

Namespaces

- A “namespace” keeps track of what names we know about (and can therefore talk about).
- A namespace is created when we begin in the shell or the main block.
- When we call a function, a new namespace is created.
- When we leave a function, its namespace is destroyed.

How Python looks up a name

1. Look in the namespace you're in (the "local" one).
If the name is defined there, it's the one!
2. Look in the namespace you started in (the "global" one), that is, the main or the shell.
If the name is defined there, it's the one!
3. If the name is found in neither of these, Python gives up.
What you've done is illegal.

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But don't access variables
this way: bad style!



Why use functions?

- So far, our examples have been mostly silly things, just to show how functions work.
- There are great reasons to use functions:
 - Reuse: You can do the same set of steps in multiple places without repeating code.
 - Chunking: Bundling up a set of steps and giving them a name makes code easier to understand. Worth doing even if you only call the function *once*. (Think of 7 ± 2 in psychology.)

Function design

- How do you decide on the parameters?
Ask yourself what the function needs to know in order to do its job.
- How do you know whether it needs to return a value?
Ask yourself what the function needs to tell back (to the code that called it).

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Give it everything it needs this way,
rather than via names in the global
namespace

Discussion Board

- Read frequently
- Post carefully!

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