



TECHNISCHE  
UNIVERSITÄT  
WIEN

# Welcome.TU.code

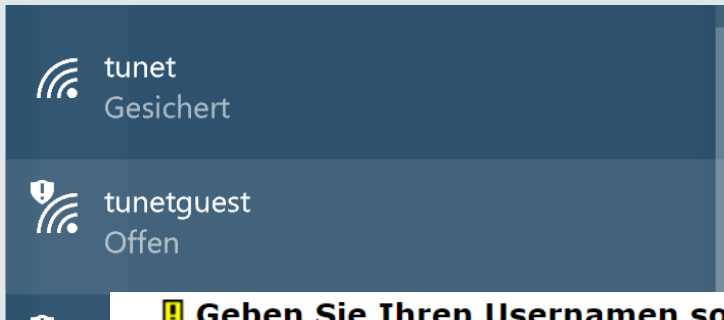
Welcome to our first lecture

# 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



**⚠ Geben Sie Ihren Usernamen sowie Ihr Passwort ein um den Netzwerkzugang freizuschalten.**  
**Please enter your username and your password to activate your network access.**

**Gültige Accounts:**

**Valid accounts:**

Userid@tuwien.ac.at, Userid@student.tuwien.ac.at, Userid@conference.tuwien.ac.at

Username:

e [redacted] @student.tuwien.ac.at

Password:

.....

OK

**EXAMPLE**

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;*

**EXAMPLE**

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“

**EXAMPLE**

Live example