# Lecture 9-1
# Professional Ethics
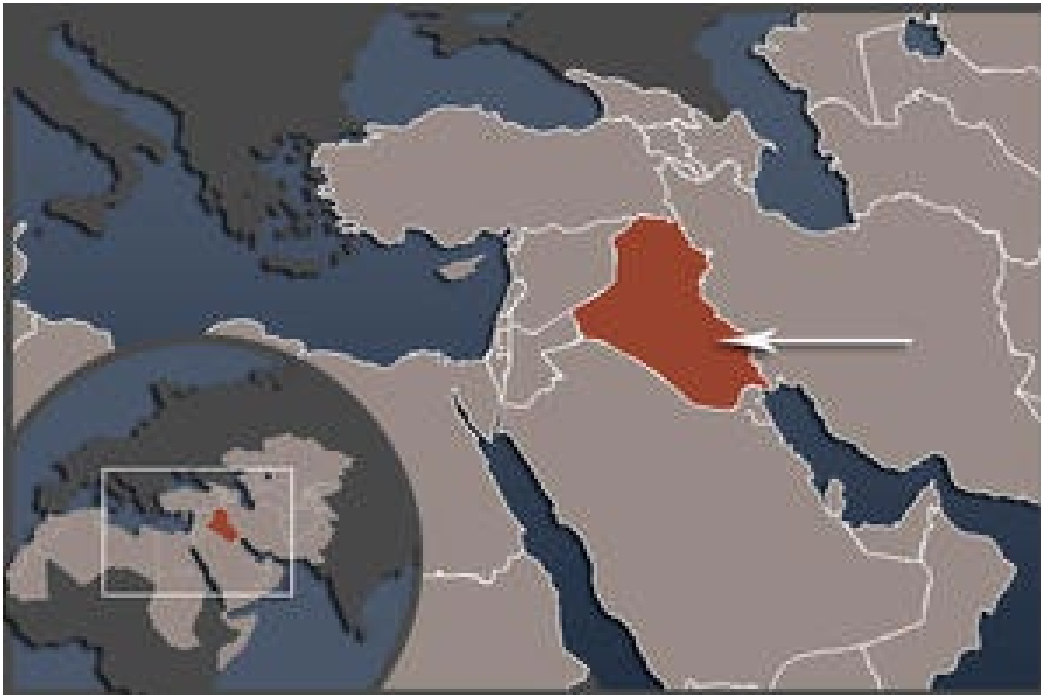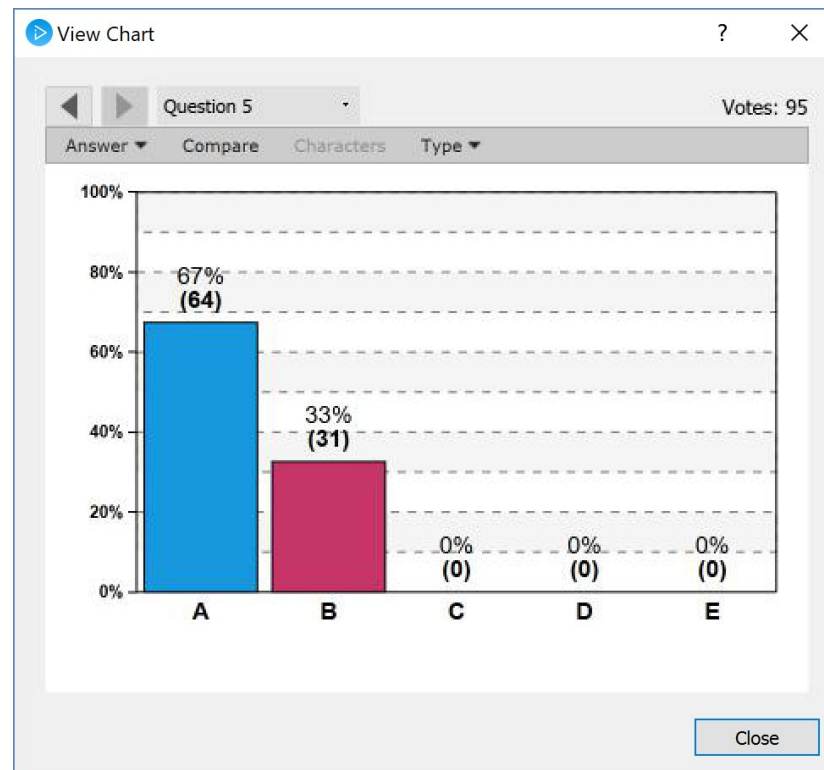
# Participation Quiz

What country is this?



A. Iran

B. Jordan

C. Saudi Arabia

D. Iraq

E. Syria

# Computer Reliability

"Self-driving cars should be allowed to operate on public roads once they have been shown to be at least slightly safer than the average human driver."

# Is Software Engineering a Profession?

- In many ways software engineering is similar to other professions such as law or accounting
    - Dependence on professional education and practical training
    - Professional associations (IEEE, ACM)
    - Potential for bad decisions to cause significant public harm
- It's not a "full-fledged" profession:
    - No formal accreditation/licensing system
- All the same, sensible to ask software engineers to follow a code of ethics.
    - One with significant support is described in the book.
    - Nothing it says ought to come as a big surprise at this point in the course ☺.

# Professional Ethics

"It is unethical for computer scientists to aid in the development of autonomous weapon systems."
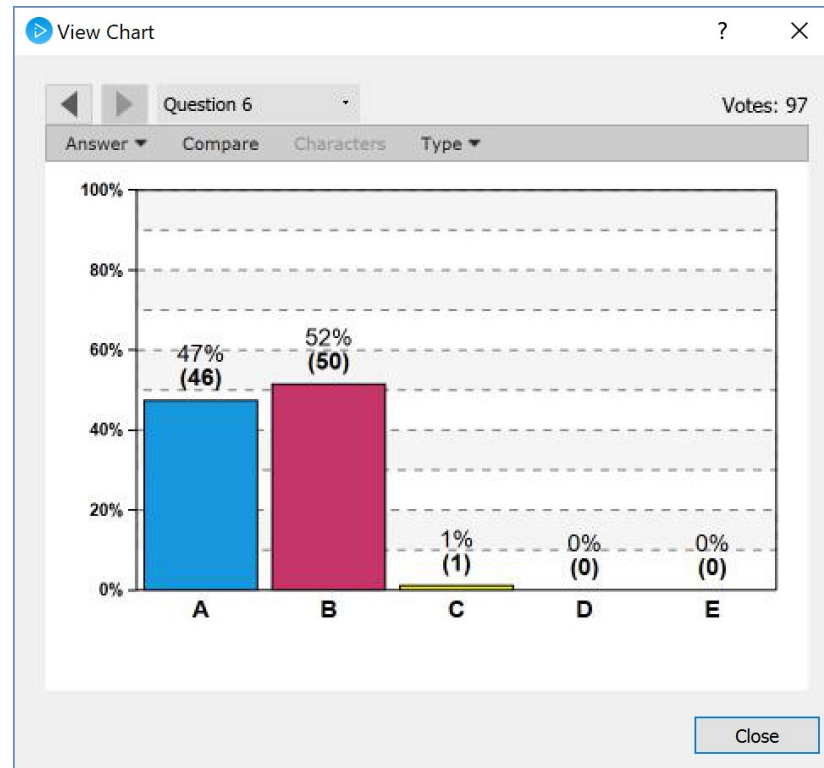
# Whistle-Blowing

- Revealing a real or potential harm to the public being caused by your employer.
  - Not an attempt to take revenge on the employer, e.g., for turning down a promotion
  - Not an attempt to avoid personal responsibility for a problem that is about to come to light anyway.

- *Under what circumstances is whistle-blowing morally **justified**? When is it morally **necessary**?*

# Software Warranties

- Software companies tend to write license agreements saying that the software may not perform as promised
  - "we expressly disclaim ... the implied warranties of merchantability and fitness for a particular purpose"
- Why is this reasonable?
  - Software is expensive
  - Other expensive goods are backed up by warranties

- *Do software makers have a moral obligation to produce software that does what it promises?*

# Computer Simulations

- Simulations are used to answer questions about scenarios that can't be easily observed in the real world
  - Hurricanes
  - Nuclear explosions
  - Climate change
  - Car crashes
- Models are only useful if they accurately describe reality

- *What would you need to see to trust a simulation?*
- *How accurate does a simulation have to be to be useful?*