

Explain the meaning of Abstraction.

Highlight a benefit of Abstraction.

Provide an application of Abstraction.

Use a code example of Abstraction from the program you wrote. (You should copy and paste a few lines of code that demonstrate the use of the principle.)

Thoroughly explain these concepts. (This likely cannot be done in less than 100 words.)

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What means Abstraction ?

Abstraction is a important principle of object-oriented programming (OOP). This allow developers as me in progress, to work with higher-level concepts without worrying about the intricate workings of the system.

It refers to hiding the complex implementation details of a system and exposing only the necessary and relevant aspects.

A key benefit of abstraction is that it simplifies code maintenance and usability. By focusing only on essential details, developers can make modifications without affecting other parts of the program. It also enhances code reusability and readability, making it easier to work with large codebases.

Abstraction is widely used in software development. A common example is database management systems (DBMS), where users can interact with databases using SQL queries without needing to understand the low-level details of how data is stored, indexed, or retrieved.