FACULTAD DE INFORMÁTICA

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IMPERATIVE PROGRAMMING

Imperative programming, as opposed to declarative programming, is a programming paradigm that describes computation in terms of a program state and statements that change the program state. In such the same way as the imperative mood in natural languages expresses commands to take action, imperative programs are a sequence of commands for the computer to perform.

Imperative programming languages stand in contrast to other types of languages, such as functional and logical programming languages. Functional programming languages, such as Haskell, are not a sequence of statements and have no global state as imperative languages do. Logical programming languages, like Prolog, are often thought of as defining "what" is to be computed, rather than "how" the computation is to take place, as an imperative programming language does.

The hardware implementation of almost all computers is imperative; nearly all computer hardware is designed to execute machine code, which is native to the computer, written in the imperative style. From this low-level perspective, the program state is defined by the contents of memory, and the statements are instructions in the native machine language of the computer. Higher-level imperative languages use variables and more complex statements, but they still follow the same paradigm. Recipes and process checklists, while not computer programs, are also familiar concepts that are similar in style to imperative programming; each step is an instruction.

A. Indique en qué párrafo se encuentran las siguientes ideas.

Estilo imperative en el código de máquina

Definición de lenguajes imperativos

Diferencias entre los lenguajes de programación

Ejemplos de lenguajes de programación

B. Responda en español, de forma completa y con su propia redacción.

1. ¿Qué es la programación imperativa?

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2. ¿Cuál es el punto común entre los lenguajes imperativos y el modo imperativo de un lenguaje natural?

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3. ¿En qué difieren los lenguajes imperativos de los funcionales y los lógicos?

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4. ¿Para qué se usa el estilo imperativo?

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C. Complete las partes faltantes de esta traducción.

Assignment statements, in general, perform an operation on information located in memory and **store the results in memory for later use**. High-level imperative languages, in addition, permit **the evaluation of complex expressions**, which may consist of a combination of arithmetic operations and function evaluations, **and the assignment of the resulting value to memory**. Looping statements allow a sequence of statements **to be executed multiple times**. Loops can either execute, a predefined number of times, **the statements they contain**, or they can execute them repeatedly until some condition changes. **Conditional branching statements** allow a block of statements to be executed only if some condition is met.

Las sentencias de asignación, en general, ejecutan una operación sobre la información ubicada en la memoria y …………………………………………………………………………………... Los lenguajes imperativos de alto nivel, además, permiten…………………………………………………., que pueden consistir en una combinación de operaciones aritméticas y evaluaciones de funciones,……………………………………………………………………… Las sentencias en bucle (en ciclo) permiten que una secuencia de sentencias ………………………………… Los bucles pueden ejecutar ……………………………… un número predeterminado de veces, o pueden ejecutarlas repetidamente hasta que cambien algunas condiciones. ……………………………………………… permiten que se ejecute un bloque de sentencias sólo si cumple con alguna condición.