

## Macros Perform Code Transformations

A macro is an operation performed on the source code of a program before evaluation

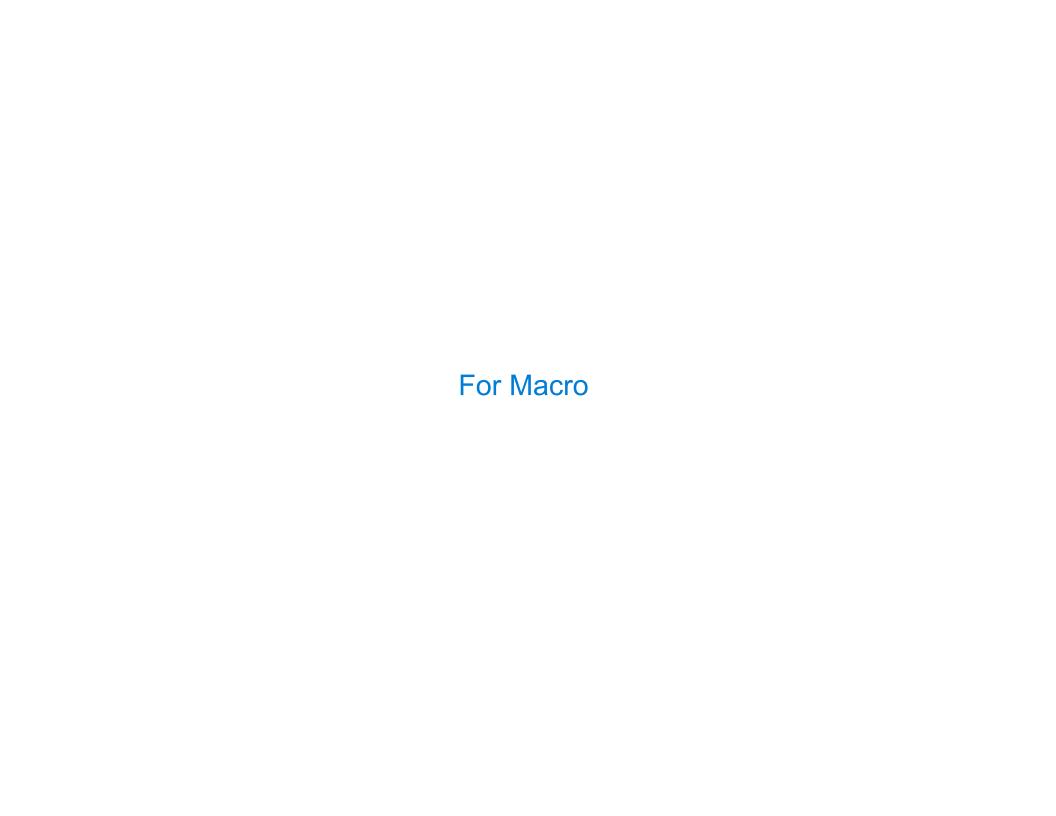
Macros exist in many languages, but are easiest to define correctly in a language like Lisp

Scheme has a **define-macro** special form that defines a source code transformation

Evaluation procedure of a macro call expression:

- Evaluate the operator sub-expression, which evaluates to a macro
- Call the macro procedure on the operand expressions without evaluating them first
- Evaluate the expression returned from the macro procedure

(Demo)



## **Discussion Question**

(4 9 16 25)

Define a macro that evaluates an expression for each value in a sequence

(Demo)

## **Implementing Macros**

(Demo)