

Language Processing System:

is a system that aims to understand and process the natural language used by humans. This system includes a range of programs and tools that help analyze, understand and interact with texts. A natural language processing system can be part of a Translator system, which is used to convert text from one language to another.

1) Translator:

1. Check Syntax:

This step deals with the structure and wording of sentences in the text. This step is to verify that sentences and phrases follow the correct rules for the target language. The language structure of the text is examined to ensure that there are no drafting errors that can affect the understanding of the meaning.

2. Check Semantics:

In this step, the linguistic meaning of sentences and phrases is examined. Words and phrases are verified to have the correct meaning and to fit into the context of the text. This aims to avoid confusion or semantic compulsions that may occur in translation.

3. Generate:

In this step, the final translation is created. The grammatical and semantic base examined in the previous steps is used to properly create translated text. This creation depends on the laws of target language and source.

2) Interpreter

1. Fetch:

In this step, the order or program that needs to be implemented is retrieved from where the software is stored. This is usually done by reading commands from memory or from an execution file.

2. Execute:

Once the order is retrieved, it is executed by the processor or the commanding part. In this step, the order is understood and the procedures specified therein are implemented. If it is a programming language, it is converted into commands suitable for the device on which the system operates.

3. Context of the interpretation system:

The interpretation system combines Fetch and Execute steps to achieve continuous interpretation and execution of orders. When a program is running, each order is immediately retrieved and executed. This is different from the system that needs to translate the entire program before it is implemented, as in the case of Compiler.

4. Illustrative example:

Suppose we have a program in some programming language, and something in this program is "Print 'Hello, World!'", The interpretative context shall be as follows:

Fetch: "Print 'Hello, World!'" from memory or executive file.

Execute: The order is interpreted and executed, leading to the printing of "Hello, World!" On the screen or the selected means of output.