UNIT-I

UNIT-II
Basic Structural Modeling: Classes-Terms and concepts, Common modeling techniques, Relationships: modeling simple dependencies, single Inheritance and structural relationships, common Mechanisms, and diagrams.
Advanced Structural Modeling: Advanced classes, advanced relationships, Interfaces, Types and Roles, Packages, Instances.

UNIT-III

UNIT-IV
Basic Behavioral Modeling-I: Collaboration Diagrams: Terms, Concepts, depicting a message, polymorphism in collaboration diagrams, iterated messages, use of self in messages Interactions: Terms and concepts, modeling a flow of control
Interaction diagrams: terms and concepts, modeling flows of control by time ordering and control by organization, Forward and reverse Engineering.

UNIT-V
Basic Behavioral Modeling-II: Use cases-terms and concepts, modeling the behavior of the element.
Use case Diagrams: Terms and concepts, modeling the context of a system and requirement of a system, Forward and reverse Engineering.
Activity Diagrams: Terms and concepts, modeling a workflow and an operation, Forward and reverse Engineering.

UNIT-VI
Case Studies: Library Management System and Automatic Teller Machine

UNIT-VII
Introduction To Design Patterns: Design Pattern Definition, Design Patterns in Small Talk MVC, Describing Design Patterns, Catalog of Design Patterns, Organizing the Catalog, Solving of Design Problems using Design Patterns, Selection of a Design Pattern, use of Design Patterns.
UNIT-VIII

Designing a Document Editor (A Case Study): Design problems, Document structure, Formatting, Embellishing the User Interface, Supporting Multiple Look and Feel standards, Supporting Multiple Window Systems, User Operations, Spelling Checking and Hyphenation.

TEXT BOOKS:


REFERENCES:


10MC50102: MANAGEMENT INFORMATION SYSTEM

UNIT-I

The meaning and role of MIS: What is MIS? Systems approach, The systems view of business, MIS organization within the company.

Management organizational theory and the systems approach-I: Development of organizational theory.

UNIT-II


UNIT-III

Information systems for decision making: Evolution of an information system, Basic information systems, decision making and MIS, MIS as a technique for making programmed decisions, decision-assisting information systems.

UNIT-IV

Strategic and project planning for MIS: General business planning, appropriate MIS response, MIS planning: General, detail.

UNIT-V

Conceptual system design: Define the problems, set system objectives, establish system constraints, determine information needs, determine information sources,
develop alternative conceptual designs and select one, document the system concept, prepare the conceptual design report.

UNIT-VI
Detailed system design: Inform and involve the organization, aim of detailed design, project management of MIS detailed design, identify dominant and trade-off criteria, define the subsystems, sketch the detailed operating subsystems and information flows, determine the degree of automation of each operation, document the detailed design, revisit the manager-user.

UNIT-VII
Implementation, evaluation and maintenance of the MIS: Plan the implementation, acquire floor space and plan space layouts, organize for implementation, develop procedures for implementation, train the operating personnel, computer related acquisitions, develop forms for data collection and information dissemination, develop the files, test the system, cutover, document the system, evaluate the MIS, control and maintain the system.

UNIT-VIII
Pitfalls in MIS development: Fundamental weaknesses, soft spots in planning, design problems, implementation: the TAR PIT.

TEXT BOOK:


REFERENCES:


10MC50103: MIDDLEWARE TECHNOLOGIES

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UNIT-I
UNIT-II
*CORBA with Java:* Review of Java concept like RMI, RMI API, and JDBC.Client/Server CORBA-style, The object web: CORBA with Java.

UNIT-III
*Introducing C# and the .NET Platform:* Understanding .NET Assemblies; Object-Oriented Programming with C#; Callback Interfaces, Delegates, and Events.

UNIT-IV
*Building c# applications:* Type Reflection, Late Binding, and Attribute-Based Programming; Object Serialization and the .NET Remoting Layer; Data Access with ADO.NET; XML Web Services.

UNIT-V
*Core CORBA / Java:* Two types of Client/Server invocations-static, dynamic. The static CORBA, first CORBA program, ORBlets with Applets, Dynamic CORBA-The portable count, the dynamic count multi count.

UNIT-VI
*Existential CORBA:* CORBA initialization protocol, CORBA activation services, CORBAIDL mapping CORBA java-to IDL mapping, the introspective CORBA/Java object.

UNIT-VII
*Java Bean Component Model:* Events, properties, persistency, Introspection of beans, CORBA Beans.

UNIT-VIII
*EJBs and CORBA:* Object transaction monitors CORBA OTM’s, EJB and CORBA OTM’s, EJB container frame work, Session and Entity Beans, The EJB client/server development Process The EJB container protocol, support for transaction EJB packaging EJB design Guidelines.

TEXT BOOKS:

REFERENCES:
UNIT - I
Introduction: Purpose of testing, Dichotomies, Model for testing, consequences of bugs, taxonomy for bugs

UNIT - II
Flow Graphs and Path testing: Basics concepts of path testing, predicates, path predicates and achievable paths, path sensitizing, path instrumentation, application of path testing.

UNIT - III
Transaction Flow Testing: Transaction flows, transaction flow testing techniques.
Dataflow testing: Basics of dataflow testing, strategies in dataflow testing, application of dataflow testing.

UNIT - IV
Domain Testing: Domains and paths, Nice and ugly domains, domain testing, domains and interfaces testing, domain and interface testing, domains and testability.

UNIT - V
Paths-Path products and Regular expressions: Path products and path expression, reduction procedure, applications, regular expressions and flow anomaly detection.
Logic Based Testing: Overview, decision tables, path expressions, kv charts, specifications.

UNIT - VI
State- State Graphs and Transition testing: State graphs, good and bad state graphs, state testing, Testability tips.

UNIT - VII
Metrics and Complexity: Metrics Objectives, Linguistic Metrics, structural Metrics, Hybrid metrics.
Graph Matrices and Application: Motivational overview, matrix of graph, relations, power of a matrix, node reduction algorithm, building tools.

UNIT - VIII

TEXT BOOKS:

**REFERENCES:**

**10MC50108: CLOUD COMPUTING (ELECTIVE –IV)**

**UNIT-I**
**Introduction to Virtualization:** Objectives of virtualization, history of virtualization, benefits of virtualized technology, the virtual service desk, what can be virtualized, related forms of computing, cloud computing, software as a service – SaaS, grid computing, utility computing, virtualization processes.

**UNIT-II**
**Virtualization Technologies-I:** ubuntu (server edition), altiris, windows, server, software virtualization, vmware, intel virtualization, red hat virtualization, softgrid application, Linux virtualization, desktop, virtualization, hardware virtualization, resource virtualization, processor virtualization, application virtualization.

**UNIT-III**
**Virtualization Technologies-II:** Storage virtualization, virtualization density, para-virtualization, OS virtualization, virtualization software, data storage virtualization, Intel virtualization technology, thininstall virtualization suite, net framework virtualization, windows virtualization on fedora, storage virtualization technologies, virtualization level, security monitoring and virtualization, oracle virtualization.

**UNIT-IV**
**Virtualization and Storage Management:** The heart of cloud computing - virtualization, defining virtualization, why virtualize, what can be virtualized, where does virtualization happen, how does virtualization happen, on the road to storage virtualization, improving availability using virtualization, improving performance through virtualization, improving capacity through virtualization, business value for virtualization.

**UNIT-V**
**Introduction to Cloud Computing:** Cloud Introduction and overview- Components, Infrastructure and Services, Why Use Cloud Computing, Benefits and Limitations, Cloud Application Architectures, Cloud Infrastructure Models, Cloud Computing Technology- Hardware & Software Infrastructure
UNIT-VI

UNIT-VII

UNIT-VIII
Disaster Recovery: Disaster Recovery Planning, Disasters in the Cloud, Disaster Management. Scaling a Cloud Infrastructure- Capacity Planning, Cloud Scale.
Case Studies: Amazon S3, Google APP Engine, IBM Clouds, Oracle OBIEE

TEXT BOOKS:

REFERENCE BOOKS:

10MC50112: MIDDLEWARE TECHNOLOGIES AND UML LAB

RMI PROGRAMMING

Week-1
1. Communication: Create a server that accepts the request from client and client displays the server system information.
2. File transfer: Create a server that asks for a password, then opens a file and sends the file over the network connection. Create a client that connects to this server, gives the appropriate password, then captures and saves the file.

Week-2
3. Calculator: Create a remote server that implements a calculator with basic functionalities like addition, subtraction, division, multiplication and client, which uses the remote calculator.

4. Stock market: Create a remote stock server that accepts the company name and gives the share value. Stock client that retrieves the company share value and displays by giving the company name.

**Week-3**

5. Phone book server: Create a remote phone book server that maintains names and phone numbers. Phone book client should provide a user interface that allows the user to scroll through entries, add a new entry, modify an existing entry and delete an existing entry. The client and the server should provide proper error handling.

**.NET Programming and UML**

**Week-4**

6. Working with callbacks and delegates in C# : Demonstrates the use of delegates, callbacks, and synchronous and asynchronous method invocation, including how Microsoft .NET Framework classes provide explicit asynchronous support using the BeginXXXX and EndXXXX naming conventions and how you can make use of this support in your own code.

**Week-5**

7. Code access security with C# : Demonstrates the use of .NET Framework Code Access Security, in which code can have permissions independent of the person executing the code.

**Week-6**


**Week-7**

9. Creating a Windows Service with C# : Demonstrates how to create a Microsoft Windows Service that uses a File System Watcher object to monitor a specific directory for changes in files.

**Week-8**

10. Read and Write Images to a SQL Server Database with C# : Demonstrates how to upload images into SQL Server by using standard HTML upload methods and then insert each image as a byte array into SQL Server.

**Week-9**

11. Interacting with a Windows Service with C# : Develop a sample application that launches a Windows Form to allow the user to interact and manipulate the IIS Admin
service on the local machine. The application should work by placing an icon in the System Tray.

**Week-10**

12. Construct various UML Diagrams for a ATM Application.

13. Partitioning an Application into Multiple Assemblies with C#: Understand why it can be beneficial to create separate modules for an application download, and then demonstrate how to do so with C#.

**Week-11**

14. Using System Printing in C# Applications: Develop a sample application that shows how to print a formatted report from sample data stored in an XML file using the PrintDocument class in the System.Drawing.Printing namespace. Also illustrates the user selection of a destination printer and multiple print fonts.

**Week-12**

15. Draw all the UML Diagrams for an Library Management System.

16. Using Reflection in C#: Demonstrate how to gather information on various types included in any assembly by using the System.Reflection namespace and some main .NET base classes.

**Week-13**

17. Sending Mail with SMTP Mail and C#: Uses a simple Web form to demonstrate how to use the SMTP Mail class in the .NET Framework.

18. Perform String Manipulation with the String Builder and String Classes and C#: Demonstrates some basic string manipulation using both the String Builder and String classes.

**Week-14**

19. Application Configuration Using Configuration Files and the Registry Using C#: A sample application that demonstrates methods of storing application settings by making use of both the system registry and application configuration files. Implements a custom configuration section to show how you can tailor these files to the specific needs of a particular application.

20. Using the System.Net.WebClient to Retrieve or Upload Data with C#: Demonstrate how to create a Windows Form that can use HTTP to download and save a resource from a specified URI, upload a resource to a specified URI, or read and write data through a stream object.
**Week-15**

21. Web Services Security with C# : Examines how to use IIS to perform user authentication so that no changes to the Web Service are required in order to provide superior security.

**Week-16**

22. Reading and Writing XML Documents with the XmlTextReader and XmlTextWriter Class and C# : Demonstrate how to retrieve information from an existing XML document and how to create a new XML document.