What is Computer Science?

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What is Computer Science?

- The study of computers?   No…

- It is the study of what can be computed
  (In other words: what can computers do?)

- Computer scientists design, analyze, and
  experiment with <u>algorithms</u>.

- What's an algorithm?

What is Computer Science?

An **algorithm** is a set of well-defined steps for performing a task or solving a problem.

A **computer program** is a set of instructions written in a programming language that tells the computer how to solve a problem or perform a task.

What is Computer Science?

- Computer Scientists study algorithms in the context of networking, security, artificial intelligence, modeling scientific data, databases, software engineering, etc.

- Computer Scientists study how to encode or translate algorithms into machine language.

What is Computer Science?

Although knowing how to program is essential to the study of computer science, it is only one element of the field. Computer scientists design and analyze algorithms to solve programs and study the performance of computer hardware and software. The problems that computer scientists encounter range from the abstract-- determining what problems can be solved with computers and the complexity of the algorithms that solve them – to the tangible – designing applications that perform well on handheld devices, that are easy to use, and that uphold security measures. 5