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New computer architectures

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In 1982, Japan began to develop a super landmark computer – Computer's fifth generation. The aim of the project was to create a computer that could solve the supercomplex problems within the shortest period of time, to manage large systems and have a highly developed artificial intelligence (for example, the computer had to write programs for itself).

For information:

- I Generation - valve computers
- II generation - transistors
- III generation - integrated circuits
- Generation IV - computers based on microprocessors

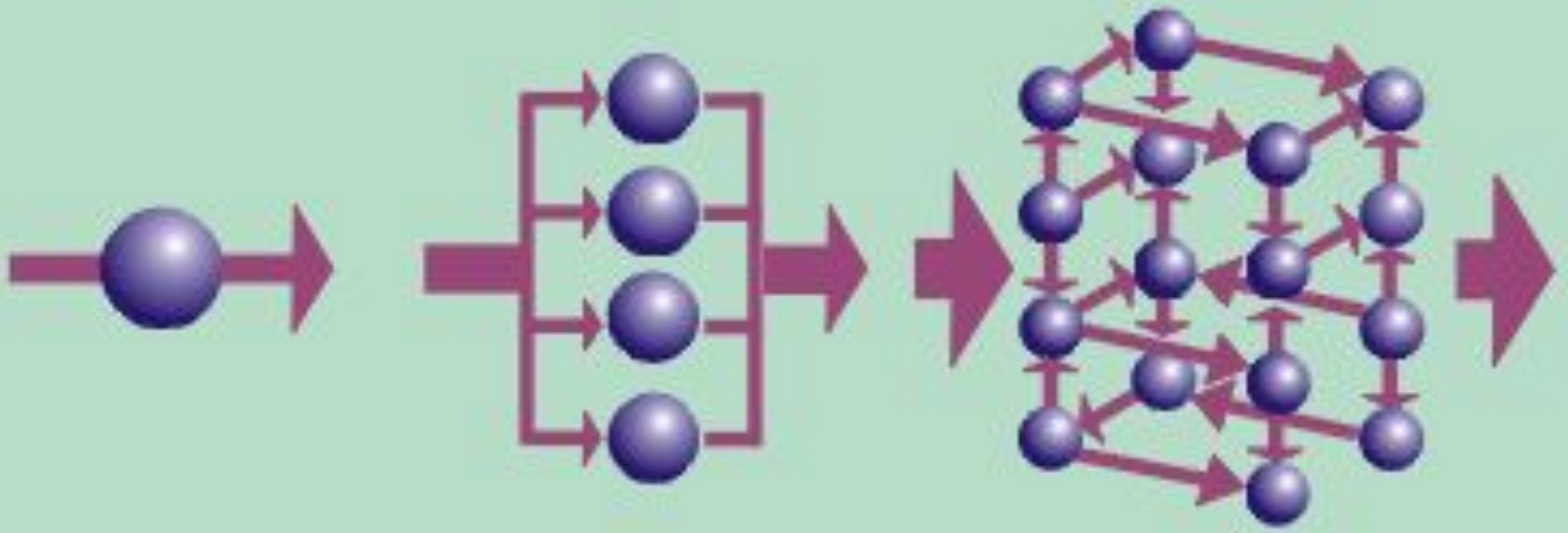
Basic requirements for computer generation of V

- 1. Creation of advanced human-machine interfaces (image, speech recognition);
- 2. The development of logic programming to create knowledge bases and artificial intelligence systems;
- 3. The creation of new technologies in the production of computer equipment;
- 4. Creating a new computer architecture and computer systems.

- **Microprocessors help control cars, weapons systems, robots and even home appliances. Computers combine the features of the text, graphics, sound and animation, making this information available through networks.**

- **Modern computers are designed on the principles of Von Neumann architecture (Von Neumann architecture). They process data sequentially, one instruction per cycle. In the future, with the development and widespread dissemination of multimedia technology and the advent of computers in all spheres of our life, computers have to be even faster. To do this, you want to use parallel processing. Today, this technology is already used to create artificial intelligence and the construction of complex mathematical models.**

- **Modern supercomputers are capable of performing billions of calculations per second. Supercomputers contain thousands of microprocessors and memory chips. These machines do more than a trillion calculations per second - 1 TFLOPS (teraflops). The abbreviation stands for FLOPS Floating Point Operations per Second**



Обычные компьютеры

содержат один центральный процессор, который выполняет всю работу, по одной операции за один такт.

Параллельная обработка

предполагает распределение задачи между несколькими процессорами.

Суперпараллельные компьютеры

содержат множество объединенных вместе процессоров.