

An abstraction is the general idea rather than one relating to a particular complex software details.

For software main properties of an abstraction are:

- The concept of hiding or removing complexities
- The concept of generalisation.
- The concept of idea versus reality.

So, abstraction is the purposeful suppression, or hiding, of some details of a process, in order to bring out more clearly other aspects, details or structure.

For example: a route on google maps will only show the roads required to reach at destination more prominently and hides all geographical details. This map is an abstract idea of a portion of land, which can differ from map to map.

Let's take the example of any random software. What does this software abstract? It abstracts:

1. User Interface
2. High level language used
3. Low level language/machine language
4. Computer architecture (registers, memory etc.)
5. Circuit elements (gates etc.)
6. Transistors.
7. Solid state physics.
8. Quantum mechanics.