

## Course: Introduction to Programming Using Python

### **Module 9. Object-Oriented Programming.**

### **Topic. Multiple Inheritance. Polymorphism. Using Magic Methods. Part 6**

#### **Task 1**

Use multiple inheritance to develop a class Circle Inscribed in a Square.

#### **Task 2**

Use multiple inheritance to develop a class Car. There should also be these classes: Wheels, Engine, Doors, etc.

#### **Task 3**

Create a base class Pet and derived classes Dog, Cat, Parrot, Hamster. Use a constructor to set the name of each animal and its characteristics. Implement the following methods for each class:

- Sound — makes the sound of an animal (type in the console);
- Show — shows the name of an animal;
- Type — shows the name of its subspecies.

## Task 4

Create a base class `Employer` with the `Print()` function. It should print info about the employer. In the case of a base class, it can be a string that reads: This is Employer class.

Create three derived classes: `President`, `Manager`, `Worker`. Override the `Print()` function to output information appropriate for each type of employer.

## Task 5

Implement the magic method `str` and `int` (to return the age of the employer) for the classes from Task 4.