

Polymorphism in C++

Talk to a Teacher

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives



Learning Objectives

► Polymorphism



Learning Objectives

- ▶ **Polymorphism**
- ▶ **Virtual Function**



Learning Objectives

- ▶ Polymorphism
- ▶ Virtual Function
- ▶ Through an example



System Requirements



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- ▶ **Ubuntu OS v. 11.10**



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- ▶ **Ubuntu OS v. 11.10**
- ▶ **g++ Compiler v. 4.6.1**



Introduction to Polymorphism



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- **Polymorphism is the ability to take different forms**



Introduction to Polymorphism

- ▶ **Polymorphism is the ability to take different forms**
- ▶ **It is the mechanism to use a function with same name in different ways**



Virtual Functions



Virtual Functions

- ▶ **Virtual function is the member function of a class**



Virtual Functions

- ▶ **Virtual function is the member function of a class**
- ▶ **It can be overridden in its derived class**



Virtual Functions

- ▶ Virtual function is the member function of a class
- ▶ It can be overridden in its derived class
- ▶ It is declared with virtual keyword



Virtual Functions

- ▶ Virtual function is the member function of a class
- ▶ It can be overridden in its derived class
- ▶ It is declared with virtual keyword
- ▶ Virtual function call is resolved at run-time



Summary

- ▶ **Polymorphism**
- ▶ **Virtual function**
 - ▶ eg. `virtual int area ()`



Assignment

- ▶ Calculate the perimeter of rectangle, square and triangle
- ▶ Create perimeter as a virtual function



About the Spoken Tutorial Project

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Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- ▶ Conducts workshops using spoken tutorials
- ▶ Gives certificates to those who pass an online test
- ▶ For more details, please write to contact@spoken-tutorial.org



Acknowledgements

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- ▶ **It is supported by the National Mission on Education through ICT, MHRD, Government of India**
- ▶ **More information on this Mission is available at:**

<http://spoken-tutorial.org/NMEICT-Intro>

