UNIT I       PARALLEL AND DISTRIBUTED DATABASES

UNIT II       OBJECT AND OBJECT RELATIONAL DATABASES

UNIT III       XML DATABASES

UNIT IV       MOBILE DATABASES
Mobile Databases: Location and Handoff Management - Effect of Mobility on Data Management - Location Dependent Data Distribution - Mobile Transaction Models - Concurrency Control - Transaction Commit Protocols- Mobile Database Recovery Schemes

UNIT V       MULTIMEDIA DATABASES

REFERENCES
UNIT I  

UNIT II  

UNIT III  

UNIT IV  

UNIT V  

TOTAL : 45

TEXT BOOKS
2. James E Smith and Ravi Nair, “Virtual Machines”, Elsevier, 2005. (Units 4, 5) (Sections 1.0-1.6, 2.0-2.5, 2.8, 3.0-3.6, 4.2, 5.0-5.3, 5.5-5.6, 6.0-6.3, 6.5-6.6, 10.2, 10.3)

REFERENCES
UNIT I
Introduction to System Concepts - Managing Complex Software — Properties – Object
Oriented Systems Development – Object Basics – Systems Development Life Cycle -
Rumbaugh Methodology - Booch Methodology - Jacobson Methodology – Unified
Process

UNIT II
Unified Approach – Unified Modeling Language – Static behavior diagrams – Dynamic
behavior diagrams – Object Constraint Language

UNIT III
Inception – Evolutionary Requirements – Domain Models – Operation Contracts -
Requirements to Design – Design Axioms – Logical Architecture - Designing Objects
with Responsibilities – Object Design – Designing for Visibility

UNIT IV
Patterns – Analysis and Design patterns – GoF Patterns - Mapping designs to code –
Test Driven development and refactoring – UML Tools and UML as blueprint

UNIT V
More Patterns – Applying design patterns – Architectural Analysis – Logical Architecture
Refinement – Package Design – Persistence framework with patterns

REFERENCES

1. Craig Larman. “Applying UML and Patterns – An introduction to Object-Oriented
3. Michael Blaha and James Rumbaugh, “Object-oriented modeling and design
CA9134  INTERNET PROGRAMMING

UNIT I  9
Java fundamentals – Class, Object – Inheritance – Polymorphism – Packages – Interfaces – Exception handling

UNIT II  9
I/O – AWT – Event handling – Introduction to Threads - Basics of Networking –TCP and UDP sockets – Connecting to the Web

UNIT III  9
Applets – JDBC – Swings – Remote Method Invocation

UNIT IV  9

UNIT V  9
Server side scripting – JSP – Servlets – Session management – Cookies

TOTAL: 45

REFERENCES

CA 9137  INTERNET PROGRAMMING LABORATORY

1. Installing java and setting up path and class path
2. Simple java programs for reading keyboard inputs, Call by value, Call by reference, inheritance types, run-time Polymorphism
3. Implementing interfaces in a class
4. Creation of user defined packages
5. Writing user specific exceptions
6. Creation of window based GUI with frames and applets and handling various Event listeners
7. Example programs with threads
8. Implementing UDP, TCP and other protocols
9. Writing java program to retrieve web pages
10. Writing a java program to invoke a remote method
11. Creation of web pages with frames, lists, tables, forms and other controls
12. Creation of XML document, Creation of DTD and schema
13. Writing XSL to display XML content
14. Client side scripts for form validation and simple programs
15. Writing web based applications using Servlets and JSP with Sessions and Cookies

CA9138  CASE TOOLS LAB

1. Practicing the different types of case tools such as (Rational Rose & other Open Source) used for all the phases of Software development life cycle.
2. Data modeling
3. Semantic data modeling
4. Source code generators
5. Re-engineering
6. Experimenting CASE Environments
   a. Toolkits
   b. Language-centered
   c. Integrated
   d. Fourth generation
   e. Process-centered
7. Implementation of the following using CASE Workbenches:

a. Business planning and modeling
b. Analysis and design
c. User-interface development
d. Programming
e. Verification and validation
f. Maintenance and reverse engineering
g. Configuration management
h. Project management

CA9141  SOFTWARE PROJECT MANAGEMENT TECHNIQUES  L T P C  3 0 0 3

UNIT I    INTRODUCTION TO SOFTWARE PROJECT MANAGEMENT  9
Project Definition – Contract Management – Activities Covered By Software Project Management – Overview Of Project Planning – Stepwise Project Planning.

UNIT II  PROJECT EVALUATION  9

UNIT III  ACTIVITY PLANNING  9

UNIT IV  MONITORING AND CONTROL  9
UNIT V  MANAGING PEOPLE AND ORGANIZING TEAMS


TOTAL = 45

REFERENCES:


CA9142  VISUAL PROGRAMMING TECHNIQUES

UNIT I


UNIT II

Modal and Modeless Dialog Boxes - Common Controls - ActiveX Controls - Menus, Keyboard Accelerators, the Rich Edit Control, and Property Sheets - Toolbars and Status Bars - ToolTips

UNIT III

Reading and Writing Documents - Printing and Print Preview - Splitter Windows and Multiple Views- Context-Sensitive Help - Win32 Core Memory Management - Windows Message Processing and Multi-Threaded Programming - SDI and MDI Applications

UNIT IV

30
Dynamic-Link Libraries - The Component Object Model – OLE – COM using Active Template Library ATL and ActiveX Controls - OLE DB

UNIT V

Internet Essentials - Introducing Dynamic HTML - ATL Server - Microsoft .NET

REFERENCES

1. George Shepherd; David Kruglinski, “Programming with Microsoft Visual C++ .NET”
UNIT I INTRODUCTION
Overview of UNIX OS - Environment of a UNIX process - Process control - Process relationships Signals – Interprocess Communication- overview of tcp/ip protocols

UNIT II ELEMENTARY TCP SOCKETS

UNIT III APPLICATION DEVELOPMENT

UNIT IV SOCKET OPTIONS, ELEMENTARY UDP SOCKETS

UNIT V ADVANCED SOCKETS

TOTAL = 45

REFERENCES:
CA9144  MIDDLEWARE TECHNOLOGIES                  L  T  P  C
                                                   3 0 0 3

UNIT I   INTRODUCTION                           7

Emergence of Middleware – Objects, Web Services – Middleware Elements – Vendor
Architecture – Interoperability – Middleware in Distributed Applications – Types of
Middleware – Transaction-Oriented Middleware – MOM – RPC.

UNIT II  OBJECT ORIENTED MIDDLEWARE           12

OOM – Developing with OOM – Heterogeneity – Dynamic Object Request – Java RMI –
COM+.

UNIT III  COMPONENT OBJECT RESOURCE BROKER ARCHITECTURE
              (CORBA)                                                                 12


UNIT IV  WEB SERVICES                           7

Introduction – XML Web Services standards – Creating Web Services – Extending Web

UNIT V   OTHER TYPES OF MIDDLEWARE             7

Real-time Middleware – RT CORBA – Multimedia Middleware – Reflective Middleware
– Agent-Based Middleware – RFID Middleware.

TOTAL = 45

TEXT BOOKS
3. Keith Ballinger, “.NET Web Services – Architecture and Implementation”,
   Pearson Education, 2003. (Unit IV)

REFERRENCES
1. Qusay H. Mahmoud, “Middleware for Communications”, John Wiley and
2. Gerald Brose, Andreas Vogel, Keith Duddy, “JavaTM Programming with
   CORBATM: Advanced Techniques for Building Distributed Applications”,
3. Michah Lerner, “Middleware Networks: Concept, Design and Deployment of
VB
1. Form Design – Keyboard & Mouse events
2. Programs on usage of data types - variant, Control arrays
3. Simple applications using file system controls
4. Database applications using data control.

VC++
1. SDK type and MFC based programs for creating simple windows with different window styles
2. SDK type and MFC based programs code for keyboard and mouse events, GDI objects.
3. Simple Dialog Based application – eg. Calculator, interest computation, money conversions, etc.
5. Programming for reading and writing into documents.
7. Creating static and dynamic splitter windows
8. Creating DLLs and using them.
9. Winsock and WinInet & Internet Explorer common controls.
10. Data access through ODBC – Cdatabase, Crecordset.
11. Creating ActiveX control and using it.

TOTAL = 45