

Practical Workbook
CS-432
Distributed Computing



Name : _____

Year : _____

Batch : _____

Roll No : _____

Department: _____

Department of Computer & Information Systems Engineering
NED University of Engineering & Technology

Practical Workbook
CS-432
Distributed Computing



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INTRODUCTION

This workbook has been compiled to assist the conduct of practical classes for CS-432 Distributed Computing. Practical work relevant to this course aims at providing students a chance to interact with tools and techniques related to distributed computing systems. In an age of ever-increasing information collection and the need to evaluate it, building systems that utilize the available compute resources in everyone's home and hands should be driving the development of more sophisticated distributed computing systems. Learning about this area of engineering is the need of the day.

The Course Profile of CS-432 Distributed Computing lays down the following Course Learning Outcome:

“Practice programs for distributed computing systems (C3, PLO-3)”

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.

Lab sessions 1 & 2 discuss Linux local sockets and Linux sockets over network respectively in detail. Lab sessions 3, 4 & 5 introduces XML. XML's set of tools to allows developers to create web. Lab session 6 & 7 are related to the Implementation of Web services in ASP.Net. Lab session 8 introduces programming in java. Lab session 9 introduces the concept of multi-threading in Java. Lab session 10 discusses applet programming in Java. Lab session 11 elaborates the indirect communication mechanism with group communication. Lab session 12 deals with implementation & usage of message queues using Java messaging service (JMS). Lab session 13 gives detailed insight to “Torrents”.

In the end, students are encouraged to develop a mini project related to Java Remote Method Invocation (RMI). Java RMI is a mechanism that allows one to invoke a method on an object that exists in another address space (on either same or different machine). The aim of this section is to motivate the students for creating a very simple project using Java RMI showing a basic example of a distributed system.

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