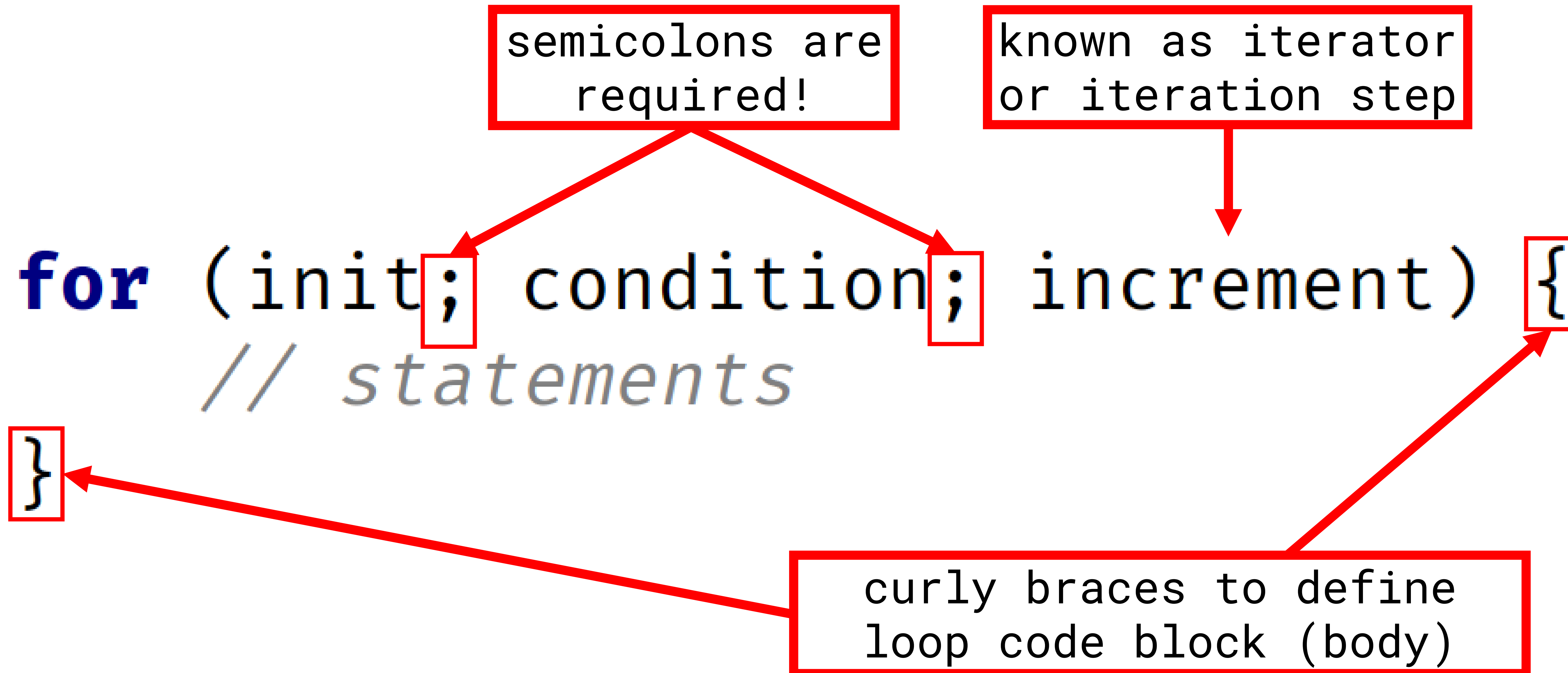


# The for Statement Recap



# The for Statement Recap

init

condition

increment  
(iteration step)

```
for (int number = 1; number < 7; number += 2) {  
    System.out.println("number = " + number);  
}
```

OUTPUT:

```
number = 1  
number = 3  
number = 5
```

# The for Statement Recap

1

initialize number  
variable to 1

2

check condition  
 $1 < 7$  is true

4

execute iteration step  
 $1 + 2 = 3$   
**number = 3**

```
for (int number = 1; number < 7; number += 2) {  
    System.out.println("number = " + number);  
}
```

3

execute line (code block)

CURRENT OUTPUT:

number = 1

# The for Statement Recap

`number = 3`

1

check condition  
`3 < 7` is true

3

execute iteration step  
`3 + 2 = 5`  
`number = 5`

```
for (int number = 1; number < 7; number += 2) {  
    System.out.println("number = " + number);  
}
```

2

execute line (code block)

CURRENT OUTPUT:

`number = 1`

`number = 3`

# The for Statement Recap

`number = 5`

1

check condition  
`5 < 7` is true

3

execute iteration step  
`5 + 2 = 7`  
`number = 7`

```
for (int number = 1; number < 7; number += 2) {  
    System.out.println("number = " + number);  
}
```

2

execute line (code block)

CURRENT OUTPUT:

```
number = 1  
number = 3  
number = 5
```

# The for Statement Recap

number = 7

1

check condition  
7 < 7 is **false**

```
for (int number = 1; number < 7; number += 2) {  
    System.out.println("number = " + number);  
}
```

CURRENT OUTPUT:

number = 1  
number = 3  
number = 5

2

jump here

# The for Statement Recap

---

```
for (int number = 1; number < 0; number += 2) {  
    System.out.println("number = " + number);  
}
```

OUTPUT:



# The for Statement Recap

1

initialize number  
variable to 1

2

check condition  
1 < 0 is **false!**

```
for (int number = 1; number < 0; number += 2) {  
    System.out.println("number = " + number);  
}
```

NO OUTPUT!

3


jump here



# The for Statement Recap

---

Example Fix:  
change condition to `number < 5`  
before it was `number < 0`



```
for (int number = 1; number < 5; number += 2) {  
    System.out.println("number = " + number);  
}
```

OUTPUT:

```
number = 1  
number = 3
```

# The for Statement Recap

---


```
for (int number = 100; number > 0; number += 10) {  
    System.out.println("number = " + number);  
}
```

OUTPUT:

# The for Statement Recap

---

condition is true, incrementing by 10  
every number above 100 is also > 0  
loop never ends (endless loop)



```
for (int number = 100; number > 0; number += 10) {  
    System.out.println("number = " + number);  
}
```


OUTPUT:



# The for Statement Recap

---

Example fix:  
change condition to `number < 130`  
before it was `number > 0`



```
for (int number = 100; number < 130; number += 10) {  
    System.out.println("number = " + number);  
}
```

## OUTPUT:

```
number = 100  
number = 110  
number = 120
```