sages
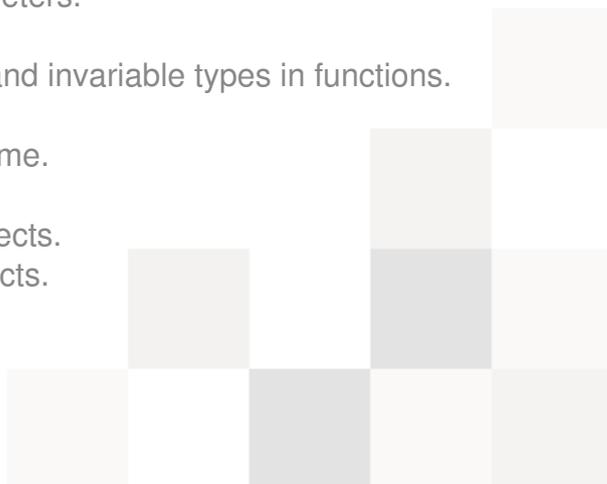
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Program szkolenia:

1. Basic information on Python language.
   - Characteristic features and applications of Python.
   - Configuration of interactive work environment.
2. Basic Python data types.
   - Python data model.
   - Numerical types, logical types, None type.
   - Sequential types:
     - Variable: lists.
     - Invariable: short character chains.
   - Dictionaries.
   - Sets.
   - Dynamic typing and duck-typing in Python.
3. Basic Python syntax elements.
   - Assignments.
   - Decision-making structures:
     - Arithmetic operators.
     - Logical operators.
   - Loops.
   - Templates for using control structures characteristic of Python.
4. Procedural functions and programming.
   - Definition of function.
   - Parameter communication to function.
     - Positional and named parameters.
   - Returning values from functions.
   - Consequences of applying variable and invariable types in functions.
5. Object-oriented programming.
   - Definition of object-oriented programme.
   - Class defining in Python.
     - Attributes of classes and objects.
     - Methods of classes and objects.

- Conventions and model procedures when defining classes in Python.
  - Inheritance and polymorphism in Python.
  - Special attributes and methods related to classes.
    - Operator overloading.
  - Properties and application of @property decorator.
6. Modules and packages.
    - Definitions of modules and packages in Python.
    - Module importing.
      - Namespaces.
      - Conventions and model procedures when importing modules.
7. Exceptions in Python.
    - Exception types and their applications.
    - Operation of exceptions in Python.
    - Exception handling.
    - Problem solving with software in Python.
      - Logging in.
      - Debugging.
8. Python standard library.
    - Review of popular modules: datetime, json, csv
    - Use of standard library components to improve code writing and operating efficiency.
      - Itertools, collections, functools modules.
9. Files and interaction with the operating system
    - Basic operations on files
      - Text files and binary files.
      - Operations on files.
      - Use of execution context.
    - System commands initiation and execution.
    - Basics of Python network programming.
10. Differences between Python in 2.x and 3.x versions.
    - Summary of differences between Python versions 2 and 3.
    - Standard library modules availability.
11. Building simple graphic applications using Tkinter package.