

Semester Fourth

ADVANCE WEB DEVELOPMENT

BMCI-401

SECTION-A

Introduction to ASP.NET:

.NET Framework (CLR, CLI, BCL), ASP.NET Basics, ASP.NET Page Structure, Page Life Cycle.

Controls:

HTML Server Controls, Web Server Controls, Web User Controls, Validation Controls, Custom Web Controls.

SECTION-B

State Management:

View State, Control State, Hidden Fields, Cookies, Query Strings, Application State, Session State, Profile Properties, Master Pages, Themes, Site Navigation.

Introduction to ADO.NET, Data Binding, Importing the SqlClient Namespace, Defining the Database Connection, Managing Content Using Grid View and Details View.

SECTION-C

Security and User Authentication:

Basic Security Guidelines, Securing ASP.NET Applications, ASP.NET Memberships and Roles.

Working with Files and Email:

Writing and Reading Text Files, Uploading Files, Sending Email with ASP.NET, Introduction to Web Services, Ajax, Silverlight.

SECTION-D

Introduction to Dreamweaver:

Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.

Purchasing a Domain Name & Web Space:

Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server.

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PROGRAMMING IN JAVA

BSBC502

SECTION-A

FUNDAMENTALS OF OBJECT-ORIENTED PROGRAMMING: - Introduction; Object-Oriented Paradigm; Basic Concepts of Object-Oriented Programming Benefits of OOP; Applications of OOP.

JAVA EVOLUTION: - Java History; Java Features; How Java Differs from C and C++; Java and Internet, Java and World Wide Web, Web Browsers; Hardware and Software Requirements; Java Support Systems, Java Environment

OVERVIEW OF JAVA LANGUAGE: - Introduction; Simple Java Program; Comments in java; An application with Two Classes; Java Program Structure; Java Tokens; Java Statements; Implementing a Java Program; Java Virtual Machine; Command Line Arguments; Programming Style.

CONSTANTS, VARIABLES AND DATA TYPES: - Introduction; Constants; Variables; Data Types; Variables, Constants, Standard Default Values.

OPERATORS AND EXPRESSIONS: - Introduction to Operators, Expressions; Operator Precedence; Mathematical Functions.

DECISION MAKING, BRANCHING AND LOOPING: - Decision making and Branching Statements, Looping Statements, Labeled loops, Jumping Statements

SECTION-B

CLASSES, OBJECTS AND METHODS: - Introduction; Defining a Class; Adding Variables; Adding Variables; Adding Methods; Creating Objects; Accessing Class Members; Constructors; Methods Overloading; Static Members; Nesting of Methods; Inheritance: Extending a Class; Overriding Methods; Final Variables and Methods; Final Classes; Finalizer Methods; Abstract Methods and Classes; Visibility Control.

ARRAYS, STRINGS AND VECTORS: - Arrays; Jagged Arrays; Strings; String functions; Vectors; Wrapper Classes.

INTERFACES: Introduction; Defining Interfaces; Extending Interfaces; Implementing Interfaces; Accessing Interface Variables, Implementing Multiple Inheritance using Interfaces.

PACKAGES: Introduction; System Packages; Using System Packages; Naming Conventions; Creating Packages; Accessing a Package; Using a Package; Adding a Class to a Package; Hiding Classes.

SECTION-C

MANAGING ERRORS AND EXCEPTIONS: - Introduction; Types of Errors; Exceptions; Exception Handling using Try, Catch and Finally block: Throwing Our Own Exceptions; Using Exceptions for Debugging.

APPLET PROGRAMMING: - Introduction; How Applets Differ from Applications; Applet Life Cycle; Creating an Executable Applet; Passing Parameters to Applets; Aligning the Display; More about HTML Tags; Displaying Numerical Values; Getting Input from the User.

GRAPHICS PROGRAMMING: - Introduction; The Graphics Class; Lines and Rectangles; Circles and Ellipses; Drawing Arcs; Drawing Polygons; Line Graphs; Using Control Loops in Applets; Drawing Bar

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Charts.

SECTION-D

JAVA AWT: - Java AWT package Containers; Basic User Interface components; Layouts.

EVENT HANDLING: - Event delegation Approach; ActionListener; AdjustmentListener, MouseListener; MouseMotionListener; WindowListener; KeyListener; ItemListener

JAVA I/O HANDLING : I/O File Handling(Input Stream & Output Streams, File Input Stream & FileOutputStream, Data I/P and O/P Streams, File Class, Reader and Writer Streams, Random Access File).

MOBILE COMMERCE

BMCI402

SECTION-A

Introduction to Electronic Commerce, Potential benefits & limitations of E-Commerce, Traditional Commerce vs. E-Commerce vs M-Commerce, Different E-Commerce Models (B2B, B2C, C2C, P2P), E-Commerce applications, Social Networks, Auctions & Portals, Legal and Ethical issues in E-Commerce.

SECTION-B

Introduction to Electronic Data Interchange, Types of EDI, Benefits of EDI
Overview of Electronic Payment system, Types of Electronic payment schemes (Credit cards, Debit cards, Smart cards, Internet banking), Issues in Electronic payment systems
Web Based Marketing and Communications: Online Advertising, E-Mail Marketing, Online Catalogs, Social Marketing and Targeted Marketing, Techniques and Strategies

SECTION-C

Mobile commerce Introduction – Infrastructure of M-Commerce – Types Of Mobile Commerce Services – Technologies Of Wireless Business – Benefits And Limitations, Support, Mobile Marketing & Advertisement, Non- Internet Applications In M-Commerce – Wireless/Wired Commerce Comparisons.

Mobile commerce: Technology

A Framework For The Study Of Mobile Commerce – NTT Docomo's I-Mode – Wireless Devices For Mobile Commerce – Towards A Classification Framework For Mobile Location Based Services – Wireless Personal And Local Area Networks –The Impact Of Technology Advances On Strategy Formulation In Mobile Communications Networks.

SECTION-D

Mobile commerce: theory and applications

The Ecology Of Mobile Commerce – The Wireless Application Protocol – Mobile Business Services – Mobile Portal – Factors Influencing The Adoption of Mobile Gaming Services – Mobile Data Technologies And Small Business Adoption And Diffusion – E-commerce in The Automotive Industry – Location- Based Services: Criteria For Adoption And Solution Deployment – The Role of Mobile Advertising In Building A Brand – M-commerce Business Models

Business- to- business Mobile Commerce

Enterprise Enablement - Email and Messaging - Field Force Automation (Insurance, Real Estate, Maintenance, Healthcare) – Field Sales Support (Content Access, Inventory) – Asset Tracking and Maintenance/Management – Remote IT Support – Customer Retention (B2C Services, Financial, Special Deals) – Warehouse Automation – Security.

Linux Operating System

BMCI403

SECTION-A

INTRODUCTION TO LINUX OPERATING SYSTEM:

Introduction and Types of Operating Systems, Linux Operating System, Features, Architecture Of Linux OS and Shell Interface, Linux System Calls, Linux Shared Memory Management, Device and Disk Management in Linux, Swap space and its management. File System and Directory Structure in Linux. Multi-Processing, load sharing and Multi-Threading in Linux, Types of Users in Linux, Capabilities of Super Users and equivalents.

INSTALLING LINUX AS A SERVER : Linux and Linux Distributions ;Major differences between various Operating Systems (on the basis of: Single Users vs Multiusers vs Network Users; Separation of the GUI and the Kernel; Domains; Active Directory;).

INSTALLING LINUX IN A SERVER CONFIGUARTION : Before Installation; Hardware; Server Design ;Dual-Booting Issues; Modes of Installation; Installing Fedora Linux; Creating a Boot Disk; Starting the Installation; GNOME AND KDE : The History of X Windows; The Downside; Enter GNOME; About GNOME ;Starting X Windows and GNOME; GNOME Basics; The GNOME Configuration Tool.

SECTION -B

INSTALLING SOFTWARE : The Fedora Package Manager; Installing a New Package using dpkg and RPM; Querying a Package; Uninstalling a Package using dpkg and RPM; Compiling Software; Getting and Unpacking the Package; Looking for Documentation; Configuring the Package; Compiling Your Package; Installing the Package, Driver Support for various devices in linux.

MANAGING USERS: Home Directories ;Passwords; Shells; Stratup Scripts; Mail; User Databases; The / etc /passwd File; The / etc / shadow File; The / etc /group File; User Management Tools; Command-Line User Management; User LinuxConf to Manipulate Users and Groups; SetUID and SetGID Programs

SECTION -C

THE COMMAND LINE : An Introduction to BASH, KORN, C, A Shell etc. ; BASH commands: Job Control; Environment Variables; Pipes; Redirection; Command-Line Shortcuts; Documentation Tools; The man Command; the text info System; File Listings; Owner ships and permissions; Listing Files; File and Directory Types; Change Ownership; Change Group; Change Mode ;

SECTION -D

BOOTING AND SHUTTING DOWN: LILO and GRUB; Configuring LILO; Additional LILO options; Adding a New Kernel to Boot ; Running LILO; The Steps of Booting; Enabling and disabling Services

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FILE SYSTEMS: The Makeup File Systems; Managing File Systems; Adding and Partitioning a Disk; Network File Systems; Quota Management; Init services

PRINTING : The Basic of lpd; Installing LPRng; Configuring /etc/printcap; The /ETC/lpd.perms File; Clients of lpd, Interfacing Printer through Operating System.

Software Engineering

BMCI404

SECTION A

Software: Characteristics, Components Applications, **Software Process Models:** Waterfall, Spiral, Prototyping, Fourth Generation Techniques, Concepts of Project Management, Role Of Metrics And Measurement.

SECTION B

S/W Project Planning: Objectives, **Decomposition Techniques:** S/W Sizing, Problem Based Estimation, Process Based Estimation, **Cost Estimation Models:** COCOMO Model, The S/W Equation, **System Analysis:** Principles Of Structured Analysis, Requirement Analysis, DFD, Entity Relationship Diagram, Data Dictionary.

S/W Design: Objectives, Principles, Concepts,

Design Methodologies: Data Design, Architecture Design, Procedural Design, Object – Oriented Concepts.

SECTION C

Testing Fundamentals: Objectives, Principles, Testability, **Test Case Design:** White Box & Black Box testing

Testing Strategies: Verification & Validation, Unit Testing, Integration Testing, Validation Testing, System Testing.

SECTION D

Advanced topics in Software Engineering: Reengineering: Reverse Engineering, Restructuring, Forward Engineering.

Computer Aided Software Engineering (CASE): Taxonomy of CASE tools.

Software Lab – VII (ADVANCE WEB DEVELOPMENT)

BMCI 405

Implementation of all the programs related to theory concepts studied in Web Technologies [BSBC 401]

- HTML Basics, HTML Elements (Tags)
- NET Framework (CLR, CLI, BCL), ASP.NET Basics
- Understanding Workspace Layout, Managing Websites, Creating a Website
- Using Dreamweaver Templates
- ADO.NET, Data Binding, Importing the SqlClient Namespace
- Database Connection

Software Lab – VIII (Programming In Java)

BSBC505

Internal Assessment-60 Marks

External Assessment-40 Marks

Implementation of all the programs related to theory concepts studied in Programming in Java Paper [BSBC 502].

1. Operators and Mathematical Functions.
2. Decision making, Branching and Looping Statements.
3. Classes, Objects and Methods.
4. Arrays, Strings and Vectors.
5. Interfaces.
6. Packages.
7. Exception handling.
8. Applet Programming.
9. AWT.
10. Event Handling.
11. I/O Handling.