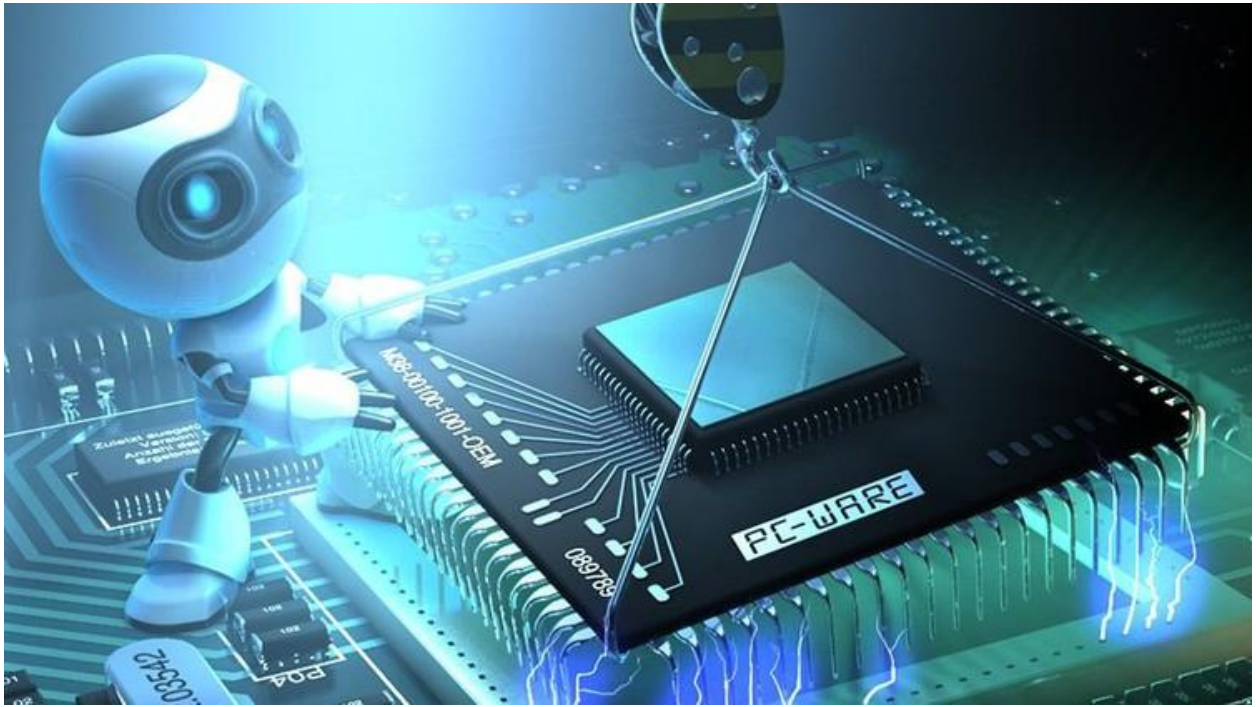
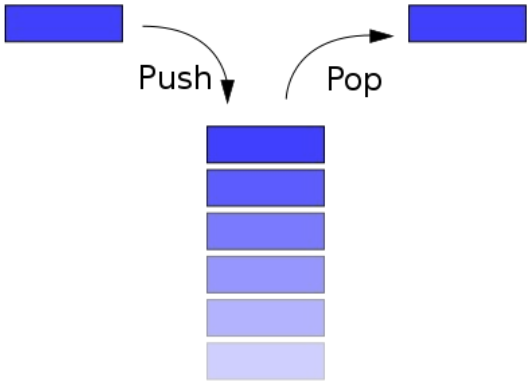
# Conventions in Linux-32 bits



# Beforehand: Stack

- All x86 architectures use a **stack** as a temporary storage area in RAM that allows the processor to quickly store and retrieve data in memory.

- A **stack** is a data structure that stores data values contiguously in memory. Unlike an array, however, we access (read or write) data only at the top of the stack. To read from the stack is said "to pop" and to write to the stack is said "to push.



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  - Vectors and matrices are always passed by reference
  - Structs are passed by value, no matter the size
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- **Local variables** are stack aligned with the same convention as in a struct
  - Char in any direction
  - Short in multiples of 2 directions
  - Integer in multiples of 4 addresses
  - The size of the set of local variables must be a multiple of 4 so that the stack is well aligned

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- The stack should always be aligned at 4