C++ Programming – Lecture 9

Reuse Mechanisms

- In C functions can be reused on a "as is where is" basis
- In C if functions have to be enhanced then they have to be reinvented
- C++ facilitates code reuse at 2 levels : a) Source code level b) Object code level
- Source code level reuse is done using Template functions and Template classes
- Templates let us write generalized functions / classes and the compiler creates specific functions / classes from it
- For creating specialized functions / classes source code has to be available
- Object code level reuse is done using Containership and Inheritance
- Containership should be used when the two classes have a "has a" relationship
- Inheritance should be used when the two classes have a "like a" relationship
- Containership and Inheritance can be implemented even if source code is not available
- Inheritance terminology : base - derived, parent - child
- Protected members are available in the inheritance chain
- Inheritance facilitates :

  Inheritance of existing feature : To implement this just establish inheritance relationship

  Suppressing an existing feature : Hide base class implementation by defining same function in derived class

  Extending an existing feature : call base class function from derived class by using Baseclassname :: Baseclassfunction() ;