and Viewing Animations in Simulation Mode

The screenshot shows a successful PDU sent to the Server. This PDU can be then deleted by double-clicking on the “(delete)” text which is highlighted in the “PDU List Window”. You can adjust animation speed using the slider in the “Simulation Panel” under “Play Controls.” The “Event List” shows the successful request sent and echo received from the Server. Since the echo is sent and no new requests are made, no further events are captured.

A screenshot of a computer

Description automatically generated



## VI. Looking Inside Packets in Simulation Mode

Clicking the "Reset Simulation" button in the "Simulation Panel" clears all events, leaving only the Simple PDU request. To view PDU information, click the green envelope or double-click the first row in the Event List. The "PDU Information at Device: Client" will then appear, showing how the packet is processed at each layer.A screenshot of a computer

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This view is available for each event, helping users understand the path and process. After sending the packet, an envelope appears at the Server icon. Users can view PDU information to see which layers it passed through. Each time the view opens, they can explore different layers to understand what occurred at each step.A screenshot of a computer

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## VII. Viewing Device Tables and Resetting the Network

When PDU was sent from Client to Server, the ARP table was automatically filled in. Deleting the PDU does not remove entries from the ARP table as these events already happened in the network. ARP Tables information will be gone when the machine is turned off.

A screenshot of a computer

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A screenshot of a computer

Description automatically generatedScreenshot below shows ARP tables being filled in once the ICMP ping packets were sent. The two machines learned about each other, and the appropriate information was provided in the ARP table. After resetting the simulation, the ARP tables remain full, preventing new ARP packets. Power off the devices empties the tables, and new ARP requests would appear in the “Event List”.

## VIII. Reviewing Your New Skills

By clicking on the icon of the End Device, there are many different options that the user can configure. The main one that we have used in this lab, were power on/off button on Server and Pc, as well as “Config” and “Desktop” tabs. Config allows us to setup device name and its interface. Desktop consists of many different options, one of them is “IP Configuration” which allows us to config static IPs and its mask. We have also used “Web Browser” to verify the connection was established properly.

A screenshot of a computer

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