Daily Assessment Format

Date: 25/06/2020

Course: c++ programming

Topic: inheritance & polymorphism

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Forenoon session details

Report

The word polymorphism means having many forms. typically, polymorphism occurs when there is a hierarchy of classes, & they are related by inheritance. c++ polymorph -s means that a call to a member function will cause a different fun to be executed.

Inheritance & polymorphism

Inheritance

→ Inheritance is one in which a new class is created that inheritance the properties of the already exist class. it supports the concepts of code reusability & reduces the length of the code in object-oriented programming

→ Types of inheritance are

1. single inheritance
2. Multi-level inheritance
3. Multiple inheritance
4. Hybrid inheritance
5. Hierarchial inheritance

polymorphism

→ polymorphism is that in which we can perform a Task in multiple forms. or ways. it is applied to the funs or methods. polymorphism allows that object to decide

which form of the function to implement at compile time as well as run-time.

→ types of polymorphism are
1. compile-time polymorphism (Method overloading)
2. Run-time polymorphism (Method overriding)

polymorphism in c++
→ The word polymorphism means having many forms. in simple words, we can define polymorphism as the ability of a msg to be displayed in more than one form. Real life ex: of polymorphism, a person at the same time can have different characterstic. Like a man at the same time is a father, a husband, an employee. So the same person diff behaviours in diff situations. this is called polymorphism. polymorphism is considered as one of the important features of oop. in c++ polymorphism is mainly divided into two types:
• compile-time polymorphism
• runtime polymorphism

c++ inheritance
→ in c++, inheritance is a process in which one object acquires all the properties & behaviours of its parent object automatically. in c++ the class which inherits the members of another class is called derived class. & the class whose members are inherited is called base class.

The capability of a class to derive properties & characteristics from another class is called inheritance. inheritance is one of the most important feature of oop.

sub class: the class that inherits properties from another class is called subclass or derived class.

Date: 25/06/2020   Name: Jyoti. S. Donur
Course: c++ programming   Vsn: 4ALI7EC037
Topic: Templates, exceptions, files.
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Afternoon session details

Report

Templates in c++

→ Templates are the foundation of generic programming, which involves writing code in a way that is independent of any particular type.

→ A template is a blueprint or formula for creating a generic class or a fuc. the library containers like iterators & algorithms are ex: of generic programming & have been developed using template concept.

→ There is a single definition of each container, such as vector, but we can define many different kinds of vectors for ex: vector < ints > or vector

→ < string >

→ A template is a simple & yet very powerful tool in c++. the simple idea is to pass datatype as a parameter so that we don't need to write the same code for different data types. for ex: a software company may need sort () for different data types.

files
→ c++ provides the following classes to perform output & input of characters to /from files.
  • ofstream
  • ifstream
  • fstream

These classes are derived directly or indirectly from the classes ostream & istream. We have already used objects whose types were these classes.

Exceptions

→ An exceptions is a problem that arises during the execution of a program. A c++ exception is a response to an exceptional circumstances. that arises. while a program. is running such as an, attempt to divide by zero.

→ Exceptions provide a way to transfer control from one part of a program to another. c++ exception handling is built upon three keywords: try, catch & throw.

• try
• catch
• throw.

Assuming a block will rise an exception, a method catches an exception using a combination of the try & catch keywords.