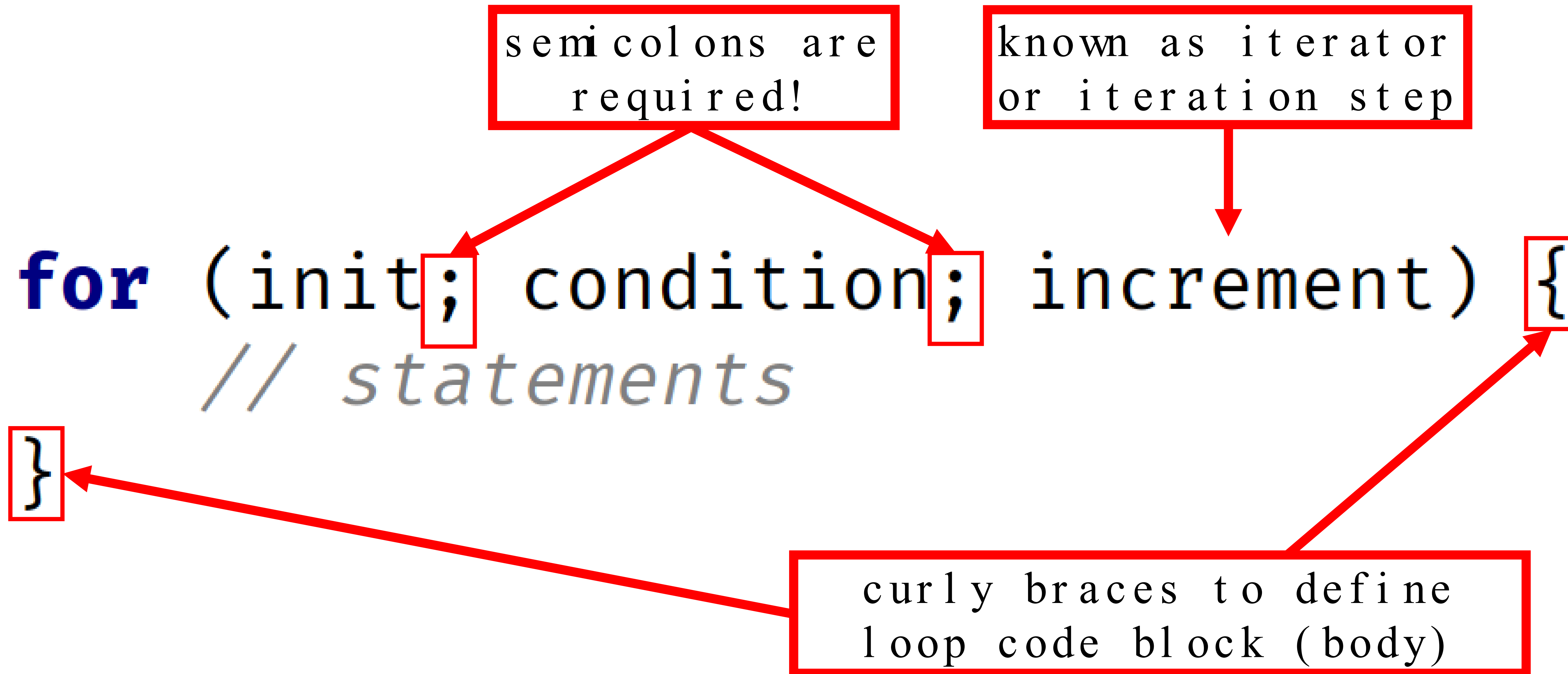


The for Statement Recap



The for Statement Recap

i n i t

c o n d i t i o n

i n c r e m e n t
(i t e r a t i o n s t e p)

```
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);  
}
```

CURRENT OUTPUT:

number = 1

3

execute line (code block)

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
```