**Question 1: SQL Injection**   Which defense strategy against SQL injection attacks would you choose?

○ Block known-bad words, e.g., drop, insert, shutdown

○ Escape characters that can be either syntax or literals so that they are treated as literals, e.g., the single-quote ' is replaced with \'.

○ Specify allowed input formats, e.g., use regular expressions to dictate what patterns are allowed

○ Use prepared statements to separate the data channel (user's input) from the control channel (server's query)

Question 2: More SQL Injection   Consider the below figure. What is the final query that gets created if the user provides "Alice" as the username and `"1234' ; DROP TABLE passwd --"` as their password?
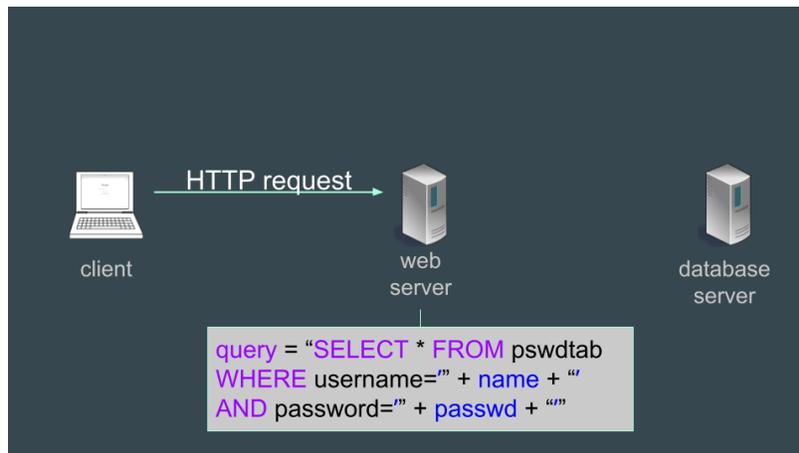

Question 3: Web-Based Attacks   How can an attacker get a user to visit a spoofed site using typo-squatting?

Question 4: Web Bugs   Third-party cookies (a.k.a. web bugs) require some content on the displayed page to be served from the third party.

○ True

○ False

Question 5: GET Requests and Cookies   Alice is using a new browser install (no cookies have yet been set) and is shopping online. She first visits the site http://www.shopping.com and then visits http://www.bettershopping.com. Both sites use 0-pixel images to allow tracking from the third-party site wetrackyou.com. See the figure below.
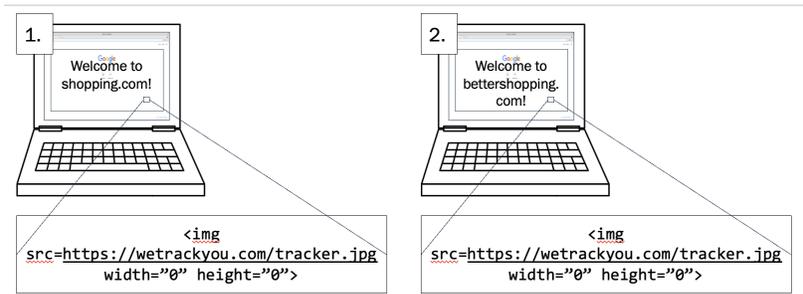
5.1. Which of the following show the two GET requests sent by Alice's browser when she visits http://www.shopping.com?

- ◯ GET http://shopping.com HTTP/1.1
  Set-Cookie: last-visit=11212022
  GET http://wetrackyou.com HTTP/1.1
  Set-Cookie: last-visit=11212022

- ◯ GET http://shopping.com HTTP/1.1
  Set-Cookie: last-visit=11212022
  GET http://wetrackyou.com HTTP/1.1

- ◯ GET http://shopping.com HTTP/1.1
  GET http://wetrackyou.com HTTP/1.1
  Set-Cookie: last-visit=11212022

- ◯ GET http://shopping.com HTTP/1.1
  GET http://wetrackyou.com HTTP/1.1

5.2. After visiting http://www.shopping.com, Alice's browser has the following cookies saved: www.shopping.com: sessionID=1122334455, wetrackyou.com: last-visit=11212022. Which of the following show the two GET requests sent by Alice's browser when she visits http://www.bettershopping.com?

- ◯ GET http://bettershopping.com HTTP/1.1
  Cookie: sessionID=1122334455
  GET http://wetrackyou.com HTTP/1.1
  Cookie: last-visit=11212022

- ◯ GET http://bettershopping.com HTTP/1.1
  Cookie: sessionID=1122334455,last-visit=11212022
  GET http://wetrackyou.com HTTP/1.1

- ◯ GET http://bettershopping.com HTTP/1.1
  GET http://wetrackyou.com HTTP/1.1
  Cookie: last-visit=11212022

- ◯ GET http://bettershopping.com HTTP/1.1
  GET http://wetrackyou.com HTTP/1.1
  Cookie: last-visit=11212022,sessionID=1122334455