AP CSP

SouthLake Christian Academy
2022-2023

Abstractions

Abstractions are an important concept in programming. An abstraction is the process of reducing complexity by focusing on the main idea. It "hides" away the details of how something was made or how it works (its *implementation*)

So think about the abstract art below:

The subject is a human face. But clearly, the artist is not concerned with drawing the face accurately. He wants us to focus instead on the feeling we get when we look at his art; the way an actual human looks is "hidden away" in favor of the main emotion.

Another real-life example of an abstraction is driving. Beyond a few basic rules, you don't need to know how a car actually works in order to drive. When you drive, knowing what a carburetor is or how it works in a car is not as useful as knowing how to use your car.

In programming we'll see how variables, functions, and modules help make our lives easier and less complex by hiding how code statements work.

Extra Resources

- [Slides (https://docs.google.com/viewer?url=https://github.com/APCSP-SLCA/slides/raw/main/abstractions/slides.pdf)](https://docs.google.com/viewer?url=https://github.com/APCSP-SLCA/slides/raw/main/abstractions/slides.pdf)