Batch: A3 **Experiment Number:4**

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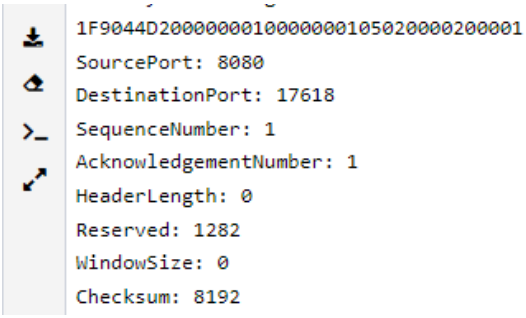
Aim of the Experiment: To write a program to implement TCP header

Program/ Steps:

```
def mytcpheader(stringer):

    sourceport = int(stringer[0:4], 16)
    destinationport = int(stringer[4:8], 16)
    sequence = int(stringer[8:16], 16)
    acknowledgement = int(stringer[16:24], 16)
    hlen = int(stringer[24], 16)
    reserved = int(stringer[25:28], 16)
    windowsize = int(stringer[28:32], 16)
    checksum = int(stringer[32:36], 16)
    urgentpointer = int(stringer[36:40], 16)


    print(f"SourcePort: {sourceport}")

    print(f"DestinationPort: {destinationport}")

    print(f"SequenceNumber: {sequence}")

    print(f"AcknowledgementNumber: {acknowledgement}")

    print(f"HeaderLength: {hlen}")

    print(f"Reserved: {reserved}")

    print(f"WindowSize: {windowsize}")

    print(f"Checksum: {checksum}")

    print(f"UrgentPointer: {urgentpointer}")

stringer = input("Enter your string: ").strip()
mytcpheader(stringer)
```

Output/Result:



Post Lab Question-Answers:

The unit of data transfer between two devices using TCP is called _____segment_____.

1) Which type of addressing is used at Transport Layer?
   a) Port addressing
   b) Logical addressing
   c) Physical Addressing
   d) None of the Above

Answer: Port Addressing

2) What is the difference between TCP and UDP?

Answer: TCP is connection-oriented, ensuring reliable data transfer with error checking and flow control, while UDP is connectionless, offering faster, simpler transmission without guarantees of delivery or order.

Outcomes:

CO2: Enumerate the layers of the OSI model and TCP/IP model, their functions and Protocols.

Conclusion (based on the Results and outcomes achieved):

Successfully executed a python program to implement TCP header.

References:

Books/ Journals/ Websites:

- Behrouz A Forouzan, Data Communication and Networking, Tata Mc Graw hill, India, 4th Edition
- A. S. Tanenbaum," Computer Networks", 4th edition, Prentice Hall