

## Instrument bytecode before execution

1. Parse  
program  
bytecode

...  
ILOAD  
IADD  
...

2. Instrument  
parsed program  
representation

...  
ILOAD  
IINC C1  
IADD  
IINC C8  
...

3. Convert into  
executable  
bytecode

...  
101  
111  
110  
111  
...

## Execute instrumented bytecode

4. Create parameters  
for class constructors  
+ method invocations

5. Replace original  
with instrumented  
bytecode classes

6. Run instrumented  
bytecode, collect  
counting results

...  
27865\*ILOAD  
11108\*IADD  
...