For some of the questions on the exam, we will be capturing your answers on a Scantron form, the one where you fill in bubbles. (By the way, *we* will be providing the Scantron forms; you don't need to obtain and bring one.) In some cases, we'll capture them in a way you probably haven't seen before if you haven't taken Fall or Spring CS 31, so we'll explain it here.

You know the usual way:

Q52. What is the square of 7?
52 A) −14 52 B) 0 52 C) 42 52 D) 49 52 E) 81

If you think the answer is the one labelled 52 D, you'd use a pencil (*not* a pen) to fill in the bubble D in the row of bubbles next to 52 on the Scantron form:

52 Ⓐ Ⓑ Ⓒ ● Ⓔ

But here's what you might not have seen before:

Q53,54) Consider the following function:

```
bool f(string s)
{
    if (s.size() < 2)
        return false;
    char ch = s.back();
    s.pop_back();
    return s.back() == ch;
}
```

For exactly one of the following strings, if you pass it to `f` as an argument, `f` returns true. Which string is it?

53 A 54 A) the empty string
53 A 54 B) %
53 A 54 C) BABOON
53 A 54 D) BINTURANG
53 A 54 E) CAPYBARA
53 B 54 A) CIVET
53 B 54 B) COATIMUNDI
53 B 54 C) DIK-DIK
53 B 54 D) GIRAFFE
53 B 54 E) KANGAROO
53 C 54 A) KODIAK
53 C 54 B) LLAMA
53 C 54 C) MEERKAT
53 C 54 D) NARWHAL
53 C 54 E) OX
53 D 54 A) Q
53 D 54 B) TITI
53 D 54 C) WALRUS
53 D 54 D) ZEBRA

You probably wouldn't have time to trace through the function with every string, so you might try it on a string or two to get a feel for what the function is doing, draw a conclusion about what characteristic about the string would make it be the answer, and quickly find the unique occurrence of a string with that characteristic. If you think it's KANGAROO, for example, which is labelled 53 B 54 E, you would fill in two bubbles: one for 53 B and one for 54 E:

53 Ⓐ ● Ⓒ Ⓓ Ⓔ
54 Ⓐ Ⓑ Ⓒ Ⓓ ●