

# Nachdenkzettel: Interfaces und Software-Architektur

## Aufgabe 1

The interface “plug” is defined by its length and width (shape) and the depth of its “bolts”. Also, the grounding is very important. (DIN - Norm)

## Aufgabe 2

- a) Not a correct extension of the above implementation, because the grounding doesn't work as expected
- b) Obviously not, because the grounding isn't correctly implemented

## Aufgabe 3

- a) Matches the interface but the implementation is different
- b) We can willfully break the interface if it's safe to use a plug without grounding (e.g. socket and plug made out of plastic  $\Rightarrow$  no grounding problem)

## Aufgabe 4

The voltage is an interface, because the 220V defines the used material for the plug.

## Aufgabe 5

We wouldn't have fun, because every manufacturer would have different solutions for their devices.

## Aufgabe 6

- Methods
- Attributes
- name of interface

## Aufgabe 7

You would get an error in Class B till you implement the new method.

## Aufgabe 8

No. If we have two objects, a car and a house and they both have the method `closeDoor()`, we can't treat them the same way, because they are completely different objects.

## Aufgabe 9

Poor naming → Later hard to identify what's the variable even for, It's not extendable etc. You should use it as an interface.

## Aufgabe 10

The normal objections to extending a class is the favor composition over inheritance discussion. Extension isn't always the preferred mechanism, but it depends on what you're actually doing.