



THREE CODING PRINCIPLES

1 Reading Code > Writing Code

2 Code Should Be Clear From **Local Reasoning**

3 Code Readability **Must Not** Depend On IDEs

SEVEN CODING GUIDELINES

1. Choose good variable names.

Before:

```
List<Customer> x = dbconn.executeQuery(query);
```

With var:

```
var custList = dbconn.executeQuery(query);
```

```
var x = dbconn.executeQuery(query);
```

2. Minimize local variable scope.

```
var items = new HashSet<Item>(...);
// ... 100 lines of code ...
for (var item : items) ...
```

3. Use good initializer information.

Before:

```
ByteArrayOutputStream outputStream =
    new ByteArrayOutputStream();
```

With var:

```
var outputStream = new
    ByteArrayOutputStream();
```

```
var reader = fetch();
```

4. Break up chained expressions in logical places.

Before: (Verbose type names lead to no interim vars, and reduced readability)

```
return strings.stream()
    .collect(groupingBy(...))
    .entrySet()
    .stream()
    .max(...).map(...);
```

With var:

```
var freqMap = strings.stream()
    .collect(...);
var maxEntryOpt = freqMap.entrySet()
    .stream()
    .max(...);
return maxEntryOpt.map(...);
```

5. Don't worry about "programming to the interface" with vars.

Before:

```
List<String> list = new ArrayList<>();
```

With var:

```
// ArrayList<String> is inferred
var list = new ArrayList<String>();
```

6. Take care with <> or generic methods.

Before:

```
PriorityQueue<Item> itemQueue =
    new PriorityQueue<>();
```

With var:

```
// PriorityQueue<Item> is inferred
var itemQueue = new PriorityQueue<Item>();
```

```
// PriorityQueue<Object> is inferred
var itemQueue = new PriorityQueue<>();
```

7. Take care with literals.

Before:

```
boolean ready = true;
```

```
char ch = '\ufffd';
```

```
long sum = 0L;
```

```
String label = "wombat";
```

```
byte flags = 0;
```

```
short mask = 0x7fff;
```

```
long base = 17;
```

Inferred type, with var:

```
boolean
```

```
char
```

```
long
```

```
String
```

```
(int)
```

```
(int)
```

```
(int)
```