

PL306 Object Oriented Programming Lab

Prerequisites: PL105, PL205

OOP lab assignments using Java/C++/C#

(30%)

1. Understanding OO basic concepts and use of IDE such as Eclipse, Visual Studio
2. Using command line interface for compiling and executing programs
3. Creation of objects, message passing, references
4. Use of Inheritance, abstract classes, interfaces, Polymorphism, Using multiple inheritance
5. Performing basic I/O, Handling exceptions
6. Use of arrays, Collections/container, Advanced collections/generics
7. Use of STL
8. Creating and running threads
9. Use of synchronized clause in java
10. Use of reflection, Serialization
11. JDBC
12. UML diagrams, analysis model diagrams, design model diagrams

UML Lab assignments:

(30%)

Mini-Project (group project) : Applying OOAD to a business application

(40%)

) Main Reading

1. Timothy Budd, An Introduction to Object Oriented Programming, 3rd Edition, Pearson Education
2. Khalid Mughal, A Programmer's Guide to Java Programming Certification, 3rd Edition, Pearson Education
3. Stanley Lippman, C++ Primer, 3rd Edition, Addison Wesley
4. Ken Arnold, James Gosling, David Holmes, The Java Programming Language, Fourth Edition, Addison-Wesley Professional, 2005
5. Bjarne Stroustrup, The C++ Programming Language by, 4th Edition, Addison Wesley
6. Martin Fowler, UML Distilled, 2nd Edition, Addison Wesley, 2003
7. Doug Rosenberg, Matt Stephens, Use Case Driven Object Modeling with UML: Theory and Practice., Apress.