VARIABLES, EXPRESSIONS, AND STATEMENTS
Notes

• Where to find course materials:

https://moodle.ut.ee/course/view.php?id=8434
https://courses.cs.ut.ee/2020/progeng/spring

• How to work with course material:

Please do the homework (lecture, quiz, assignments) before the practice session!
Expressions

• **Variables**
  *Mnemomically* named place in the memory where the programmer can store a value and later retrieve it
  • Must start with a letter or underscore `_`
  • Must consist of letters, numbers or underscore
  • Case sensitive

• **Constants**
  • Numbers, letters, and string are constants
  • They do not change their value
  
  123  98.6  'Hello, world'  "Hello, world"

• **type()**
  • Types  `int`  `float`  `str`
  • Type conversion  `int()`  `float()`  `str()`
Expressions

• **Assignment statement** (e.g. \( x = 2 \))
  Go to the place called \( x \) and store 2 there

• **Assignment with expression** (e.g. \( x = x + 2 \))

• **Operators**
  - Addition +
  - Subtracion -
  - Multiplication *
  - Division /
  - Power **
  - Remainder %
  - Integer part of division //

  (result of \( 450 \% 100 \) is 50)
  (result of \( 450 // 100 \) is 4)

• **Order of evaluation** (operator precedence)
  
  \((\) ** */% +-) \n
  Left to right

• **Reserved words**
  
  e.g. print for elif while
• **User input**
  
  ```python
  name = input("Enter name: ")
  weeks = int(input("Enter weeks: "))
  rate = float(input("Enter rate: "))
  ```

• **Output**

  ```python
  print("Hello")
  print("Hello", name)
  print("Weeks: ") + str(weeks)
  ```

• **Comments**

  ```python
  # Compute the answer
  ```