

Lecture 4: Decomposition, Abstraction, and Functions

Creating Structure with decomposition ;

- ↳ separate devices : indifferent compositions
- ↳ in programming, divide code into modules
 - ↳ are self-contained
 - ↳ used to back up code
 - ↳ intended to be reusable
 - ↳ keep code organized
 - ↳ keep code coherent
- ↳ achieve decomposition with functions (this lecture)
- ↳ achieve decomposition with class (later lecture)

Express Details with Abstraction:

- in programming: think of a piece of code as a blackbox
 - ↳ can't see details
 - ↳ do not need to see details
 - ↳ do not ~~need~~ want to see details
 - ↳ hide tedious coding details
- achieve abstraction with functions specifications or docstrings

Functions

- ↳ write reusable pieces of code → functions
- ↳ functions are not run in programs until they are "called" in a program
- ↳ function characteristics:

↳ has name

↳ has parameters

↳ has docstrings

↳ has body

↳ returns something