



COPYRIGHT BASICS: PROTECTION OF COMPUTER PROGRAMS

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AGENDA

- 1 WHY SOFTWARE RIGHTS MATTER
- 2 THE IP TOOLBOX: COPYRIGHT, PATENTS, SECRETS
- 3 THE LEGAL BASIS: §§ 69A FF. URHG
- 4 WHAT EXACTLY IS PROTECTED?
- 5 IDEA VS. EXPRESSION
- 6 WHO OWNS THE RIGHTS?
- 7 RIGHTS & USER FREEDOMS
- 8 DURATION + OUTLOOK: AI-WRITTEN CODE

source / app.py

```
1 def calculate_total(items):  
2     total = 0  
4     for item in items:  
5         total += item.price  
6     return total  
7  
8 def apply_discount(total, discount):  
9     return total * (1 - discount)  
10
```

TODO: integrate with payment provider

GOOD
CODE
TRAVELS
FAST

Ctrl

C

```
def calculate_total(items):  
    total = 0  
    for item in items:  
        total += item.price  
    return total
```

Ctrl

V

duplicate / app_copy.py

```
1 def calculate_total(items):  
2     total = 0  
3     for item in items:  
4         total += item.price  
5     return total  
6  
7 def apply_discount(total, discount):  
8     return total * (1 - discount)  
9  
10 # TODO: integrate with payment provider
```

IDEAS

BUILD

SHIP

REPEAT

Same code.
New place.
That easy.

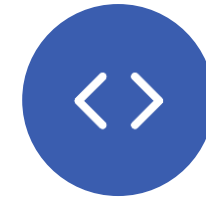
WHY SOFTWARE RIGHTS MATTER

Software is one of today's most valuable assets
– and one of the easiest to copy.

A perfect copy costs almost nothing and can be shared worldwide in seconds.

Copyright gives the creator control: who may copy, change or distribute the code.

It is the everyday, automatic protection that applies to virtually all software.



Code is written



Copied in seconds



Copyright steps in

THE IP TOOLBOX: THREE WAYS TO PROTECT SOFTWARE



Copyright

Automatic on creation. Protects the concrete code. No registration. The default for software.



Patent

Only for technical inventions, not code "as such". Costly, must be registered, examined.



Trade secret

Protects code kept secret, as long as it stays secret and is properly safeguarded.

This deck focuses on copyright — the protection that applies to essentially all software.

THE LEGAL BASIS

Software has its own special rules in the German Copyright Act (UrhG).

§§ 69a–69g UrhG = a dedicated section just for computer programs.

These rules implement an EU directive, so they look similar across Europe.

**Programs are protected like literary works:
as texts written by their authors.**



EU Software Directive

2009/24/EC



§§ 69a–69g UrhG

German Copyright Act



Your program

protected as a work

WHAT EXACTLY IS PROTECTED?



Protected

- ✓ Source code (the code you write)
- ✓ Object code (the machine version)
- ✓ Preparatory design material
- ✓ The concrete way it is written (the „expression“)



Not protected

- ✗ The idea or concept behind it
- ✗ What the program does (functionality)
- ✗ Algorithms & mathematical methods
- ✗ The programming language itself



The IDEA

e.g. "an app that tracks tasks"
Free for everyone to use



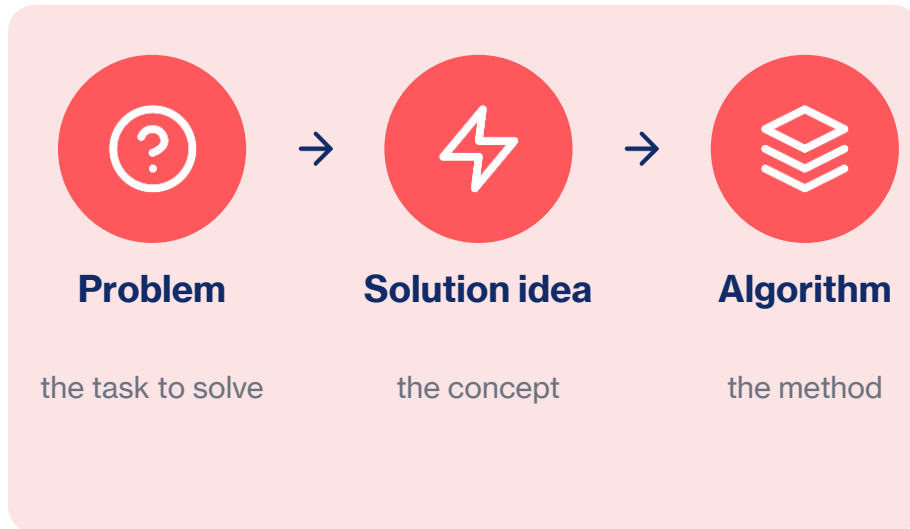
The EXPRESSION

the concrete source code you wrote
This is what copyright protects

**COPYRIGHT PROTECTS
THE EXPRESSION –
NOT THE IDEA.**

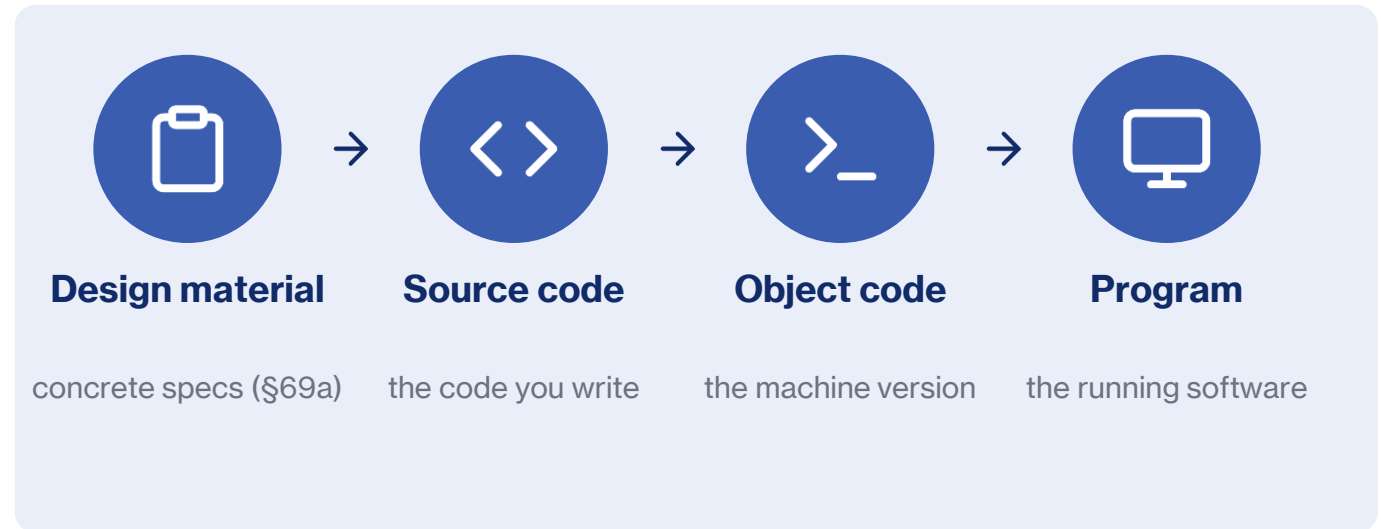
WHAT MAKES UP A COMPUTER PROGRAM

NOT PROTECTED · the idea



Also free: the programming language & what the software does (functionality).

PROTECTED · the expression



Also protected: the fabric / structure of the program – if it is the result of human creativity



Special case: the GUI

The graphical interface is not protected as software – but it can be protected under general copyright if it is original.

HOW ORIGINAL MUST IT BE?

Protection requires an "own intellectual creation" of the author.

For software the bar is deliberately low, no quality or artistic test applies.

If the author made individual choices in writing it, that is usually enough.

Only truly trivial, dictated snippets may fall short. Most real programs qualify.



A low bar

Made your own choices while coding?
That is normally enough.

No test of quality, art or novelty

Authors

=
creators of a specific work



Paint brush, typewriter,
camera, microphone, ...

Artificial
Intelligence?!



Work

=
personal intellectual creation

have **exclusive
Rights**
to their works

copying
modification
distribution
publishing
...

human creative action

intellectual content

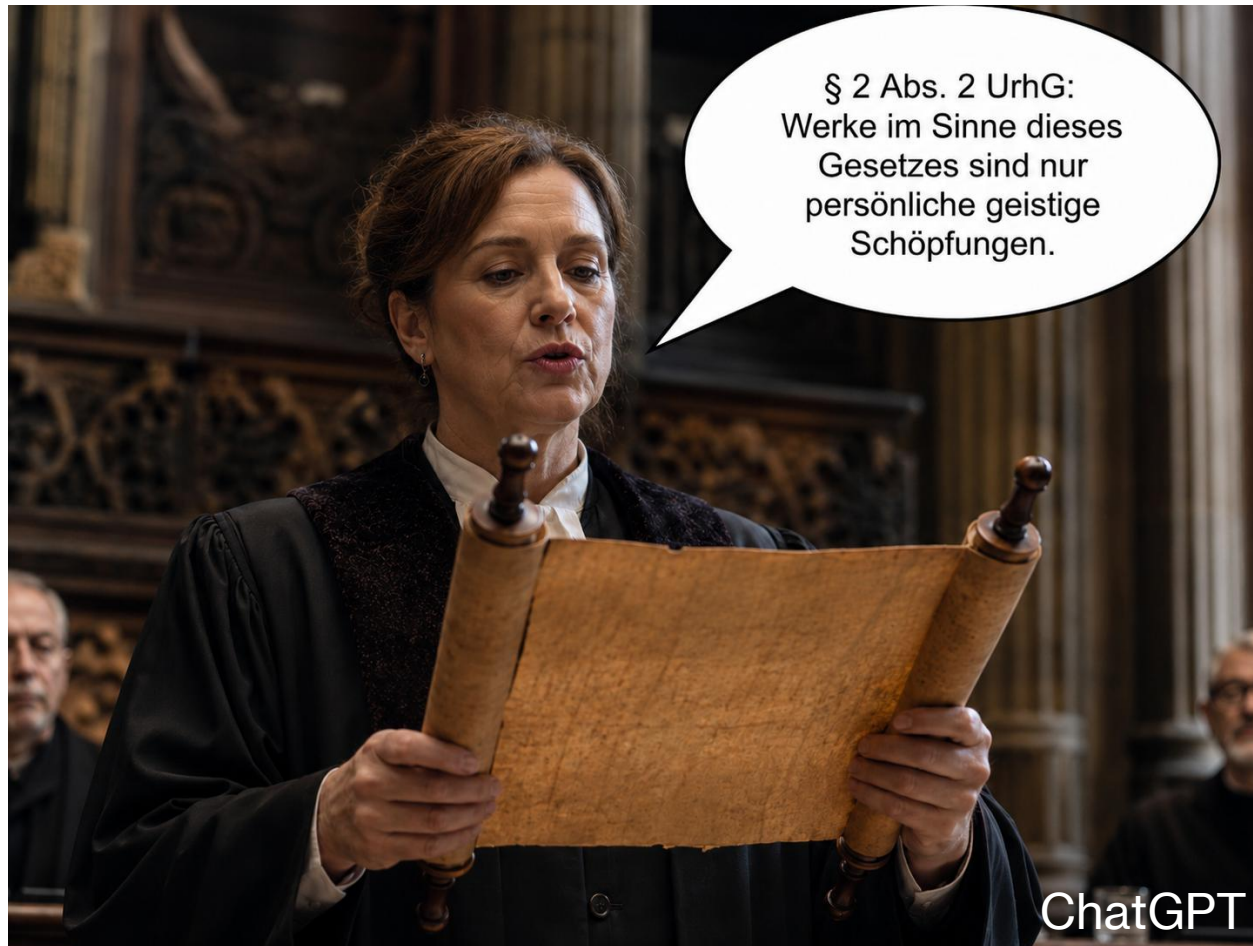
perceivability

individuality

attribution??

Only humans can be
authors

„originality“?
→ low requirements



THIS MEANS:

- In many cases output created by AI cannot be copyright protected.
- Outputs may be used by anyone since they are in the public domain
- WATCH OUT: output may contain third-party contents → distribution may be infringing
- There is more to computer programs than just code – creative decisions *may* lie in the architecture & assembly

Potential steps for **legal review**:

- **Control** of the process & output by a human author
- **Decision of choice**
- Resulting program = **expression** of a personal intellectual creation?

WHO OWNS THE RIGHTS?



Default rule

The person who writes the code is the author and holds the copyright.



Employees (§ 69b)

Write it as part of your job? The employer may exercise all economic rights – unless agreed otherwise.

WHAT RIGHTS DOES THE OWNER GET?



Reproduce

Make copies of the program – in whole or in part.



Modify & adapt

Change, translate or build on the code.



Distribute

Sell, share or make the program available.

These are exclusive rights: others need the owner's permission (a licence) to do them.

WHAT USERS MAY STILL DO



Normal use

A lawful user may run the program as intended – including fixing errors.



Back-up copy

A necessary back-up copy cannot be contractually forbidden.



Interoperability

Limited decompilation is allowed to make programs work together (§ 69e).

Some of these freedoms are mandatory — they can't simply be signed away.

HOW LONG DOES PROTECTION LAST?

Protection is automatic from the moment the code is created – and lasts a long time.



After that, the software becomes free for everyone to use (public domain).

PUTTING IT TOGETHER: A QUICK EXAMPLE

Maya writes a task-management app.

The moment she writes the code, it is protected – no registration needed.

A competitor may build a rival app with the same features (the idea is free).

But copying Maya's source code would infringe her copyright.

If Maya wrote it as an employee, her employer holds the economic rights (§ 69b).

Idea vs. code



Same features

Allowed – the idea is free



Copying the code

Infringement – the code is protected

KEY TAKEAWAYS



Automatic & free

Copyright protects software from the moment it's written – no registration.



Expression, not idea

It covers the concrete code, not the functionality or concept behind it.



Ownership can shift

The author owns it – but employers get the economic rights for work code (§ 69b).



Long protection

Rights last 70 years after the author's death, then enter the public domain.