**Quiz 1**

**Short Answer Questions, you must submit your results before the class.**

1. List at least four potential grand challenges in current computer science.

* Collaborative problem solving
* Reasoning under uncertainty
* Virtual reality
* Neurophysiological models of cognition

1. Describe the contribution of the one of the following peoples to the history of computer science:
2. Hillbert

Hillbert demonstrate his famous finiteness theorem in 1888. To solve the Gordan’s Problem, he demonstrated Hilbert’s basis theorem. He attempted to support axiomatized mathematics. His work had started logic of this course of clarification and led to the development of recursiontheory and themathematical logic, which also made the development of theoretical computer science possible.

1. Goedel

Goedel layed the foundations of theoretical computer science with his work on universal formal languages and the limits of proof and computation and artificial intelligence. He went to on to construct statements that claim their own unprovability, to demonstrate that traditional math is either flawed in a certain algorithmic sense or contains unprovable but true statements. His incompleteness result is widely regarded as the most remarkable achievement of 20th century mathematics.

1. Turing

Turing developed the proof that automatic computation cannot solve all mathematical problems. This concept became known as the Turing machine, which has become the foundation of the modern theory of computation and computability. Turing made it his goal to crack the complex Enigma code used in German naval communications, which were generally regarded as unbreakable. Turing was also involved in philosophical debates over whether machines could think like a human brain.

1. Describe at least two forms of conflicts of interests.

* Nepotism: Nepotism is the practice of giving favors to relatives and close friends in matters of hiring, promotion, transfer, or termination. The term comes from the word for "nephew," and it was common practice in ancient times. Nepotism is considered a conflict of interest because the relative may not be the best person for the job
* Self-dealing: Self-dealing is an action taken by a corporate fiduciary for that person's personal gain, rather than for the benefit of the company. Examples including using corporation funds as a personal loan, or buying company stock based on insider information—which is also an insider trading violation. In a non-profit organization, setting compensation or benefits for officers, directors, or trustees may result in a conflict of interest. For instance, paying an employee in a position or substantial authority excessive compensation serves a private interest.

1. Describe the [contemporary virtue ethics](https://en.wikipedia.org/wiki/Ethics#Contemporary_virtue_ethics) theory.

There are four distinct forms taken by contemporary virtue ethics, namely, a) eudaimonist virtue ethics, b) agent-based and exemplarist virtue ethics, c) target-centered virtue ethics, and d) Platonistic virtue ethics. The distinctive feature of eudaimonist versions of virtue ethics is that they define virtues in terms of their relationship to *eudaimonia*. A virtue is a trait that contributes to or is a constituent of *eudaimonia* and we ought to develop virtues, the eudaimonist claims, precisely because they contribute to *eudaimonia*. Rather than deriving the normativity of virtue from the value of *eudaimonia*, agent-based virtue ethicists argue that other forms of normativity—including the value of *eudaimonia*—are traced back to and ultimately explained in terms of the motivational and dispositional qualities of agents. The target-centered view developed by Christine Swanton (2003), by contrast, begins with our existing conceptions of the virtues. We already have a passable idea of which traits are virtues and what they involve. The fourth form a virtue ethic might adopt takes its inspiration from Plato. The Socrates of Plato’s dialogues devotes a great deal of time to asking his fellow Athenians to explain the nature of virtues like justice, courage, piety, and wisdom