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HISTORY OF SOFTWARE ENGINEERING

Basic information

The term "software engineers" first appeared in 1968 at NATO conferences and was intended to provoke a search for solutions to the "software crisis" that was occurring at that time.

In this area, research is being conducted on the development of software that is better, more affordable, better supported and faster to develop associated with the disciplines of computer science, project management and systems engineering.

History

When the first modern digital computers appeared in the early 1940s, sets of executable instructions were already built into the machine. Thus, the division into “hardware” and “software” began with an abstraction used to solve the problem of

computational complexity. The first programming languages began to appear in the 1950s. Major languages such as Fortran, Algol and Kobol were released in the late 1950s to solve scientific, algorithmic and business problems, respectively. The hardware management system software called the “operating system” was introduced by Unix in 1969.

In 1967, Simula introduced the concept of an object-oriented programming paradigm. The late 1970s and early 1980s were marked by the advent of several new simul-like object-oriented programming languages, including Smalltalk, Objective-C, and C ++.

Profession

Legal requirements for licensing and certification of professional software engineers are different worldwide.

Work

In 2004, the US Bureau of Labor Statistics, counted 760,840 software engineers working in the United States. In the same time period, there were about 1.4 million practitioners employed in the United States in other mixed engineering fields. In large projects, people can specialize in only one role, in small ones they can take up some or all of the roles at once. Specializations include: in the industry: analysts, software architects, developers, testers, technical support, intermediate analyst, manager; in academic circles: teachers, researchers.

Training

A number of universities have training programs for software engineers. Since 2010, there have been 244 full-time programs, 70 online courses, 230 specialist programs, 41 academic programs in the field, and 69 certificate programs in the United States. In addition to higher education, many companies finance internships for students who want to pursue a career in information technology.