

# FREE WEBINAR ON "OOPS In C++ Programming"



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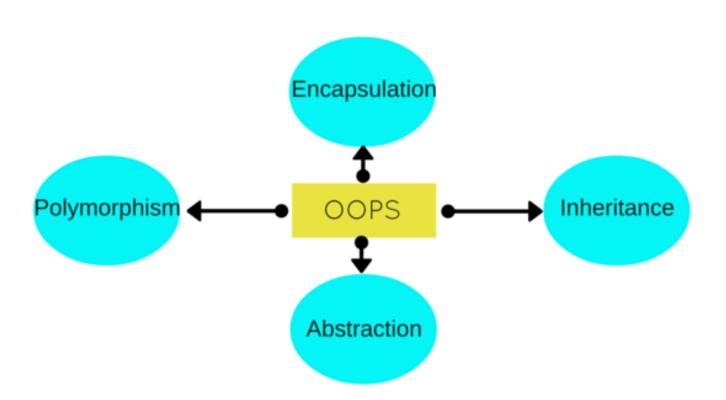
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## What is OOP?

- OOP stands for Object-Oriented Programming.
- Object-oriented programming has several advantages over procedural programming:



## OOP Fundamentals?



## Advantages of OOP over Procedural Oriented Prog.

- ✓ OOP is faster and easier to execute
- ✓OOP provides a clear structure for the programs
- ✓OOP helps to keep the C++ code DRY "Don't Repeat Yourself", and makes the code easier to maintain, modify and debug
- ✓OOP makes it possible to create full reusable applications with less code and shorter development time

## Basics of OOP?

- Class
- Object
- Method

## Access Modifiers?

- Public
- Private
- Protected

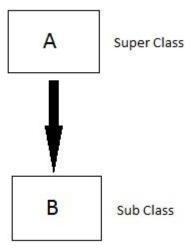
## Encapsulation

• The wrapping up of data and functions together in a single unit is known as encapsulation. It can be achieved by making the data members' scope private and the member function's scope public to access these data members. Encapsulation makes the data non-accessible to the outside world.

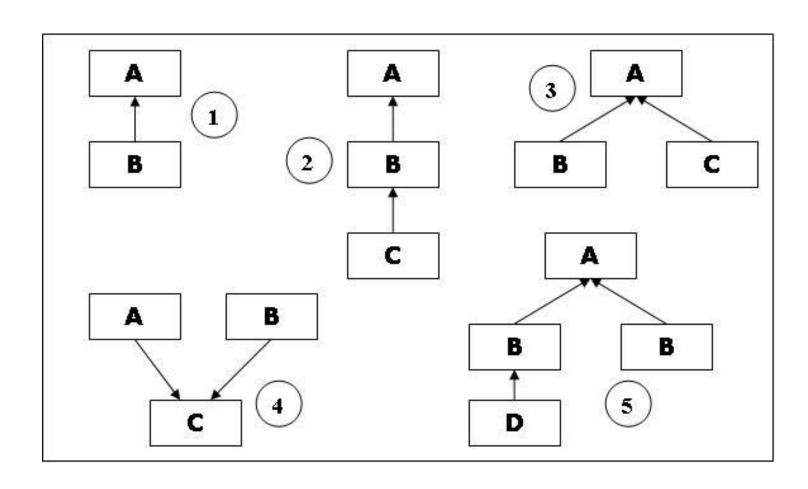


## Inheritance

• <u>Inheritance</u> is the process in which two classes have an is-a relationship among each other and objects of one class acquire properties and features of the other class. The class which inherits the features is known as the child class, and the class whose features it inherited is called the parent class.



# Type of Inheritance



- ✓ Single Level Inheritance
- ✓ Multi Level Inheritance
- ✓ Multiple Inheritance
- ✓ Hierarchical Inheritance
- ✓ Hybrid Inheritance

## Polymorphism

• <u>Polymorphism</u> means many forms. It is the ability to take more than one form. It is a feature that provides a function or an operator with more than one definition. It can be implemented using function overloading, operator overload, function overriding, virtual function.

#### **Types of Polymorphism**

- ✓ CompileTime Polymorphism
- ✓ RunTime Polymorphism

#### Data Abstraction

• <u>Abstraction</u> helps in the data hiding process. It helps in displaying the essential features without showing the details or the functionality to the user. It avoids unnecessary information or irrelevant details and shows only that specific part which the user wants to see.















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