Polymorphism

C++ in QF I - a course by Paweł Sakowski

Przemysław Kurek

Chair of Political Economy
Faculty of Economic Sciences
University of Warsaw

Labs 11

We already know:

- Quite a lot about classes.
- Basics of inheritance.
- How to use dynamic memory (`new` and `delete`).
- Pointers.
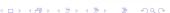- What is operator `->` doing.

Now we can learn:

- Multiple inheritance.
- Polymorphism.

Examples I:

1. Create two classes to represent a Person and a Wolf with some features (methods). Create class representing a warewolf, which inherits features from both classes. Test it.

2. *A pointer to base class is type compatible with derived class.* Write an investigative program to understand how this works.

3. Write a program, that will allow to use members of derived class from pointer to base class. Investigate how `virtual` keyword works.

4. Create an abstract class. Investigate what constraints using of abstract methods will imply.

Examples II:

5. Write a program, that will ask user for the number of pets that this user wants. Then, for each pet ask user what type of pet this user wants (cat, dog, hamster). Then let all of those pets play (write playing text). Use classes and polymorphism.

Thank you!