Welcome.TU.code
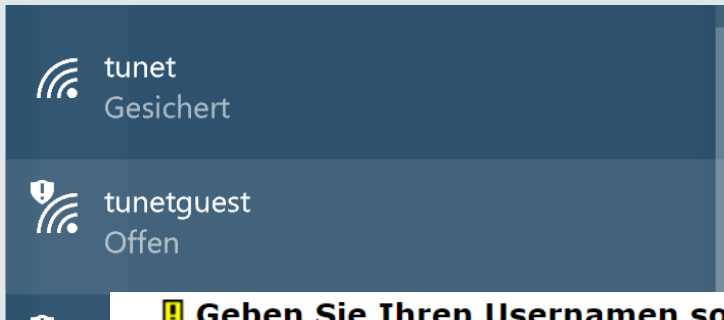
Welcome to our first lecture

First let us to go to know each other…

- What's your name?
- How old are you?
- How much experience do you have with computers?

Setting up internet connection

First live example

What is a variable?

- changeable over time
- contains a value
- has one specified type (Number, Text, etc.)

- Syntax:
  - *Type Variablename;*
  - e.g.:
    - *int numericValue;*
    - *String text;*

What is a variable?

- Declaration
  - specifies name and type
  - e.g.: *int numericValue;*

- Initialization and assignment
  - Variable obtains (new) value
  - assignment via „="
    - name of variable on left side
    - new value on right side
  - e.g.: numericValue *= 2016;*

What is a variable?

- Declaration + Initialization
  - can be obtained in one step
  - e.g.:
    - *int numericValue = 4;*
    - *String text = „Example";*

- constant = not changeable
  - e.g.:
    - *final int four = 4;*

Live example

Operators

- Arithmetic operators
  - Addition, Subtraction, Multiplication und Division
  - Modulooperator
    - calculates remainder of Division
  - e.g.:
    - *x = 2 + 2;*
    - *y = 2 * 10 – 5;*
    - *z = 9 % 4*   *results in 1*   *(9/4 = 2, 1 remainder)*

Operators

- Abbreviated syntax
  - Operation and assignment combined
  - e.g. Addition:
    - *x += 2;*   equals   *x = x + 2;*
  - e.g. Addition/Subtraction with 1
    - *x++;*   equals   *x = x + 1;*
    - *x--;*   equals   *x = x − 1;*
  - more examples
    - *x /= 2;*
    - *x *= 10;*

Operators

- Concatenation Operator
  - „+" – Operator
  - combines/connects texts
  - e.g.:
    - String text = „Example" + „text"

Live example