Software Engineering and Programming Basics - WS2021/22
Exercise 4: Arrays

TECHNISCHE UNIVERSITÄT
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Professorship of Software Engineering

11| 2021

Task 1

Create a method print() that will print a given array of numbers in order to the console. Now create a method reversePrint() that will print the same array in reverse order. Do not change the array for this method!

Task 2

A weather station registers data about wind every hour.

1.

Create a class called **Wind** with the attributes **speed** and **direction** (don't forget about choosing fitting data types).
Wind has a max speed of 200 km/h and can blow at max from a direction of 360°.

Create a suitable constructor and getter methods.

2.

Create a second class called **WeatherStation** with the attributes **hours** (for the amount of hours the data is registered for) and **windData**, where the data is saved in an array.

Create a constructor that reserves memory for **windData** for the amount of **hours** in your parameter.

Create a method **observeWind()** where you either enter the data manually (via the Scanner class) OR create a method **observeWind()** where you create the values randomly.

Create a method **printData()** that prints the data to the console in an accessible format like the following:
„Wind speed is $speed km/h and the direction is $direction °."
(Replace the variables marked with $ with the corresponding data.)

Task 3

Check whether a small Sudoku field (3x3) is solved correctly. A Sudoku field contains every number from 1 to 9 exactly once.

Create a method **checkSudoku()** that can check whether a given 3x3 field contains all the numbers from 1 to 9.