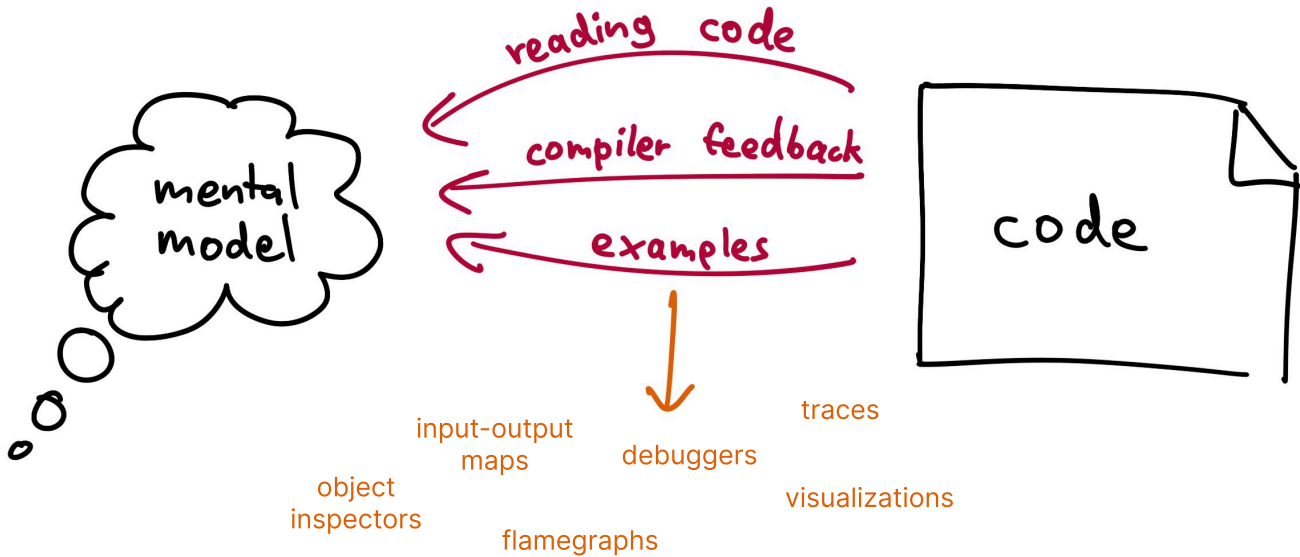


Fast Feedback Through Program Execution



A fast feedback loop during programming can improve how well programmers understand nuances of the code's behavior. We *fuzz* code as soon as you write it: We give it random inputs, observe which parts of the code are executed and how it behaves. After some time, we arrive at a set of examples that stress the entire function's behavior. These examples can be used as the entry point to other dynamic programming tools, as seen above.

```

fun average(list: List[Int]): Int { [] panics [0] -> 0
  list.sum() / list.len
}

fun eval(term: Term): Int { 6 - 3 / 0 panics 5 * 0 -> 0
  switch term
  case number(num) num
  case add(op) op.left.eval() + op.right.eval()
  case subtract(op) op.left.eval() - op.right.eval()
  case multiply(op) op.left.eval() * op.right.eval()
  case divide(op) op.left.eval() / op.right.eval()
}
  
```

More Actions...
 What input reaches this code?

