Lab: Inheritance

Problems for in-class lab for the Python OOP Course @SoftUni. Submit your solutions in the SoftUni judge system at https://judge.softuni.bg/Contests/1940

Part I: Inheritance

1. Single Inheritance

Create two classes named Animal and Dog.

Animal with a single public method **eat()** that returns: "eating..."

Dog with a single public method bark() that returns: "barking..."

Dog should inherit from Animal.

2. Multiple Inheritance

Create three classes named **Person**, **Employee** and **Teacher**.

Person with a single public method **sleep()** that returns: "sleeping..."

Employee with a single public method **get fired()** that returns: "fired..."

Teacher with a single public method **teach()** that returns: "**teaching...**"

Teacher should inherit from **Person** and **Employee**.

3. Hierarchical Inheritance

Create three classes named Animal, Dog and Cat.

Animal with a single public method **eat()** that returns: "eating..."

Dog with a single public method bark() that returns: "barking..."

Cat with a single public method meow() that returns: "meowing..."

Dog and Cat should inherit from Animal.

Part II: Reusing Classes

4. Random List

Create a RandomList class that has all the functionality of an List.

Add additional function that returns and removes a random element from the list.

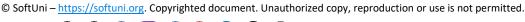
Public method: get random element()

5. Stack of Strings

Create a class **Stack** which can store **only strings** and has the following functionality:

Private field: data: list















- Public method: push(item)
- Public method: pop()
- Public method: peek()
- Public method: is_empty(): returns boolean













