

For any logistics emergencies during the exam, email
cs161-staff@berkeley.edu or text (252) 410-1123.

For questions with **circular bubbles**, you may select exactly *one* choice on Gradescope.

- ☐ Unselected option
- ☒ Only one selected option

For questions with **square checkboxes**, you may select *one* or more choices on Gradescope.

- ☒ You can select
- ☒ multiple squares

For questions with a **large box**, you need to write your answer in the text box on Gradescope.

There is an appendix on the last page of this exam, containing descriptions of all C functions used on this exam.

You have 180 minutes. There are 11 questions of varying credit (200 points total).

The Gradescope answer sheet assignment has a time limit of 180 minutes. Do not click "Start Assignment" until you're ready to start the exam. The password to decrypt the PDF is at the top of the answer sheet.

The exam is open note. You can use an unlimited number of handwritten cheat sheets, but you must work alone.

Clarifications will be posted at <https://cs161.org/clarifications>.

Q1 **MANDATORY** – *Honor Code*

(5 points)

Read the following honor code and type your name on Gradescope.

I understand that I may not collaborate with anyone else on this exam, or cheat in any way. I am aware of the Berkeley Campus Code of Student Conduct and acknowledge that academic misconduct will be reported to the Center for Student Conduct and may further result in, at minimum, negative points on the exam and a corresponding notch not on Nick's staff but on his Stanley Fubar demolition tool.

This is the end of Q1. Leave the remaining subparts of Q1 blank on Gradescope, if there are any. Proceed to Q2 on your answer sheet.

C Function Definitions

```
size_t strlen(const char *s, size_t maxlen);
```

The `strlen()` function returns the number of characters in the string pointed to by `s`, excluding the terminating null byte (`'\0'`), but at most `maxlen`. In doing this, `strlen()` looks only at the first `maxlen` characters in the string pointed to by `s` and never beyond `s+maxlen`.

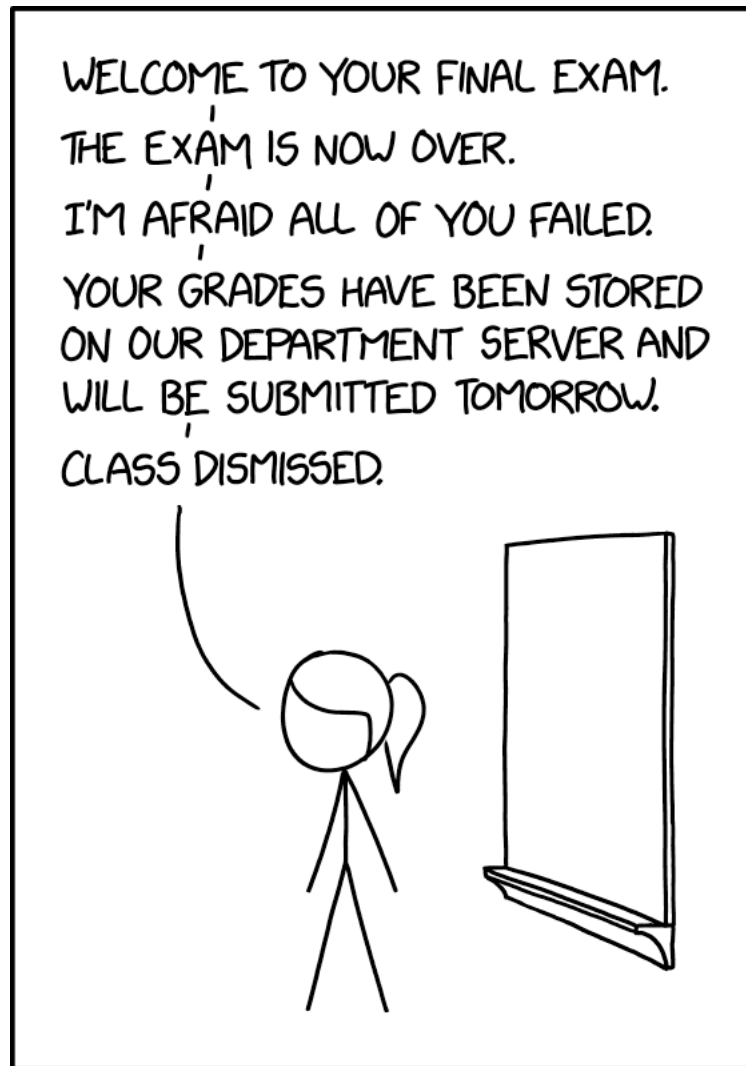
```
char *strcpy(char *dest, const char *src);
```

The `strcpy()` function copies the string pointed to by `src`, including the terminating null byte (`'\0'`), to the buffer pointed to by `dest`. The strings may not overlap, and the destination string `dest` must be large enough to receive the copy.

```
char *strncpy(char *dest, const char *src, size_t n);
```

The `strncpy()` function is similar, except that at most `n` bytes of `src` are copied. Warning: If there is no null byte among the first `n` bytes of `src`, the string placed in `dest` will not be null-terminated.

If the length of `src` is less than `n`, `strncpy()` writes additional null bytes to `dest` to ensure that a total of `n` bytes are written.



CYBERSECURITY FINAL EXAMS

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