**CSE 484 In-class Worksheet #4 – Lecture 5**

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Partner names for this activity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Q1:** The goal of this code is to allow a program to open regular files, but not symlinks.

**int openfile(char \*path) {**

**struct stat s;**

**if (stat(path, &s) < 0)**

**return -1;**

**if (!S\_ISRREG(s.st\_mode)) {**

**error("only allowed to regular files!");**

**return -1;**

**}**

**return open(path, O\_RDONLY);**

**}**

Can you spot any potential problems?

**Q2:** Consider this code:

**char buf[80];**

**void vulnerable() {**

**int len = read\_int\_from\_network();**

**char \*p = read\_string\_from\_network();**

**if (len > sizeof buf) {**

**error("length too large, nice try!");**

**return;**

**}**

**memcpy(buf, p, len);**

**}**

And note the following definitions:

**void \*memcpy(void \*dst, const void \* src, size\_t n);**

**typedef unsigned int size\_t;**

Can you spot any potential problems?

**Q3:**  Consider this code:

**size\_t len = read\_int\_from\_network();**

**char \*buf;**

**buf = malloc(len+5);**

**read(fd, buf, len);**

Can you spot any potential problems?

**Q4:** What issues, if any, do you see with the following code for password comparisons?

**// The following is the functional description of the code -- what it should do**

**PwdCheck(RealPwd, CandidatePwd) should:**

**Return TRUE if RealPwd matches CandidatePwd**

**Return FALSE otherwise**

**RealPwd and CandidatePwd are both 8 characters long**

**// The following is the implementation, like on the TENEX system**

**PwdCheck(RealPwd, CandidatePwd) // both 8 chars**

**for i = 1 to 8 do**

**if (RealPwd[i] != CandidatePwd[i]) then**

**return FALSE**

**return TRUE**

**Q5:** Is there anything from the software security section of the course that you found particularly confusing? Anything that you particularly liked? Anything else you’d like to ask or share?