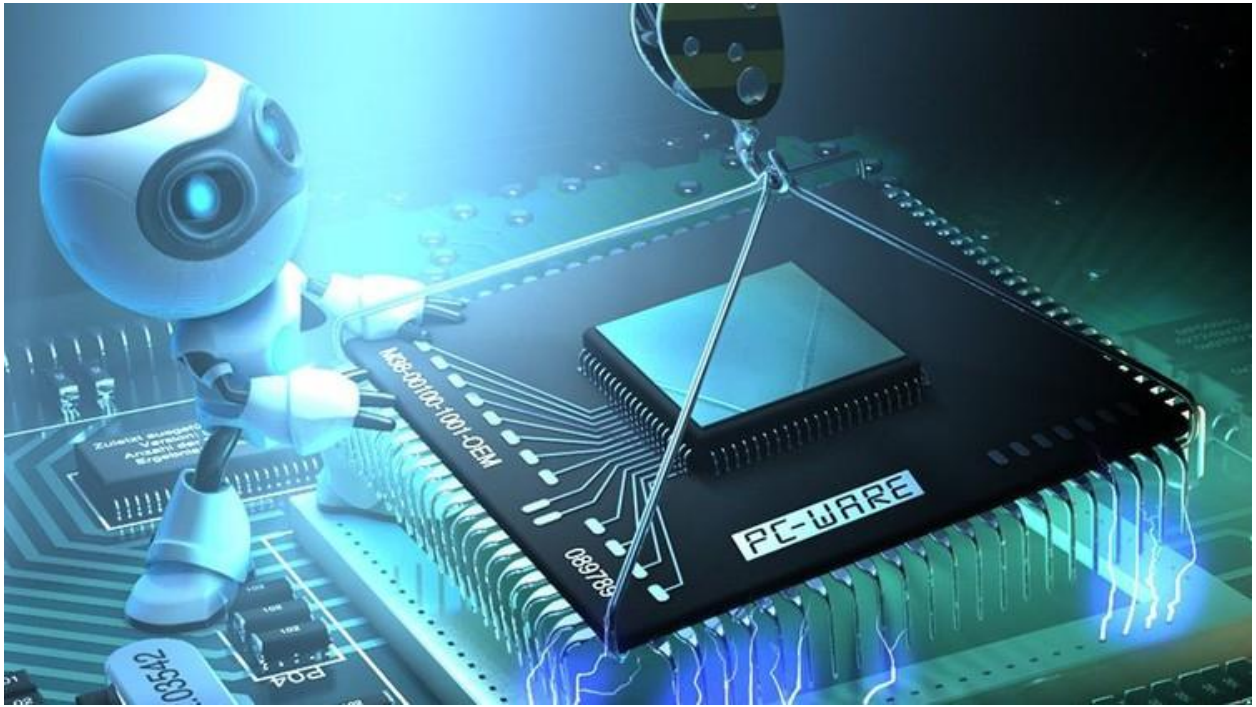
Introduction to Subroutines



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- **Subroutine:** Set of ML instructions that performs a specific task and that can be activated (called) from any point in a program or from the subroutine itself.
- **Internal activation**: the call is made from the subroutine itself
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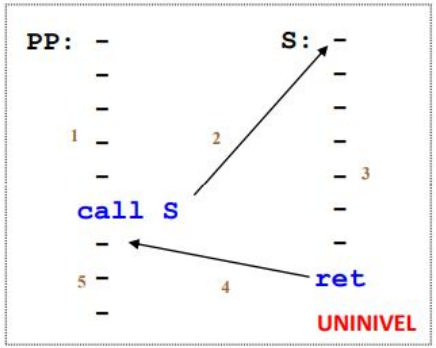
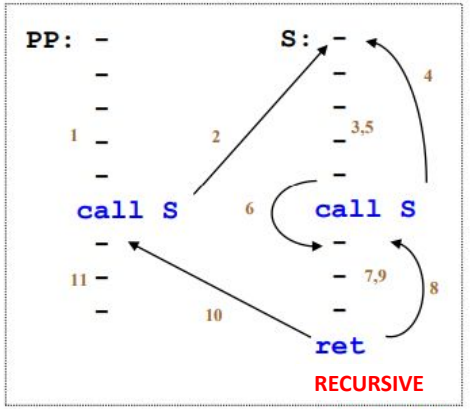
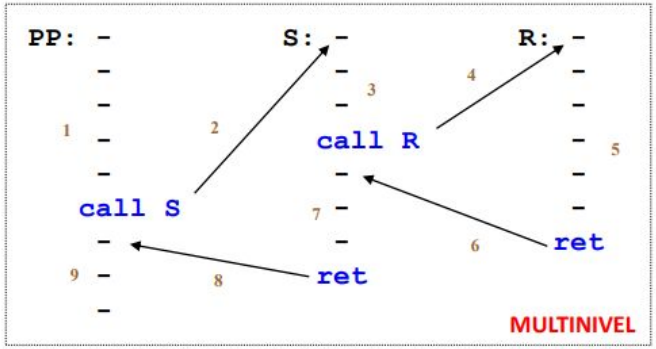
- Classification of subroutines
  - Unilevel
  - Multilevel
  - Recursive

Types of Subroutines







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  - The code is more structured
  - The ML reflects the fundamental idea of high-level structured languages: the existence of functions and procedures.

- **Disadvantages of using subroutines**:
  - The execution time of the programs increases due to:
    - the execution of the subroutine call and return instructions
    - parameter passing
  - Processor complexity is higher because specific hardware must be added for efficient subroutine management.