Most **common bugs** where the compiler won't complain, but the program doesn't do what it is supposed to.

semicolon after if

П

instead of

same variable in double-loop

WRONG!

The computer will always execute this block of code

if (a = b) = is assignment // == is comparing

if (a < b)

WRONG!

Assignment of variable a:

The computer will always execute the following block of code (except if b is zero), and variable a will have the same value as b afterwards.

```
if ( a ∈ b )
  //do something
```

for (a=0; a<10; a++)

CORRECT!

Comparison of a and b:

The computer will only execute the following block of code if a equals to b

```
for (a)=0; a<20; a++)
for (a)=0; a< 10; a++)
      for (b=0; b<20; b++)
```

WRONG!

The result of a double loop using the same iteration variable can lead to infinite loops and is mostly not intended.

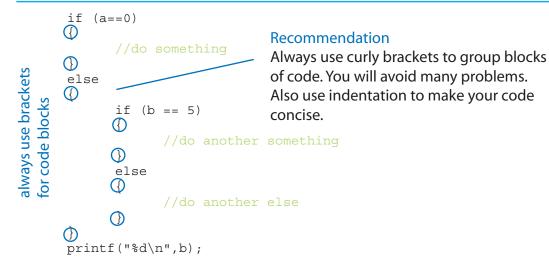
CORRECT!

Use two independent iteration variables.

Compiler errors and tips

missing semicolon

```
//compiler errors
                                WRONG!
printf("hello"
                                The error here is the missing
for (....
                                semicolon. But the compiler will
                                complain about the next line!
```



Some words

```
ausführen
to execute
to assign
                         zuordnen
                         Schleife
loop
                        Schritt/Wiederholung
iteration
```

indentation einrücken

concise (hier) übersichtlich

Some signs often used in programming languages

```
ampersand
                             (kaufmännisches "Und")
underscore
                             (Unterstrich)
                             ("Gartehaaq")
hash
curly brackets
                             geschwungene Klammern
                             eckige Klammern
square brackets
```