**MIS 6330: IT Security**

**Individual Homework 6**

1. What is *SQL injection*? What can you do to prevent such attacks?
2. Define the following terms: *input fuzzing* and *the principle of least privilege*.
3. I traced the path to utdallas.edu (using *tracert* *utdallas.edu*). The output I got is shown below.
   1. Based on this output, how many times does each IP packet traveling from my computer to utdallas.edu get framed and reframed?
   2. How many routers does each packet cross when going from my home to UTD?
   3. Can you identify the bottleneck, that is, between which two routers a packet traveling from my home to UTD would spend most of its time?

C:\Users\axl144730>tracert utdallas.edu

Tracing route to utdallas.edu [104.16.43.54]

over a maximum of 30 hops:

1 1 ms 1 ms 1 ms Wireless\_Broadband\_Router.home [192.168.1.1]

2 5 ms 5 ms 5 ms 47.187.192.1

3 6 ms 7 ms 6 ms 172.102.52.84

4 8 ms 7 ms 7 ms ae7---0.scr01.dlls.tx.frontiernet.net [74.40.3.17]

5 9 ms 8 ms 8 ms ae0---0.cbr01.dlls.tx.frontiernet.net [74.40.4.14]

6 8 ms 8 ms 7 ms 13335.dal.equinix.com [206.223.118.145]

7 8 ms 7 ms 7 ms 104.16.43.54

Trace complete.

1. While working from home, I used the *ipconfig* command and learned the following details about my laptop computer. If take the laptop to school and continue working, which of the following information is likely to change? Which one(s) will not change? Why?

Physical Address. . . . . . . . . : 44-39-D4-5A-C6-E2

IPv4 Address. . . . . . . . . . . : 192.168.1.10

Subnet Mask . . . . . . . . . . . : 255.255.255.0

Default Gateway . . . . . . . . . : 192.168.1.1