CAP445:OBJECT ORIENTED PROGRAMMING USING C++ - LABORATORY

L:0 T:0 P:2 Credits:1

Course Outcomes: Through this course students should be able to

CO1 :: define the various concepts of object oriented programming

CO2 :: understand the working with files and streams

CO3 :: practice the generic programming to increase the efficiency of code

CO4 :: analyze the unexpected situations and manage them using exception handling mechanism

List of Practicals / Experiments:

Principle of OOP's

- classes and objects
- the concept of constructors and destructors
- friend Functions

Inheritance and type conversion

- different types of inheritance
- basic to class type conversion
- class type to basic type conversion
- class type to class type conversion

Polymorphism

- unary operator overloading
- binary operator overloading
- abstract classes
- virtual functions and pure virtual functions
- this pointer
- pointer to object

Working with Files and Streams

- different file operations
- the concept of random access in files
- the concept of command line arguments

Generic Programming with Templates

- class and function templates
- function template overloading
- recursion with template function
- macros

Exception handling

- exceptions handling mechanism
- multiple exceptions handling
- exceptions in constructors and destructors

Text Books:

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1. OBJECT ORIENTED PROGRAMMING WITH ANSI & TRUBO C++ by ASHOK N. KAMTHANE, Pearson Education India

References:

1. OBJECT ORIENTED PROGRAMMING IN C++ by ROBERT LAFORE, GALGOTIA PUBLICATIONS

2. C++: THE COMPLETE REFERENCE by HERBERT SCHILDT, Mc Graw Hill Education