Raluca Ada Popa Spring 2018

CS 161 Computer Security

Discussion 11

# Week of April 16, 2018

**Instructions.** We will break into groups to discuss the following questions. Please think of as many solutions as you can. Be original! Maybe you will come up with something no one has thought of yet. Be prepared to talk about your solutions with the rest of the section.

## Question 1 Clickjacking

(20 min)

Users take actions on the web based on clicking on links or buttons, yet they may not be taking the action that they think. Clickjacking hijacks their click from the action they intended to do, such as canceling some request, to one an attacker wants them to do, such as enabling remote access to a camera.

(a) How can the attacker trick the user into clicking on something they do not mean to?

(b) What are some defenses against clickjacking?

### Question 2 Phishing

(10 min)

Phishing tries to gain sensitive user information by tricking users into going to a fake version of a website they trust. The attacker might convince the user to go to what appears to be their bank and to enter their username and password.

(a) What are some ways that attackers try to fool users about the site they are going to? How do they convince people to click on links to sites?

(b) What are some defenses you should employ against phishing?

### Question 3 Web tracking

(15 min)

Sites use information about us to better display information, but also to sell us services, or to sell access to our screen views to advertisers.

(a) What kind of information do sites gain about you to run the technical aspects of the pages they serve you?

(b) What other information could a site learn about you? How could a business learn about many of the sites you visit and construct a detailed profile of you based on your web habits.

(c) What measures do you have to restrict this tracking?

#### Question 4 Review: Buffer Overflow

 $(5 \min)$ 

Circle and explain all possible issues with the code shown below.

```
1 void print name(char *first, char *last) {
2
      char full [256] = "echo";
3
       if (strlen(first) + strlen(last) + strlen(full) >= sizeof(full))
4
           return;
5
6
       strcat(full, first);
      strcat(full, "");
8
      strcat (full , last);
9
      system (full);
10|}
```