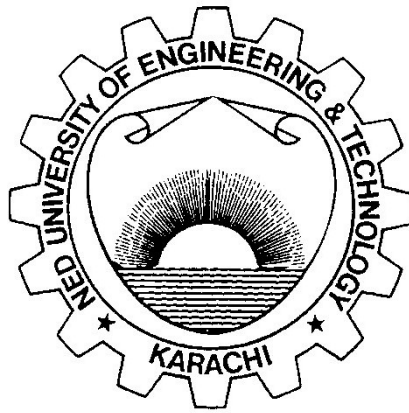


Practical Workbook

CS-116

Object Oriented Programming



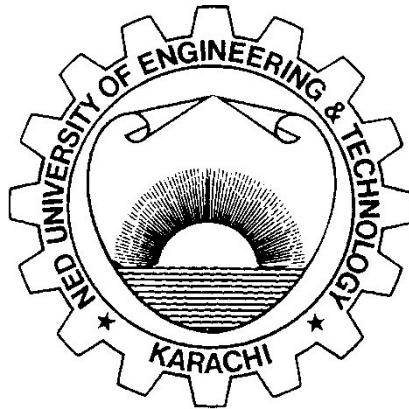
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Batch _____
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Dept. of Computer & Information Systems Engineering
NED University of Engineering & Technology,
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Practical Workbook

CS-116

Object Oriented Programming



Prepared by:

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Revision 2

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Introduction

This workbook has been compiled to assist the conduct of practical classes for CS-116 “Object Oriented Programming”. Practical work relevant to this course aims at introducing the basic as well as advance concepts of object oriented programming using Python language such as class, object, inheritance, multiple inheritance, polymorphism, function and operator overloading.

The Course Profile of CS-116 “Object Oriented Programming” lays down the following Course Learning Outcome:

CLO-3 Practice computer programming using object oriented paradigm (Lab work).

All lab sessions of this workbook have been designed to assist the achievement of the above CLO. A rubric to evaluate student performance has been provided at the end of the workbook.

The Workbook comprises of fourteen labs starting with a practical on the classes and objects based programming environment and fundamental concepts of Object Oriented programming language. Next few lab sessions deal with familiarization with constructor and types of methods. Inheritance: a key concept in all object oriented programming languages is discussed in Lab session 4. Lab Session 5 covers extended version of inheritance i.e. multiple inheritance. Lab session 6 Covers the representation of class i.e. Class Diagram. Lab session 7 introduces the concept of Method resolution order (MRO) that is applied in case of inheritance when two or more methods have same name. Lab session 8 introduces abstract classes. Lab session 9 discusses the existing and implements user defined meta-functions. Polymorphism is discussed in Lab session 10. The programming of exception handling is explained in Lab session 11. Lab session 12 covers concept of function overloading. Operator overloading is discussed in Lab session 13. The Lab session 14 covers complex engineering activity.

This workbook is designed to assist (both) instructor and student, practically realizing theoretical concepts of the course, and providing in-depth understanding and elaborate system programming experience.

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