

**KAKATIYA UNIVERSITY**  
**FACULTY OF SCIENCE**  
**B.Sc. (Computer Science)**  
**SEMESTER - V**  
**Programming in Java**

2017-18

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Theory	4 Hours/Week	4 Credit	Internal marks = 20
Practical	3 Hours/Week	1 Credit	External Marks = 80

**Unit - I**

Introduction: Java Essentials, JVM, Java Features, Creation and Execution of Programs, Data Types, Structure of Java Program, Type Casting, Conditional Statements, Loops, Classes, Objects, Class Declaration, Creating Objects.

**Unit - II**

Method Declaration and Invocation, Method Overloading, Constructors – Parameterized Constructors, Constructor Overloading, Cleaning-up unused Objects. Class Variables & Method-static Keyword, this Keyword, One-Dimensional Arrays, Two-Dimensional Arrays, Command-Line Arguments, Inner Class.

Inheritance: Introduction, Types of Inheritance, extends Keyword, Examples, Method Overriding, super, final Keyword, Abstract classes, Interfaces, Abstract Classes Verses Interfaces.

Packages: Creating and Using Packages, Access Protection, Wrapper Classes, String Class, StringBuffer Class.

**Unit - III**

Exception: Introduction, Types, Exception Handling Techniques, User-Defined Exception.

Multithreading: Introduction, Main Thread and Creation of New Threads –By Inheriting the Thread Class or **Implementing the Runnable Interface**, Thread Lifecycle, Thread Priority and Synchronization.

Input/Output: Introduction, java.io Package, File Streams, FileInputStream Class, FileOutputStream Class, Scanner Class, BufferedInputStream Class, BufferedOutputStream Class, RandomAccessFile Class.

**Unit - IV**

Applets: Introduction, Example, Life Cycle, Applet Class, Common Methods Used in Displaying the Output (Graphics Class).

Event Handling: Introduction, **Types of Events**, Example.

AWT: Introduction, Components, Containers, Button, Label, Checkbox, Radio Buttons, Container Class, Layouts.

Swings: Introduction, Differences between Swing and AWT, JFrame, JApplet, JPanel, Components in Swings, Layout Managers, JTable.

**Text Book:**

1. Sachin Malhotra, Saurabh Choudhary, Programming in Java (2e)

**References:**

1. Bruce Eckel, Thinking in Java (4e)
2. Herbert Schildt, Java: The Complete Reference (9e)
3. Y. Daniel Liang, Introduction to Java Programming (10e)
4. Paul Deitel, Harvey Deitel, Java: How To Program (10e)
5. Cay S. Horstmann, Core Java Volume I –Fundamentals (10e)

Department of Computer Science, KU

With Effect from the Academic Year 2019-2020

# Visual Programming.

2018-19

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Sixteen Week Lesson Plan	Week	Topics Covered
	1	<b>Introduction to Visual Programming</b> <ul style="list-style-type: none"><li>* Different type of Visual Programming</li><li>* <b>Graphical User Interface</b></li><li>* The need of Visual Programming</li><li>* Rapid Application Development (RAD) Tools</li><li>* Advantages of Visual Programming</li><li>* Disadvantages of Visual Programming</li></ul>
	2	<b>Introduction to .NET</b> <ul style="list-style-type: none"><li>* Discuss the transformation in computing, internet and application development</li><li>* Identify the need for .NET</li><li>* Explain the role of CLR and Intermediate Language</li><li>* Describe the core components of Microsoft .NET</li></ul>
	3	<b>Introduction to Visual Studio .NET</b> <ul style="list-style-type: none"><li>* Features of VS.Net</li><li>* Shared IDE</li><li>* Introduction to C++, C#, Vb.Net, HTML, Javascript VBscript and ASP.NET</li></ul>
	4	<b>Working with WinForms and Controls</b> <ul style="list-style-type: none"><li>* Introduction to Class Libraries</li><li>* Properties and Methods</li><li>* <b>Events and Event Handlers</b></li><li>* Winforms GUI</li><li>* Form (Properties, Methods and Events)</li><li>* Controls in Winform</li></ul>
	5	<b>Advanced User Interface Enhancement</b> <ul style="list-style-type: none"><li>* <b>Dialog Boxes</b></li><li>* <b>Types of Dialog Boxes</b></li><li>* Visual Effect in Winform</li></ul>
	6	<b>Error Handling in Winforms</b> <ul style="list-style-type: none"><li>* Exception</li><li>* Types of Errors</li><li>* Exception Classes</li><li>* Properties of Exceptions</li><li>* Handling Exceptions</li><li>* ErrorProvider Control</li></ul>
	7	<b>MDI Applications</b> <ul style="list-style-type: none"><li>* Single Document Interface</li><li>* Multiple Document Interface</li><li>* <b>Designing an MDI application</b></li><li>* Activating and Deactivating Windows</li></ul>
	8	<b>Introduction to ADO.Net Data Access Components</b> <ul style="list-style-type: none"><li>* ODBC</li><li>* OLE DB</li><li>* ADO</li></ul>

	<ul style="list-style-type: none"> <li>* ADO.NET</li> <li>* Benefits of ADO.NET</li> <li>* ADO.Net Architecture</li> <li>* Components of ADO.Net</li> <li>* DataSet</li> <li>* DataTable</li> <li>* DataView</li> <li>* Connection Object</li> <li>* Command Object</li> </ul>
0	<b>MID TERMS</b>
10	<b>Introduction to Web Applications and ASP.NET</b> <ul style="list-style-type: none"> <li>* Describe Web applications</li> <li>* Describe the Web application development cycle</li> <li>* Discuss Active Server Pages</li> <li>* Enumerate the features of ASP.NET</li> <li>* Enumerate the features of ASP.NET 2.0</li> </ul>
11	<b>ASP.NET and HTTP</b> <ul style="list-style-type: none"> <li>* Request/Response Programming</li> <li>* HttpRequest Class</li> <li>* HTTP Collections</li> <li>* HttpResponse Class</li> <li>* Redirection</li> <li>* HttpUtility Class</li> </ul>
12	<b>Web Applications and Web Services Using Visual Studio</b> <ul style="list-style-type: none"> <li>* Using Visual Web Developer</li> <li>* Visual Studio Forms Designer</li> <li>* Using Components</li> <li>* Shadow Copying</li> <li>* Using the Global.asax File</li> <li>* Data Binding</li> </ul>
13	<b>State Management and Web Applications</b> <ul style="list-style-type: none"> <li>* Session State</li> <li>* Application State</li> <li>* Multithreading Issues</li> <li>* Cookies</li> </ul>
14	<b>Server Controls</b> <ul style="list-style-type: none"> <li>* HTML Server Controls</li> <li>* Web Forms Server Controls</li> <li>* Rich Controls</li> <li>* Validation Controls</li> <li>* User Controls</li> </ul>
15	<b>ASP.NET Configuration and Security Fundamentals</b> <ul style="list-style-type: none"> <li>* Configuration Overview</li> <li>* Authentication and Authorization</li> <li>* Forms Authentication</li> <li>* Windows Authentication</li> <li>* Security and ASP.NET</li> </ul>



Faculty of Commerce & Business Management, Kakatiya University, Warangal.

Paper DSC 303: RELATIONAL DATABASE MANAGEMENT SYSTEMS

(Only for B.Com. (Computer Applications))

Hours Per Week: 7 (3T-4P)

Credits: 5

Exam Hours: 1 1/2

Marks: 50U+35P+15I

Objective: to acquire basic conceptual background necessary to design and develop simple database system, Relational database mode, ER model and distributed databases, and to write good queries using a standard query language called SQL.

UNIT-I: BASIC CONCEPTS: Database Management System - File based system - Advantages of DBMS over file based system - Database Approach - Logical DBMS Architecture - Three level architecture of DBMS or logical DBMS architecture - Need for three level architecture - Physical DBMS Architecture - Database Administrator (DBA) Functions & Role - Data files indices and Data Dictionary -Types of Database. Relational and ER Models: Data Models - Relational Model - Domains - Tuple and Relation - Super keys - Candidate keys - Primary keys and foreign key for the Relations - Relational Constraints - Domain Constraint - Key Constraint - Integrity Constraint - Update Operations and Dealing with Constraint Violations - Relational Operations - Entity Relationship (ER) Model - Entities - Attributes - Relationships - More about Entities and Relationships - Defining Relationship for College Database - E-R Diagram - Conversion of E-R Diagram to Relational Database.

UNIT-II: DATABASE INTEGRITY AND NORMALISATION: Relational Database Integrity - The Keys - Referential Integrity - Entity Integrity - Redundancy and Associated Problems - Single Valued Dependencies - Normalisation - Rules of Data Normalisation - The First Normal Form -The Second Normal Form - The Third Normal Form - Boyce Codd Normal Form - Attribute Preservation - Lossless-join Decomposition - Dependency Preservation. File Organisation : Physical Database Design Issues - Storage of Database on Hard Disks - File Organisation and Its Types - Heap files (Unordered files) - Sequential File Organisation - Indexed (Indexed Sequential) File Organisation - Hashed File Organisation - Types of Indexes - Index and Tree Structure - Multi-key File Organisation - Need for Multiple Access Paths - Multi-list File Organisation - Inverted File Organisation.

UNIT-III: STRUCTURES QUERY LANGUAGE (SQL): Meaning-SQL commands - Data Definition Language - Data Manipulation Language - Data Control Language - Transaction Control Language - Queries using Order by - Where - Group by - Nested Queries. Joins - Views - Sequences - Indexes and Synonyms - Table Handling.

UNIT-IV: TRANSACTIONS AND CONCURRENCY MANAGEMENT: Transactions - Concurrent Transactions - Locking Protocol - Serializable Schedules - Locks Two Phase Locking (2PL) - Deadlock and its Prevention - Optimistic Concurrency Control. Database Recovery and Security: Database Recovery meaning - Kinds of failures - failure controlling methods - Database errors - Backup & Recovery Technique - Security & Integrity - Database Security - Authorization.

UNIT-V: DISTRIBUTED AND CLIENT SERVER DATABASES: Need for Distributed Database Systems - Structure of Distributed Database - Advantages and Disadvantages of DDBMS - Advantages of Data Distribution - Disadvantages of Data Distribution - Data Replication - Data Fragmentation. Client Server Databases: Emergence of Client Server Architecture - Need for Client Server Computing - Structure of Client Server Systems & its advantages.

ADVANCED TOPICS: Overview: Parallel Database - Multimedia Database - Mobile Database - Web Database - Multidimensional Database. Data Warehouse - OLTP Vs OLAP - NoSQL Database. LAB: SQL QUERIES BASED ON VARIOUS COMMANDS.

SUGGESTED READINGS: 1) Database Systems: R.Elmasri & S.B. Navathe, Pearson.; 2) Introduction to Database Management System: ISRD Group, McGraw Hill.; 3) Database Management System: R.Ramakrishnan & J.Genrke, McGrawHill.; 4) Modern Database Management: J.A.Hoffer, V.Ramesh & H.Topi, Pearson.; 5) Database System Concepts: Silberschatz, Korth & Sudarshan, McGrawHill.; 6) Simplified Approach to DBMS: Parteek Bhalia, Kalyani Publishers

**Kakatiya University, Warangal**  
**Faculty of Commerce & Business Management,**

**B.Com. III Semester - Paper SEC1 (a): PRINCIPLES OF INSURANCE**

**Objectives:** To make Students to learn Principles of Insurance.

**UNIT I: RISK MANAGEMENT AND INSURANCE:**

Risk Management - Types of Risks - Actual and Consequential Losses - Management of Risks - Different Classes of Insurance - **Importance of Insurance** - Management of Risk by Individuals and Insurers - Fixing of Premiums - Reinsurance - Role of Insurance in Economic Development and Social Security - Constituents of Insurance Market - Operations of Insurance Companies - Operations of Intermediaries - Specialist Insurance Companies - Role of Regulators - Common and specific terms in Life and Non-Life Insurance - Understanding Insurance Customers - Customer Behavior at Purchase Point - Customer Behavior when Claim Occurs - Importance of Ethical Behavior







**UNIT II: INSURANCE CONTRACT AND INSURANCE PRODUCTS:**

Insurance Contract Terms - Principles of Insurance: Principle of Insurable Interest, Principle of Indemnity, Principle of Subrogation, Principle of Contribution, Relevant Information Disclosure, Principle of utmost Good Faith, Relevance of Proximate Cause - **Life Insurance Products: Risk of Dying Early - Risk of Living too Long - Products offered - Term Plans - Pure Endowment Plans - Combinations of Plans - Traditional Products - Linked Policies** - Features of Annuities and Group Policies - General Insurance Products: Risks faced by Owner of Assets - Exposure to Perils - Features of Products Covering Fire and Allied Perils - Products covering Marine and Transit Risks - Products covering Financial Losses due to Accidents - Products covering Financial Losses due to Hospitalization - Products Covering Miscellaneous Risks

**SUGGESTED READINGS:**

1. Principles of Insurance : A Publication of the Insurance Institute of India
2. Principles of Insurance : Telugu Academy Hyderabad
3. Guide to Risk Management : Sagar Sanyal
4. Principles of Insurance : Dr V Padmavathi Dr V Jayalakshmi - PBP
5. Insurance and Risk Management: P.k. Gupta
6. Insurance Theory and Practice : Tripathi PHI
7. Principles of Insurance Management: Neelam C Gulati, Excel Books

**Suggested Websites:** 1) [www.irda.gov.in](http://www.irda.gov.in) 2) [www.policyholder.gov.in](http://www.policyholder.gov.in)  
3) [www.irdaindia.org.in](http://www.irdaindia.org.in)

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 Dr. Ramesh Babu	 Dr. D. Tirumala Chari	 Dr. C. Shashidhar Rao



**Kakatiya University, Warangal**

Faculty of Commerce &amp; Business Management,

**B.Com. IV Semester -Paper DSC 403: WEB TECHNOLOGIES**

(Only for B.Com (Computer Applications))

**Hours Per Week:** 7 (3T+4P)**Credits:** 5**Exam Hours:** 1 ½**Marks:** 50U+35P+15I**Objective:** To gain skills of usage of Web Technologies to design Web pages.**UNIT-I: INTRODUCTION:**

Art of creating a web site - Markup language (HTML) - Hypertext - Formatting text - Forms & formulating instructions & formulation elements - Commenting code - Anchors - Back grounds - Images - Hyperlinks - Lists - Tables - Frames - Web design principles.

**UNIT-II: AN OVER VIEW OF DYNAMIC WEB PAGES & DYNAMIC WEB PAGE:**

An over view of dynamic web pages and dynamic web page technologies: Introduction to Dynamic HTML programming - Cascading style sheets (CSS) - Basic syntax and structure - Events handling - Changing Text and Attributes - Dynamically changing style - Text Graphics and placements - Creating multimedia effects with filters and Transactions.

**UNIT-III: JAVA SCRIPT & EVENTS AND EVENT HANDLERS:**

**Java Script:** Introduction - Client side Java script - Server side Java script - Core features - Data types and variables - Operators - Expressions and statements - Functions - Objects - Array - Date and math related objects - Document object model - Event handling.

**Events And Event Handlers:** General information about Events - Event - OnAbort - OnClick - Ondblclick - OnDrag drop - Onerror - Onfocus - Onkey Press - Onkey Up - Onload - Onmouse Down - Onmouse Move - Onmouse Out - Onmouse Over - Onmove - Onrest - Onresize - Onselect - Onsubmit - Onunload.

**UNIT-IV: HYPER TEXT PRE PROCESSOR (PHP):**

**Introduction to PHP:** Declaring variables, data types, arrays, strings, operators, expressions, control structures, functions, Reading data from web form controls like text boxes, radio buttons, lists etc., Handling File Uploads. Connecting to database (MySQL as reference), executing simple queries, handling results, Handling sessions and cookies.

**File Handling in PHP:** File operations like opening, closing, reading, writing, appending, deleting etc. on text and binary files, listing directories.

**UNIT-V: EXTENSIBLE MARKUP LANGUAGE (XML) & JSP:**

**Extensible Markup Language (XML):** Introduction - Creating XML Documents - XML style Sheet - Hyperlinks in XML Document Object Model - XML Query Language.

**JSP:** Introduction to JSP: The Anatomy of a JSP Page, JSP Processing, Declarations, Directives, Expressions, Code Snippets, implicit objects, Using Beans in JSP Pages, Using Cookies and session for session tracking, connecting to database in JSP.

**LAB WQRK:** CREATING A WEBSITE WITH DYNAMIC FUNCTIONALITY USING CLIENT-SIDE AND SERVER SIDE SCRIPTING.

**SUGGESTED READINGS:**

1. Web Technology: Pradeep Kumar. HPH
2. Internet & World Wide Web How to Program: Deitel&Deitel, Pearson.
3. Web programming: Chris Bates.
4. HTML & XML. An Introduction NIT, PHH.
5. HTML for the WWW with XHTML & CSS: Wlizabeth Castro, Pearson

Prof. K. Jayaram Reddy

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2017-18

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**Kakatiya University, Warangal.**  
**Faculty of Commerce & Business Management,**  
**B.Com. V Semester - Paper DSE 503b: E-COMMERCE**  
**(Only for B.Com. (Computer Applications))**

**Hours Per Week:** 7 (3T+4P)

**Credits:** 5

**Exam Hours:** 1 ½

**Marks:** 50U+35P+15I

**Objective:** to acquire conceptual and application knowledge of ecommerce.

**UNIT-I: INTRODUCTION:**

E-Commerce: Meaning - Advantages & Limitations - E-Business: Traditional & Contemporary Model, Impact of E-Commerce on Business Models - Classification of E-Commerce: B2B - B2C - C2B - C2C - B2E - Applications of Ecommerce: E-Commerce Organization Applications - E-Marketing - E-Advertising - E-Banking - Mobile Commerce - E-Trading - E-Learning - E-Shopping.

**UNIT-II: FRAMEWORK OF E-COMMERCE:**

Framework of E-Commerce: Application Services - Interface Layers - Secure Messaging - Middleware Services and Network Infrastructure - Site Security - Firewalls & Network Security - TCP/IP - HTTP - Secured HTTP - SMTP - SSL.

Data Encryption: Cryptography - Encryption - Decryption - Public Key - Private Key - Digital Signatures - Digital Certificates.

**UNIT-III: CONSUMER ORIENTED E-COMMERCE APPLICATIONS:**

Introduction - Mercantile Process Model: Consumers Perspective and Merchant's Perspective - Electronic Payment Systems: Legal Issues & Digital Currency - E-Cash & E-Cheque - Electronic Fund Transfer (EFT) - Advantages and Risks - Digital Token-Based E-Payment System - Smart Cards.

**UNIT-IV: ELECTRONIC DATA INTERCHANGE:**

Introduction - EDI Standards - Types of EDI - EDI Applications in Business - Legal - Security and Privacy issues if EDI - EDI and E-Commerce - EDI Software Implementation.

**UNIT-V: E-MARKETING TECHNIQUES:**

Introduction - New Age of Information - Based Marketing - Influence on Marketing - Search Engines & Directory Services - Charting the On-Line Marketing Process - Chain Letters - Applications of 5P's (Product, Price, Place, Promotion, People) E-Advertisement - Virtual Reality & Consumer Experience - Role of Digital Marketing.

**Lab work:** Using Microsoft Front Page Editor and HTML in Designing a Static Webpage/Website.

**SUGGESTED READINGS:**

1. Frontiers of Electronic Commerce: Ravi Kalakota, Andrew B Whinston, Pearson
2. E-Commerce: Tulasi Ram Kandula, HPH.
3. Electronic Commerce, A Managers' Guide: Ravi Kalakota, Andrew B Whinston
4. E-Commerce & Computerized Accounting: Rajinder Singh, Er. Kaisar Rasheed, Kalyani
5. E-Commerce & Mobile Commerce Technologies: Pandey, Saurabh Shukla, S. Chand

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2019-20

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**Kakatiya University, Warangal.**  
**Faculty of Commerce & Business Management,**  
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4. E-Commerce & Computerized Accounting: Rajinder Singh, Er. Kaiser Rasheed, Kalyani
5. E-Commerce & Mobile Commerce Technologies: Pandey, Saurabh Shukla, S. Chand

*(Faint signatures and names of faculty members are visible at the bottom of the page, including Prof. P. Narasimha Murthy, Prof. K. Ramesh Babu, and others.)*