CSCA08: Variables

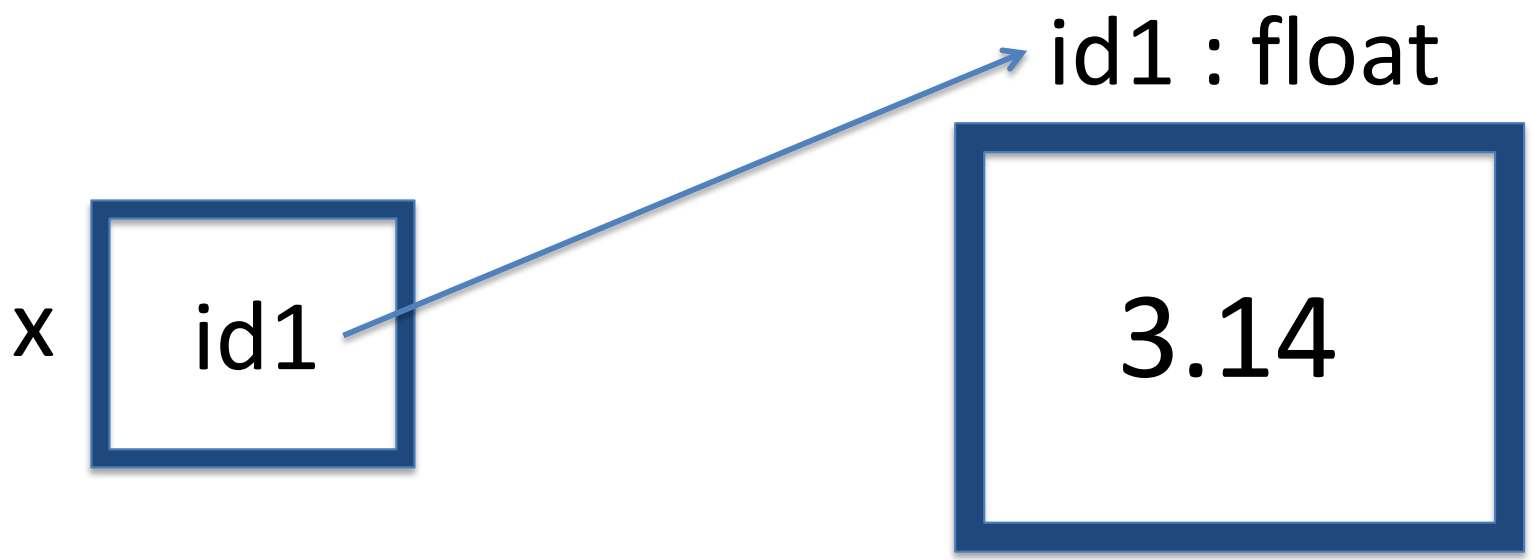
Assignment Statement

Variable = Expression

x = 3.14 + 2

1) Evaluate the expression on the right-hand-side
2) Get the memory id of the result of the above evaluation
3) If the variable on the left-hand-side does not exist, create it (otherwise move on)
4) Put the memory id from step 2 in the left-hand-side variable

Abstract memory model



Terminology

x = 1

x gets 1

x refers to the value 1

x contains memory address id1

Memory address id1 is stored in variable x

Naming variables

- Start with a letter (or underscore)
- Can include letters, digits, and underscores, but nothing else.
- Case matters: age, aGe, Age, AGE are all different names

Valid examples: age, _var_1 , a2d, I_LIKE_CSCA08

Invalid examples: age-1, 1_var, what!?!, @home

Convention & Style

thEre'S a GoOD rEasON wHy WorDs haVE A StaNDaRd caPITaLizAtIon sCHemE

- Python convention: pothole_case
- Rarely, single-letter names are capitalized: L, X, Y
- When in doubt, use lowercase_pothole
- We choose names that will be meaningful to the humans who will read our code.
- Example: if you are adding something up, total is better than x.
- You will be graded on the names you pick.