

DEPARTMENT OF MCA
ADHIYAMAAN COLLEGE OF ENGINEERING(AUTONOMOUS)
2019-2020

118CAE09 – INTRODUCTION TO UNIX

Objectives:

- To familiarize students with the Linux environment
- To learn the fundamentals of shell scripting/programming
- To familiarize students with basic Linux administration

UNIT – I INTRODUCTION

9

Introduction – Computer System - UNIX Environment – Structure – Accessing UNIX – Common Commands – Other Commands - Basic Editors: Concepts – The vi Editor - Modes – Editor Commands.

UNIT – II FILE SYSTEMS

9

Filenames – File Types – Regular Files – Directories – File System Implementation – Operation Unique to Directories – Operation Unique to Files – Operation Common to Both – Security and File Permission – Users and Groups – Security Levels – Changing Permissions – User Masks – Changing Ownership and Group.

UNIT – III FILTERS

9

Filters and Pipes - Concatenating – Sorting – Translating Characters – Duplicate Lines – Character Count – Comparing Files. Communications: User commands – Electronic mail – Remote Access – File Transfer.

UNIT – IV C SHELL PROGRAMMING

9

Basic Scripts – Expressions – Decision Making Selections – Special Parameters – Argument Validation – Debugging Scripts – Arrays -Signals – Built-in Commands - Scripting Techniques – C Shell Features.

UNIT – V ADVANCED TOPICS

9

Using a Database: MySQL and PostgreSQL Database – Working with tables and scripts. Using the Web: The Lynx and cURL program – Networking with zsh. Using E-Mail: Linux E-Mail – Setting Up Server – Mailx – Mutt Program. Shell Scripts for Administrators: Monitoring System Statistics – Performing Backups.

Total No. of Periods : 45

Course Outcomes:

- Work Confidently in Unix/Linux environment.
- Write Shell Scripts to automate various tasks.
- Master the basics of Linux administration.


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REFERENCE BOOKS

1. Behrouz A. Forouzan, Richard F. Gilberg, "UNIX and Shell Programming: A Textbook", Seventh Indian Reprint, 2009, Cengage Learning.
2. Uresh Vahalia, "UNIX Internals – The New Frontiers", Pearson Education, 2012.
3. Sumitabha Das, "Unix Concepts and Applications, 4th Edition, Eleventh Reprint, Tata McGraw Hill, 2010.
4. Maurice J. Bach, "The Design of the UNIX Operating System", Indian Edition, PHI Learning Private Limited, 2011.
5. W. Richard Stevens and Stephen A. Rago, "Advanced Programming in the UNIX Environment", Second Ed., Pearson, 2011.



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118CAL05- UNIX LAB

Objectives:

- To introduce Basic Unix general purpose commands
- To Learn C Programming in Unix editor environment
- To learn Shell script and inter process communication concepts
- To learn file management and permission advance commands.
- To learn system calls, open, read, write, close, Fstat, and Lseek.

LIST OF EXPERIMENTS

1. Execution of various file/ directory handling commands.
2. Program using system calls, create, open, read, write, close, stat, Fstat and Lseek.
3. Program to implement inter process communication using pipes.
4. Program to implement inter process communication using message queue.
5. Program to implement inter process communication using shared memory.
6. Simple Shell script for basic arithmetic and logical operations.
7. Shell scripts to check various attributes of files and directories.
8. Shell scripts to perform various operations on given strings.
9. Write a shell script to delete all the temporary.
10. Write a shell script to search an element from an array using binary searching.

Total No. of Periods : 45

Course Outcomes:

- Identify the basic Unix general purpose commands
- Apply the change the ownership and file permissions using advance Unix commands
- Implement Shell scripts and inter process communication concepts.
- Use the system calls, open, read, write, close, Fstat, and Lseek.


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218CAT02 – INTERNET PROGRAMMING

Objectives :

- To understand the concepts and architecture of the World Wide Web.
- To understand and practice markup languages
- To understand and practice embedded dynamic scripting on client side Internet Programming
- To understand and practice web development techniques on client-side.

UNIT - I INTRODUCTION TO WWW 9

Internet Standards – Introduction to WWW – WWW Architecture – SMTP – POP3 – File Transfer Protocol - Overview of HTTP, HTTP request – response — Generation of dynamic web pages

UNIT - II UI DESIGN 9

Markup Language (HTML5): Basics of Html -Syntax and tags of Html- Introduction to HTML5 -Semantic/Structural Elements -HTML5 style Guide and Coding Convention– Html Svg and Canvas – Html API's - Audio & Video - Drag/Drop - Local Storage - Web socket API- Debugging and validating Html.

UNIT - III OVERVIEW OF **CASCADING STYLE SHEET (CSS3)** 9

The need for CSS – Basic syntax and structure Inline Styles – Embedding Style Sheets - Linking External Style Sheets - Introduction to CSS3 – Backgrounds - Manipulating text - Margins and Padding - Positioning using CSS - Responsive Web Design - Introduction to LESS/SASS

UNIT – IV OVERVIEW OF **JAVASCRIPT** 9

Introduction - Core features - Data types and Variables - Operators, Expressions, and Statements Functions - Objects - Array, Date and Math Related Objects - Document Object Model - Event Handling - Controlling Windows & Frames and Documents - Form validations.

UNIT - V **ADVANCED FEATURES OF JAVASCRIPT** 9

Browser Management and Media Management – Classes – Constructors – Object-Oriented Techniques in JavaScript – Object constructor and Prototyping - Sub classes and Super classes – Introduction to JSON – JSON Structure –Introduction to jQuery –Introduction to AJAX- Bootstrap - Bootstrap components.

Total No. of Periods : 45

Course Outcomes :

- Create a basic website using HTML and Cascading Style Sheets.
- Design and implement dynamic web page with validation using JavaScript objects and by applying different event handling mechanisms.
- Design rich client presentation using AJAX.
- Design and implement simple web page in PHP, and to present data in XML format.
- Design front end web page and connect to the back end databases.

REFERENCE BOOKS

1. David Flanagan, "JavaScript: The Definitive Guide, Sixth Edition", O'Reilly Media, 2014
2. Harvey & Paul Deitel & Associates, Harvey Deitel and Abbey Deitel, "Internet and World Wide Web - How To Program", Fifth Edition, Pearson Education, 2011
3. James Lee, Brent Ware, "Open Source Development with LAMP: Using Linux, Apache, MySQL, Perl, and PHP" Addison Wesley, Pearson 2009
4. Thomas A. Powell, "HTML & CSS: The Complete Reference", Fifth Edition, 2010
5. Thomas A Powell, Fritz Schneider, "JavaScript: The Complete Reference", Third Edition, Tata McGraw Hill, 2013



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218CAT03 – OBJECT ORIENTED PROGRAMMING AND DATA STRUCTURES

Objectives :

- Understand and apply linear data structures-List, Stack and Queue.
- Understand the graph algorithms.
- Learn different algorithms analysis techniques.
- Apply data structures and algorithms in real time applications.
- Able to analyze the efficiency of algorithm.

UNIT – I INTRODUCTION TO OOPs 9

Features of OOPs - Classes – Constructors and Destructors – Static Member – this Pointer – Function Overloading – Constructor Overloading – Default Argument

UNIT – II OVERLOADING AND TEMPLATES 9

Overloading Operators – Unary Operator Overloading – Binary Operator Overloading – Function Selection – Pointer Operators. Defining Template – Function Templates – Class Templates – Overload and Template.

UNIT – III INHERITANCE 9

Derived Class – Typing Conversions and Visibility – Code Reuse – Virtual Functions – Templates and Inheritance – File I/O – Exceptions – Handlers – Standard Exceptions - STL – Algorithms – Function Adaptors.

UNIT VI LINEAR DATA STRUCTURES 9

Introduction - Abstract Data Types (ADT) – Stack – Queue – Circular Queue - Double Ended Queue - Applications of stack - Evaluating Arithmetic Expressions - Other Applications - Applications of Queue - Linked Lists - Singly Linked List - Circularly Linked List - Doubly Linked lists – Applications of linked list – Polynomial Manipulation.

UNIT V NON-LINEAR TREE STRUCTURES 9

Binary Tree – expression trees – Binary tree traversals – applications of trees – Huffman Algorithm - Binary search tree - Balanced Trees - AVL Tree - B-Tree - Splay Trees –Heap operations- -Binomial Heaps - Fibonacci Heaps- Hash set.

Total No. of Periods : 45

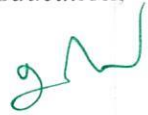
Course Outcomes :

- Describe, explain and use abstract data types including stacks, queues and lists
- Design and Implement Tree data structures and Sets
- Able to understand and implement nonlinear data structures - graphs.
- Able to understand various algorithm design and implementation.


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1. Anany Levitin "Introduction to the Design and Analysis of Algorithms" Pearson Education, 2015.
2. Gilles Brassard, "Fundamentals of Algorithms". Pearson Education 2015
3. Harsh Bhasin, "Algorithms Design and Analysis", Oxford University Press 2015
4. John R.Hubbard. "Data Structures with Java", Pearson Education, 2015
5. Stanley B.Lippman, Josee Lajoie and Barbara E.Moo, "C++ Primer", Pearson Education, Fifth Edition, 2013.



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218CAP06 - INTERNET PROGRAMMING LAB

Objectives :

- Learn about web design technology HTML with advanced version
- Learn about CSS support tools for the web design
- Understand about Java script
- Helps to work Jframes and Swing concepts.

LIST OF EXPERIMENTS

1. Create a web page with the following using HTML5
 - (i) To embed an image map in a web page
 - (ii) To fix the hot spots
 - (iii) Show all the related information when the hot spots are clicked.
2. Create a web page with all types of Cascading style sheets.
3. Implement Client Side Scripts for Validating Web Form Controls using JavaScript.
4. Designing Quiz Application Personal Information System/ Using JavaScript
5. Write a JavaScript for Loan Calculation.
6. Develop and demonstrate a HTML file that includes JavaScript that uses functions for the following problems:
 - a) Parameter: A string Output: The position in the string of the left-most vowel
 - b) Parameter: A number Output: The number with its digits in the reverse order
7. Writing Java programs by making use of class, interface, package, etc for the following
 - a) Uses of 'this' keyword
 - b) Polymorphism
 - c) Creation of user specific packages
8. Reading and writing text files
9. Writing window based GUI applications using Swing such as Calculator application, Fahrenheit to Centigrade conversion etc.
10. Design GUI Application Using JFrame Class.

Total No. of Periods: 45

Course Outcomes :

- Excel in web design with trending technologies HTML
- CSS helps to Innovate in web technologies
- Outclass for Product based application using Core java and Swing concepts
- Outclass the Java script code depends on client need.
- Excel in GUI components


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218CAE02 - MANAGEMENT INFORMATION SYSTEMS

Objectives :

- Increasing impact of information processing for organizational decision making.
- Dependency of services sector including banking, financial organization, health care, entertainment, tourism and travel, education and numerous others on information.
- Changing employment scene world over, shifting base from manual agricultural to machine-based manufacturing and other industry related jobs.
- Information revolution and the overall development scenario.

UNIT – I ORGANIZATIONS AND INFORMATION SYSTEMS 9

Perspectives on Information Systems – Dimensions Information Systems – Major Types of Systems in organization – Systems from a functional perspective – Organization and Information System – Common features of Organizations – Managements and strategies – Information Business Strategies.

UNIT – II IT INFRASTRUCTURES AND PLATFORMS 9

IT Infrastructure – Infrastructure Components – Contemporary Hardware Platforms – Contemporary software Platform Trends – Organizing data in a Traditional File Environment Redesigning the organization with Information Systems.

UNIT – III MANAGING KNOWLEDGE IN DIGITAL FIRM 9

Important dimension of Knowledge – Knowledge Work System – Intelligence Technique – Business process Reengineering and process Improvement – Total Quality Management – Object oriented Methodologies.

UNIT – IV DECISION SUPPORT SYSTEMS AND EXPERT SYSTEMS 9

Manager's view – Important Features of Decision Support Systems – Components of Decision Support Systems – The Tools of Decision Support Systems – Life Cycle of DSS – Benefits of DSS – Rule Based System – Frame Base System.

UNIT – V ENTERPRISE MANAGEMENT INFORMATION SYSTEM PLANNING 9

Enterprise Management Systems(EMS) – ERP Systems – ERP Modules – Technology of Information Systems – Data Procession - Information System Planning Strategies – Critical Success factor – Business System Planning – Organizing the Information System Plan – Technology planning.

Total No. of Periods: 45


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Course Outcomes :

- Describe the major technological, organizational, behavioral, and ethical issues facing today's information systems professional.
- Describe IT strategy formulation and explain its alignment with organizational strategy.
- Conduct research on and describe, several current and merging technologies and explain their impact on corporate performance.
- Explain the difference between supporting a business with technology and driving a business with technology.
- Describe ways in which technology can provide an organization with competitive advantages.
- Describe how technology facilitates and enhances both operational and strategic decision making in an organization.

REFERENCES

1. Kenneth C.Laudon, Jane P.Laudon, Management Information Systems managing the Digital Firm, 9th Edition, Pearson/PHI 2007. (Unit I,II,III)
2. Robert Schultheis, Mary Sumner, Management Information Systems The Managers View, McGraw-Hill 4ed, 2008. (Unit IV)
3. S.A Kelkar, Management Information Systems, Prentice Hall 2nd Edition, 2003.
4. W.S Jawadekar, Management Information Systems, 4th Ed, TMH, 2009. (Unit V).
5. Rafael L alcami ,Carlos D Caranana, Introduction to Management Information Systems, Servei de Communication Publications 2nd Edition, 2013.


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218CAL02 - DATA STRUCTURES LAB USING C++

Objectives :

- To develop skills in design and implementation of data structures.
- To learn and implement linear, non linear and tree data structures.
- To learn Set ADT and Graph data structures and its applications.
- To study, implement and analyze the different sorting techniques.

LIST OF EXPERIMENTS

1. Program to practice Class creation, method definition and method invocation
2. Implement Constructor concept through simple programs
3. Practice the concept of function overloading
4. Write a C++ program to demonstrate unary operator overloading and binary operator overloading.
5. Practice function template with simple example.
6. Array implementation of stack
7. Singly Linked List operations
8. Linked list implementation of Queue
9. Polynomial Addition using Linked List
10. Binary Search tree operations

Total No. of Periods: 45

Course Outcomes :

- Work with basic data structures that are suitable for the problems to be solved efficiently.
- Design and implement linear, tree, and graph structures and its applications
- Design various sorting techniques, its algorithm design and analysis



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318CAT01 – JAVA PROGRAMMING

Objectives :

- To provide an overview of working principles of internet, web related functionalities
- To understand and apply the fundamentals core java, packages, database connectivity for computing
- To enhance the knowledge to server side programming.
- To Understand the OOPS concept & how to apply in programming.

UNIT - I JAVA FUNDAMENTALS AND EXCEPTIONS

9

Class fundamentals-Declaring Objects-Overloading methods-Inheritance basic-Multilevel Hierarchy-Dynamic method dispatch-Packages-Packages and Member access-Interfaces-Default Interface Methods-Static method Interface-Exception handling-Exception Types-Multiple catch clauses-Java Built-in Exceptions.

UNIT - II I/O & MULTITHREADING CONCEPTS

9

I/O Basics-Reading Console Input-Writing Console Output-I/O Classes and Interfaces-The Byte Streams-Primitive type Wrappers-Process system -Runtime Memory management-Thread-Thread group and Runnable-Runnable Interface-The Java Thread Model-Main Thread-Creating a Thread.

UNIT - III AWT & EVENT HANDLING

9

AWT Classes-Windows Fundamentals-Working with Frame Windows-Working with Font-AWT Control Fundamentals-AWT Components-Understanding Layout Managers-Menu Bars and Menus-Event Handling Mechanisms-Delegation Event Model-Event classes-Key Event class-Event Listener Interfaces.

UNIT - IV NETWORKING AND SQL PACAKAGES

9

Networking Basics-Networking Classes and Interface-InetAddress-Inet4 and Inet6 Address-TCP/IP Client Socket -URL Connections-Cookies-TCP/IP Server Socket-Java Database Connectivity-Introduction JDBC Drivers-JDBC connectivity with MySQL/Oracle-Prepared Statement & Result Set.

UNIT - V JAVA SERVLETS

9

The Life Cycle of a Servlet-Servlet Development Options-A Simple Servlet-Servlet API- Servlet Packages-Reading Servlet Parameters-Handling HTTP GET Request-Handling HTTP GET Request -Using Cookies-Session Tracking-Introduction Swing-Swing Is Built On AWT.

Total No. of Periods: 45

Course Outcomes :

- Implement Java programs
- Make use of hierarchy of Java classes to provide a solution to a given set of requirements found in the Java API
- Use the Java Swing.
- Design and implement server side programs using Servlets.


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1. Amritendu De, "Spring 4 and Hibernate 4: Agile Java Design and Development", McGraw-Hill Education, 2015
2. Herbert Schildt, The Complete Reference – Java 2, 11th Edition, Tata McGraw Hill, 2019.
3. Joyce Farrell, "Java Programming", Cengage Learning, Seventh Edition,
4. John Dean, Raymond Dean, "Introduction to Programming with JAVA – A Problem Solving Approach", Tata Mc Graw Hill, 2014.
6. Mahesh P. Matha, "Core Java A Comprehensive Study", Prentice Hall of India, 2011



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318CAT03 - C# & DOT NET PROGRAMMING

Objectives :

- Understand the foundations of CLR execution and learn the technologies of the .NET framework.
- Know the object oriented aspects of C#.
- Be aware of application development in .NET.

UNIT - I INTRODUCTION TO C#

9

Introducing C#: Evolution, characteristics and applications, Understanding .NET, Overview of C#. Literals, Variables, Data Types, Operators, Expressions.

UNIT - II DECISION MAKING STATEMENT

9

Decision Making and Branching, Decision Making and Looping, Methods, Arrays: One dimensional, Two dimensional and variable array size, Strings: String Manipulation and Regular Expression, Structures: Structures, structs with method, Nested structs Enumerations.

UNIT - III OBJECT ORIENTED ASPECTS OF C#

9

Classes, Objects, Inheritance, Polymorphism, Interfaces, Operator Overloading, Delegates, Events, Managing Console I/O Operations, Managing Errors and Exceptions, Multithreading.

UNIT - IV APPLICATION DEVELOPMENT ON .NET

9

Building Windows Applications, Managing Data with ADO.NET: ADO.NET Architecture, Making Connection, viewing data, manipulating data, Calling Stored Procedure, Working with disconnected data

UNIT - V WEB BASED APPLICATION DEVELOPMENT ON .NET

9

Programming Web Applications with Web Forms, Master pages, Programming Web Services, Case Study - Create and run some sample window applications

Total No. of Periods 45

Course Outcomes :

- Explain how C# fits into the .NET platform and analyze the basic structure of a C# application.
- Design and develop Develop programs using C# on .NET.
- Web based applications on .NET.

REFERENCES

1. E. Balagurusamy, "Programming in C#", 4th ed., Tata McGraw-Hill, 2011.
2. J. Liberty, "Programming C# 4.0 ", 4th ed., O'Reilly, 2010.
3. Herbert Schildt, "The Complete Reference: C#", Tata McGraw-Hill, 2012.
4. Robinson et al, "Professional C#", 4th ed., WroxPress, 2014.
5. Andrew Troelsen, "C# and the .NET Platform", 3 Ed, AI Press, 2003.
6. S. ThamaraiSelvi, R. Murugesan, "A Textbook on C#", Pearson Education, 2003.

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318CAP06 – JAVA PROGRAMMING LAB

Objectives:

- To learn Java and Enterprise Java intensively.
- To understand many advanced technologies of Java such as Multithreading, Streaming, Networking, Generic collections, RMI.
- To learn and use MVC architecture for application development.
- To learn and use web services and advanced frameworks for web application development

LIST OF EXPERIMENTS

1. Writing Java programs by making use of class, interface, and package.
2. Writing a Java program to **handle Exception**.
3. Construct a Java Application to handle threads.
4. Generate a Code for Reading and writing text files.
5. Design a Socket Programming in Java.
6. Design a Java program to handle Event (Applet/Swing).
7. Writing an RMI application to access a remote method.
8. **Establishing the JDBC Connection in Java to store few records.**
9. **Interfacing Java Servlet Program with JDBC Connection.**

Total No. of Periods: 45

Course Outcomes:

- Become an intermediate or advanced developer of Java.
- Write programs on advanced technologies of Java such as Streaming Generic collections.
- Implement Server Side Programming and dynamic software components.
- Design and Develop GUI based components.
- Design and implementation of interactive web sites.
- Create MVC applications using advanced frameworks.



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318CAE03 - ADVANCED DATABASE MANAGEMENT SYSTEMS

Objectives:

- Learn new ways to query and model data.
- Become familiar with the expanding role of database technology.
- Design and implement advanced queries using Structured Query Language
- To the design and implement Distributed Databases.

UNIT - I PARALLEL DATABASE

9

Database System Architectures: Centralized and Client-Server Architectures – Server System Architectures – Parallel Systems- Distributed Systems – Parallel Databases: I/O Parallelism – Inter and Intra Query Parallelism – Inter and Intra operation Parallelism – Design of Parallel Systems

UNIT - II DISTRIBUTED DATABASES AND OBJECT RELATIONAL DATABASES

9

Distributed Database Concepts - Distributed Data Storage – Distributed Transactions – Concurrency Control – Distributed Query Processing -Concepts for Object Databases: Object Identity – Object structure – Type Constructors – Encapsulation of Operations – Methods – Persistence – Type and Class Hierarchies – Inheritance – Complex Objects – Object Database Standards.

UNIT - III INTELLIGENT DATABASES

9

Intelligent database Active – Knowledge Representation – Traditional Databases Vs IDBs – Traditional DB – Database concepts and triggers - Temporal Database - Spatial Databases - Deductive databases – Introduction to Database security – Challenges of database security.

UNIT - IV DATA MODELS

9

Internet databases – Digital libraries – Mobile Transaction Models - - Information Retrieval-Data Warehousing architecture - Data Mining - Text Mining – Information retrieval-Indexing of Documents –Measuring Retrieval Effectiveness.

UNIT - V XML DATABASE

9

XML Databases: XML-Related Technologies-XML Schema- XML Query Languages- Storing XML in Databases-XML and SQL- Native XML Databases- Web Databases.

Total No. of Periods: 45

Course Outcomes:

- To understand the basic concepts regarding database, know about query processing and techniques involved in query optimization and understand the concepts of database transaction and related database facilities including concurrency control, backup and recovery.
- To understand the introductory concepts of some advanced topics in data management like distributed databases, data warehousing, deductive databases and be aware of some advanced databases like partial multimedia and mobile databases.
- To understand the difference between DBMS and advanced DBMS and use of advanced database concepts and become proficient in creating, deleting, updating and

318CAE07 - HUMAN RESOURCE MANAGEMENT

Objectives :

- The objective of the course is to equip students with knowledge, skill and competencies to manage people along with capital, material, information and knowledge asset in the organization
- In addition to providing a basic legal and conceptual framework for managers, the course will introduce the manager to practices and techniques for evaluating performance, structuring teams, coaching and mentoring people, and performing the wide range of other people related duties of a manager in today's increasingly complex workplace.
- The course will provide students logic and rationale to make fundamental choice about their own assumption and belief in dealing with people.

UNIT I INTRODUCTION TO HRM

9

Meaning, Scope, Definition and Objectives of HRM –Importance of human factor-Challenges-Inclusive growth and Affirmative action- Functions of HRM and Models of HRM - Activities and Challenges of HRM - Role of HR Manager - HRM as Linked to Environmental changes.

UNIT II HUMAN RESOURCE PLANNING & RECRUITMENT, SELECTION

9

HR Planning process - Job analysis, Job description & Job specification - Job Rotation, Job enlargement & Job enrichment - Job evaluation – RECRUITMENT: - Recruitment -Process & Methods of Recruitment, SELECTION: - Selection process - type of tests & types of interviews - Designing and conducting the effective interview - Induction and Placement.

UNIT III WAGE AND SALARY ADMINISTRATION & APPRAISING AND MANAGING PERFORMANCE

9

Principles and techniques of wage fixation - Incentive schemes and plans, Appraisal process, methods, and potential problems in performance evaluations, Traditional Modern methods - Potential Appraisal - Methods to improve performance - Career Planning and Development.

UNIT IV TRAINING AND EXECUTIVE DEVELOPMENT

9

Nature of Training – Methods of Training – Training Need Analysis- Training Design – Training Evaluation-Management Development –Succession Planning-Coaching.

UNIT V RECENT TRENDS IN HR

9

HR outsourcing - Managing Attrition and Retention - Collective Bargaining - Grievance Management - Quality of work life – HR Accounting and Audit – Whistle Blowing – Employee poaching - HRIS- Diversity of Workforce Programs.

Total No. of Periods: 45

Course Outcomes:

- Explain the importance of human resources and their effective management in organizations.
- Demonstrate a basic understanding of different tools used in forecasting and planning human resource needs.
- Analyse the key issues related to administering the human elements such as motivation, compensation, appraisal, career planning, diversity, ethics, and training.

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1. K.Aswathappa Human Resource Management TMH. 2017.
2. Dessler Human Resource Management. Pearson Education Limited. 2017
3. Luis R.Gomez-Mejia, David B.Balkin, Robert L Cardy. Managing Human Resource. PHI Learning. 2015 2. Bernadin. Human Resource Management. Tata Mcgraw Hill. 14th edition 2015
4. Scott Snell & George Bohlander Human Resource Management Thomson Learning 2009.
5. VSP Rao Human Resource Management -2016.
6. Raymond A. Noe John R. Hollenbeck Patrick M Wright Human Resource Management – Gaining a competitive advantage TMH 2007.



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LAB ELECTIVE – III

318CAL01 C# & DOT NET PROGRAMMING LAB

Objectives :

- Design, document, code and test small C# console and GUI applications.
- Design, document, code and unit test class libraries.
- Use an object browser and .NET documentation to examine C# and the .NET framework namespace contents.

LIST OF EXPERIMENTS

1. Programs using Branching, Looping.
2. Programs using Methods, Arrays, Strings.
3. Programs using Inheritance.
4. Programs using Delegates, Events, Errors and Exceptions.
5. Program to Build a Calculator Widget.
6. Development of Window Application using ADO.net
7. Design a web site with master page using ASP . Net.
8. Design a web page using web services.
9. Develop a window based applications and generate appropriate reports.
10. Development of Web Applications using Ajax tool kit.

Total No. of Periods: 45

Course Outcomes :

- The students able to create simple web applications and window applications.
- To learn fundamentals of window application programming and create a window application.
- To develop web applications and learn advanced features of C#.


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418CAT01 - WEB PROGRAMMING

Objectives :

- To understand the core PHP concepts of.
- To understand the types of PHP array and functions
- To learn the concepts of web applications and MVC architecture.

UNIT - I INTRODUCTION 9

Getting PHP - Creating a First PHP Page - Printing Some Text - Working with Variables - Creating Constants - Understanding PHP's Internal Data types - Operators and Flow Control - String: String Functions - Formatting text Strings.

UNIT - II ARRAYS AND FUNCTIONS 9

Arrays: Handling Arrays with Loops - PHP Array Functions-Converting String and Arrays - Sorting Arrays - Handling Multidimensional Arrays - Moving through Arrays - Splitting and Merging Arrays - Other Array functions - Functions: Creating function in PHP - Introduction to Variable Scope in PHP - Nesting Functions.

UNIT - III WORKING WITH DATABASES AND COOKIES 9

Database Introduction - Creating MYSQL Database - Accessing database in PHP - Updating Databases - Inserting item into a Database - Delete Records. Setting a Cookie - Reading a Cookie - Session - Working with FTP - Downloading Files with FTP - Deleting a File with FTP.

UNIT - IV FILE HANDLING & OBJECT ORIENTED CONCEPTS 9

Handling Form Controls - Handling Hidden Controls - Image Maps - Handling file Uploads. File Handling: Opening Files - Closing a File - Reading and Writing to a File - Appending to File - Classes and Objects - Constructors and Destructors Inheritance - Overriding Methods - Overloading Methods.

UNIT - V PHP FRAMEWORKS 9

Frameworks Introduction - Types of Frame works - Codeignter Framework Installation - Query manipulations: Insert - Update - Retrieve - Delete -File Upload - Import / Export Excel - Laravel Framework view.

Total No. of Periods: 45

Course outcomes :

- Work with session and cookies for real time applications.
- Work with Web application server side code.
- Work with manipulation of Object oriented concepts
- Design and develop applications using advanced frameworks.


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REFERENCES

1. Steven Holzner, PHP The Completer Reference, McGraw Hill Education, reprint 2013.
2. David Sklar and Adam Tracktenberg, PHP Cookbook, Oreilly, 2nd Edition, 2010.
3. Steve Suehring, Tim Converse Joyce Park, PHP 6 and MYSQL Bible, 2009.
4. Ed Lecky, Thompson, Steve D Nowicki, Professional PHP6, Wiley India, 2009.
5. Kevin Tatore, Peter MacIntyre and Rasmus Lerdorf, Programming PHP, O'Reilly, 2015.



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418CAT02- DATA WAREHOUSING AND DATA MINING

Objectives :

- To expose the concepts of Data warehousing Architecture and Implementation.
- To learn the association rule mining for handling large data.
- To understand the concept of classification for the retrieval purposes.
- To identify Business applications and Trends of Data mining.

UNIT – I INTRODUCTION 9

Relation to Statistics, Databases – Data Mining Functionalities – Steps in Data mining Process – Architecture of a Typical Data Mining Systems – Classification of Data Mining Systems – Overview of Data mining Techniques.

UNIT – II DATA PREPROCESSING AND ASSOCIATION RULES 9

Data Preprocessing – Data Cleaning, Integration, Transformation, Reduction, Discretization
Concept Hierarchies – Concept Description: Data Generalization and Summarization based
Characterization – Mining Association Rules: Apriori Algorithm, Partition Algorithm and FP-
Tree Growth Algorithm.

UNIT – III PREDICTIVE MODELING 9

Classification and Prediction: Issues Regarding Classification and Prediction – Classification by
Decision Tree Induction – Bayesian Classification – Other Classification Methods: Genetic
Algorithms, Rough Set Theory and Fuzzy Set Approach - Prediction – Cluster Analysis: Types
of Data in Cluster Analysis – Categorization of Major Clustering Methods: Partitioning Methods:
K- Means and K- Medoids Methods – Hierarchical Methods: BIRCH, ROCK and CHAMELON.

UNIT – IV DATA WAREHOUSING 9

Data Warehousing Components – Multi Dimensional Data Model – Data Warehouse
Architecture – Data Warehouse Implementation – Mapping the Data Warehouse to
Multiprocessor Architecture – OLAP – Need – OLAP Operations – Categorization of OLAP
Tools.

UNIT – V APPLICATIONS 9

Applications of Data Mining – Social Impacts of Data Mining – Tools – An Introduction to
WEKA – DB2 – MOA - DBMiner – Case Studies – Mining WWW – Mining Text Databases –
Mining Spatial Databases.

Total No. of Periods: 45

Course outcomes :

- Preprocess the data for mining applications
- Apply data mining techniques and methods to large data sets
- Apply the association rules for mining the data
- Use data mining tools.
- Compare and contrast various classifiers


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REFERENCES

1. Jiawei Han, Micheline Kamber, "Data Mining: Concepts and Techniques", Morgan Kaufmann Publishers, 2002, 2nd Edition.
2. Alex Berson, Stephen J. Smith, "Data Warehousing, Data Mining, & OLAP", Tata McGraw- Hill, Edition 2011.
3. Dunham Margaret H, "Data Mining : Introductory and Advanced Topics" . Pearson Education, Inc., 2012.
4. Ralph Kimball, "The Data Warehouse life Cycle Tool kit", John Wiley & Sons Inc., 2002, 2nd Edition.
5. Sean Kelly, "Data Warehousing in Action", John Wiley & Sons Inc., 2007.
6. David Hand, Heikki Mannila, Padharic Symth, "Principles of Data Mining", PHI, 2009.
7. Arun K. Pujari, "Data Mining Techniques", University Press, 2013, 3rd Edition.



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418CAT03 - MOBILE APPLICATION DEVELOPMENT

Objectives :

- Importance of Mobile Strategies in Business World
- Generate Mobile User Interface Design
- Develop android application
- Understanding of IOS and Windows phone

UNIT-I INTRODUCTION

9

Introduction to Android- Features of Android – Architecture of Android – Android device in the market – Obtaining the required tools: Eclipse- Android SDK – Android Development tool(ADT) – Creating Android Virtual Devices- Creating your first application- Anatomy of an application

UNIT-II ACTIVITIES, INTENTS and COMPONENTS

9

Understanding Activities: Applying Style and Themes to Activity- Displaying a Dialog Window- Displaying a Progress Window-Linking Activities Using Intents – Calling Built in Application using Intents- Understanding the component of a screen- Adapting to display orientation- Managing changes to screen orientation.

UNIT-III VIEWS AND DATA PERSISTENCE

9

Basic Views- Picker Views- List Views – Using Images Views to Display Pictures – Using Menus with Views – Some Analog View: Analog Clock View-Digital Clock View – Web View- Saving and Loading User Preferences – Persisting Data to Files – Creating and Using Databases: insert, delete, update, search database –Building the database with applications.

UNIT – IV MESSAGING, NETWORKING AND LOCATION BASED SERVICES

9

Sharing data in android-Using a Content provider: Projection-Filtering-Sorting-Creating own content provider- SMS Messaging- Sending E-mail – Networking – Displaying Maps – Getting Location Data – Creating your own Services.

UNIT – V IOS


9

Getting the Tools - iOS Project: Anatomy of an iOS App. XCode ide - Debugging iOS App – iOS simulator – Debugging Code – Instruments - Objective C Basics – Simple App Development – Building the Derby App in iOS – Other Useful iOS things.

Total No. of Periods: 45

Course Outcomes:

- Knowledge about mobile strategies in business world
- Design Mobile User Interface
- Implement Android Application using Android SDK
- Knowledge about IOS and Windows Phone.


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REFERENCES

1. Wei-Meng Lee. "Beginning Android Application Development", Wiley 2011
2. Jeff Mc Wherter and Scott Gowell. "Professional Mobile Application Development", Wrox 2012.
3. Himansu Dwivedi, Chris Clark and David Thiel. "Mobile Application Security", Tata McGraw Hill Edition 2010
4. Paul Deitel, Harvey Deitel, Abbey Deitel and Michael Morgany. "Android for Programmers An App-Driven Approach". Pearson 2012.
5. Reto Meier. "Professional Android 4 Application Development", Wiley 2015.



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418CAP06 – WEB PROGRAMMING LAB

Objectives :

- To understand the core PHP concepts of.
- To understand the types of PHP array and functions
- To learn the concepts GET / POST of form handling.

LIST OF EXPERIMENTS

1. Implement
 - a. Array Types
 - b. String function
 - c. Date function
 - d. User Defined function
2. Design a User Registration Form and display the user information in another form (Use GET/POST).
3. Design any simple Web Application using PHP and MYSQL
4. Design a Responsive Web Page using PHP.
5. Set Cookies and Retrieve the same in another page.
6. Practice Session Handling in PHP.
7. Implement File Concept in PHP.
8. PHP code for Login signIn.
9. PHP code for File Upload, PHP code for Import / Export using any Framework.

Total No. of Periods: 45

Course outcomes :

- Can able to work with PDO PHP code
- Can able to work with query manipulations.
- Can able to work with new frameworks like Larvel and Codeigniter.
- Can able to work with dynamic base applications


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418CAE08 - PROFESSIONAL COMMUNICATION

Objectives :

- To facilitate students amplify suitable language skills for academic and professional purposes
- To inculcate and develop strategies to understand and to increase students' efficiency in their academic and general reading
- To strengthen students' vocabulary power
- To familiarize students with different functions of technical and scientific English
- To coach the students in augmenting the technical writing skills like writing letters and reports in formal and business situations
- To strengthen Students' Creative skill

UNIT – I BASICS OF TECHNICAL COMMUNICATION

9

Technical Communication – features - Distinction between General and Technical communication - Language as a tool of communication - Levels of communication: Interpersonal, Organizational, Mass communication - The flow of Communication: Downward, Upward, Horizontal, Diagonal - Importance of technical communication - Barriers to Communication.

UNIT – II CONSTITUENTS OF TECHNICAL WRITTEN COMMUNICATION

9

Word formation - Synonyms and Antonyms – Acronyms – Homonyms - Word Power - Select vocabulary of about 500- 1000 New words – Odd man Out – Jumbled Words and Sentences- Creative and Critical Thinking - Requisites of Sentence Construction - Paragraph Development: Techniques and Methods - Inductive, Deductive, Spatial, Linear, Chronological etc: Essay Writing – Narrative – Argumentative - Reading and Interpretation.

UNIT – III FORMS OF TECHNICAL COMMUNICATION

9

Business Letters: Sales and Credit letters - Letter of Enquiry - Letter of Quotation, Order, Claim and Adjustment Letters - Job application and Resumes - Reports: Types – Significance – Structure - Style & Writing of Reports – Agenda – Minutes of Meeting – Advertisement – Fliers – Brochures – Faxes – Internet Websites – Intranet Websites – Extranet Websites – Blogging.

UNIT – IV PRESENTATION STRATEGIES

9

Defining Purpose Analyzing Audience & Locale - Organizing Contents - Modes of Delivery: Extemporaneous, Manuscript, Impromptu, Memorization - Kinesics – proxemics – Paralinguistics – Chronemics.

UNIT – V CAREER SKILLS

9

Transfer of Information: Pie Chart, Bar Chart, Flow Chart - Check List – Recommendation – Instruction - E-mail Writing – Verbal Analogy – HR Questions – Theme Detection – Deriving conclusions from Passages.

Total No. of Periods: 45


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Course outcomes :

- The ability to strengthen technical writing and speaking
- The ability to be proactively read, listen, speak and present facts in a persuasive manner in both oral and written medium
- The ability to interact, translate and delegate information.
- The ability to face various levels of competitive examinations to upgrade educational and career options

REFERENCES

1. Effective Technical Communication by Barun K. Mitra, Oxford Univ. Press, 2006, New Delhi.
2. Business Correspondence and Report Writing by Prof. R.C. Sharma & Krishna Mohan, Tata McGraw Hill & Co. Ltd., New Delhi, 2002.
3. How to Build Better Vocabulary by M.Rosen Blum, Bloomsbury Pub. London, 1989.
4. Word Power Made Easy by Norman Lewis, W.R.Goyal Pub. & Distributors, Delhi, 2011.
5. Developing Communication Skills by Krishna Mohan, Meera Banerji- Macmillan India Ltd. Delhi, 2000.
6. Manual of Practical Communication by L.U.B. Pandey & R.P. Singh: A.I.T.B.S. Publications India Ltd., Krishan Nagar, Delhi, 2013.



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EMPLOYABILITY ENHANCEMENT COURSE –IV

418CAL04 – EXECUTIVE COMMUNICATION LAB

Objectives :

- To equip students with effective receptive and productive skills in English.
- To help them develop their soft skills and interpersonal skills, which will make the transition from college to workplace smoother and help them excel in their job.
- To enhance the performance of the students at Placement Interviews, Group Discussions and other recruitment exercises.

LIST OF EXPERIMENTS

1. Introduction – Soft Skills:

Team Skills: Team Building and Leadership, Evolution of Groups Into Teams, Group Dynamics, Emergence Of Leadership, Intra-Group Dynamics, Inter-Group Dynamics, Conflict Management, Inter Dependency, Assessment of Team-Based Projects.
Time Management: Goal Setting, Effective Time Management.
Interpersonal Skills: Negotiations, Listening Skills, Social Skills, Assertive Skills, Cross-Cultural Communications, Organizing functions and Meetings
Leadership Skills: Concepts of Leadership, Leadership Styles, Insights from Great Leaders.
Soft skills – video clips

2. Listening Comprehension:

- a) Phonetics
- b) Conversations – video clips

3. Reading comprehension:

4. Presentation skills – video clips

Preparing For Effective Presentations,
Presentation For Small Groups And Large Groups,
Marketing And Business Presentations

5. Body language: Importance of Non-Verbal Communication

6. Training in Group Discussion and Personal Interview

Training in Group Discussion (GD),
Interview Skills,
Interview FAQ's,
Mock Interview.

7. Resume / Letter writing/E-Mail Etiquettes

8. Report preparation

9. Grammar: Concord, Error Correction, Editing etc.,

Total No. of Periods: 45

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Course outcomes :

- The ability to strengthen technical writing and speaking
- The ability to be proactively read, listen, speak and present facts in a persuasive manner in both oral and written medium
- The ability to interact, translate and delegate information
- The ability to face various levels of competitive examinations to upgrade educational and career options

REFERENCE BOOKS

1. Andrea J. Rutherford, "Basic Communication Skills for Technology", 1st Edition, Pearson Education Asia (Singapore) Pvt. Ltd., Bangalore, 2001.
2. Bhatia R.C., "Business Communication", Ane Books India, New Delhi, 2008.
3. Raman, Meenakshi and Sangeetha Sharma, "Technical Communication – English Skills for Engineers", 2nd Edition, Oxford University Press, New Delhi, 2009.
4. Ashraf M Rizvi, "Effective Technical Communication", 5th Edition, The McGraw-Hill Publishing Company Ltd., New Delhi, 2007.
5. Mohan Krishna Banerjee Developing Communications Skills Macmillan India Ltd. 2009.


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515CAT01 – INTERNET OF THINGS

UNIT I M2M to IoT

9

The vision – Introduction, M2M towards IoT - the Global context, a use case example, differing characteristics.

UNIT II M2M to IoT –A MARKET PERSPECTIVE

9

Introduction, some definitions, M2M Value chains, IoT value chains, An emerging industrial structure for IoT, The international driven global value chain and global information monopolies – **An Architectural Overview** – Building an architecture, Main design principles and needed capabilities, An IoT architecture outline, standards considerations.

UNIT III M2M and IoT TECHNOLOGY FUNDAMENTALS

9

Devices and gateways, Local and wide area networking, Data management, Business processes in IoT, Everything as a service (XaaS), M2M and IoT Analytics, Knowledge Management.

UNIT IV IoT ARCHITECTURE –STATE OF THE ART

9

Introduction, state of the art, **Architecture Reference Model** and architecture, IoT references Model – Functional View – Information View – Deployment and operational view.

UNIT V IoT REFERNCE ARCHITECTURE

9

Real – World Design Constraints – Introduction, Technical Design constraints – Data representation and visualization, interaction and remote control. - IoT Platform : Raspberry Pi Interface - **Commercial Building automation** - Introduction, case study: phase one – commercial building automation today, case study: phase two – commercial building automation in the future.

Total No. of Periods : 45

REFERENCES

1. Jan Holler, Vlasios Tsiatsis, Catherine Mulligan, Stefan Avesand, Stamatis Karnouskos, David Boyle, "From Machine-to-Machine to the Internet of Things: Introduction to a New Age of Intelligence", 1st Edition, Academic Press, 2014.
2. Vijay Madiseti and Arshdeep Bahga, "Internet of Things (A Hands-on-Approach)", 1st Edition, VPT, 2014.
3. Francis daCosta, "Rethinking the Internet of Things: A Scalable Approach to Connecting Everything", 1st Edition, Apress Publications, 2013
4. Samvel Greengard, "The Internet of Things, MIT Press Essential Knowledge Series, Paperback, 2015.
5. Olivier Hersent, David Boswarthick, Omar Elloumi, "The Internet of Things –Key applications and Protocols", Wiley, 2012


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515CAT02 – MOBILE APPLICATION DEVELOPMENT

UNIT – I INTRODUCTION

9

Preliminary Considerations – Cost of Development – Importance of Mobile Strategies in Business World – Mobile Web Presence - Mobile Applications - Marketing – Web Services for Mobile Devices : Web Services - Creating Example Web Service - Debugging Web Service.

UNIT – II MOBILE USER INTERFACE DESIGN

9

Effective Use of Screen Real Estate – Understanding Mobile Application Users – Understanding Mobile Information Design – Understanding Mobile Platform – Using the Tool for Mobile Interface Design – Choosing a Mobile Web Option – Adaptive Mobile Web Site – Mobile Application with HTML 5.

UNIT-III ANDROID APPLICATION DEVELOPMENT

9

Getting to know the Android User Interfaces – Designing User Interface Using Views – Displaying Pictures and Menus with Views : Using Image Views to Display Pictures – Using Menus with Views – Data Persistence : Saving and Loading User Performances – Persisting data to files – Creating and Using Databases- Messaging and Networking.

UNIT – IV IOS

9

Getting the Tools - iOS Project: Anatomy of an iOS App, Xcode ide - Debugging iOS App – iOS simulator – Debugging Code – Instruments - Objective C Basics – Simple App Development – Building the Derby App in iOS – Other Useful iOS things.

UNIT –V WINDOWS PHONE

9

Getting the Tools – Windows Phone 7 Project - Building the Derby app in Windows Phone 7 – Distribution other useful Window Phone Things – Case Study – Phone Gap – Titanium.

Total No. of Periods: 45

REFERENCES

1. Jeff Mc Wherter and Scott Gowell, “Professional Mobile Application Development”, Wrox 2012.
2. Wei-Meng Lee, “Beginning Android Application Development”, Wiley 2011.
3. Himansu Dwivedi, Chris Clark and David Thiel, “Mobile Application Security”, Tata McGraw Hill Edition 2010.
4. Paul Deitel, Harvey Deitel, Abbey Deitel and Michael Morgany, “Android for Programmers An App-Driven Approach”, Pearson 2012.
5. Reto Meier, “Professional Android 4 Application Development”, Wiley 2015.

515CAT03 – BIG DATA MANAGEMENT

UNIT I - BASICS OF DATA AND NOSQL DATA MANAGEMENT 9

Introduction - Big Data - Data-Data Storage and Analysis - Comparison with Other Systems - Convergence of Key Trends - Unstructured Data - Industry Examples of Big Data - Big Data Technologies - NOSQL Data Management - Introduction to NOSQL - Aggregate Data Models - Relationships - Graph Databases - Schemaless Databases - Materialized Views - Distribution Models - Version Stamps – Mapreduce - Partitioning and Combining - Composing Mapreduce Calculations.

UNIT II – HADOOP INTRODUCTION 9

Hadoop : History of Hadoop - Components of Hadoop -Application Development in Hadoop - Getting your Data into Hadoop - Other Hadoop Components - Basics of Hadoop - Data Format - Analyzing Data with Hadoop - Scaling out – DataFlow - Hadoop Streaming - Hadoop Pipes - Design of Hadoop Distributed File System - HDFS Concepts- Java Interface-Hadoop I/O.

UNIT III –MAPREDUCE APPLICATIONS 9

Map Reduce Applications - Mapreduce Workflows - Unit Tests With MRUnit - Test Data and Local Tests - Anatomy of Mapreduce Job Run - Failures in Classic Mapreduce and Yarn - Job Scheduling - Shuffle and Sort - Task Execution - Map Reduce Types.

UNIT IV – PIG, HIVE AND HBASE 9

Pig-Installing and Running Pig - An Example - Comparison with Databases - Pig Latin - Data Processing Operators – Hive - Installing Hive - An Example - Running Hive - Comparison with Traditional Databases – HiveQL – Tables - Querying Data – HBase – HBasics – Concepts – Installation – Clients - HBase versus RDBMS - Praxis.

UNIT V – DATA STREAMING AND HADOOP CLUSTERING 9

Mining Data Streams : Stream Data Model – Sampling Data in a Stream – Filtering Streams - Setting Up a Hadoop Cluster - Cluster Specification – Cluster Setup and Installation – Hadoop Configuration - Security - Benchmarking a Hadoop Cluster

Total No. of Periods: 45

REFERENCES

1. Chandrakant Naikodi “Managing the Big Data”, Vikas Publishing House Pvt Ltd.New Delhi 2015.
2. Chris Eaton, Dirk DeRoos, Tom Deutsch, George Lapis, Paul Zikopoulos. “Understanding Big Data: Analytic for Enterprise Class Hadoop and Streaming Data”, McGraw-Hill Publishing, 2012
3. Tom White. “Hadoop: The Definitive Guide: Storage and Analysis At Internet Scale”, Fourth Edition, Oreilly Media, 2015.
4. Anand Rajaraman and Jeffrey David Ullman. “Mining Massive Datasets”, Cambridge University Press, 2012.
5. Bill Franks. “Taming the Big Data Tidal Wave: Finding Opportunities in Huge Data Streams with Advanced Analytics”, John Willey & Sons 2012.

515CAE02 – OPEN SOURCE TECHNOLOGIES

UNIT – I INTRODUCTION TO PYTHON

9

Python Basics: Statements and Syntax – Style Guidelines – Memory Management. Python Objects: Built-in and Internal types – Standard Type Operators and Built-in Functions – Categorizing the Standard and Unsupported Types. Numbers: Complex Numbers – Built-in and Factory Functions – Numeric Types.

UNIT – II SEQUENCES, CONDITIONALS, LOOPS AND FILE I/O

9

Sequences – Strings – Lists – Tuples – Conditional Statements and Expressions – File Objects – File Built-in Functions, Methods and Attributes – Standard Files – Command-Line Arguments – File System and Execution.

UNIT – III PYTHON NETWORK AND GUI PROGRAMMING

9

Network Programming in Python – SocketServer Module – Introduction to the Twisted Framework. GUI Programming – Tkinter and Python Programming – Tkinter Examples – Tour of other GUIs.

UNIT – IV PYTHON & AWS

9

Elastic Compute Cloud (EC2): Launching an Instance – Keeping Tracks of Instances with Tag – Accessing the Console – Uploading and Synchronizing SSH Keypair – Attach a Persistent EBS Volume and Back Up – Find All Running EC2 Instance – Monitoring the Performance of Instance. Simple Storage Service (S3): Create a Bucket in a Specific Location – Store Private Data and Metadata – Computing Total Storage Used by a Bucket – Find Out Who Is Accessing Data.

UNIT – V PYTHON FOR DATA ANALYSIS

9

Data Loading, Storage and File Formats: Reading and Writing Data in Text Format – Binary Data Formats – Interacting with HTML, Web APIs and Database. Plotting and Visualization: A brief matplotlib API Primer – Plotting Functions in pandas – Python Visualization Tool Ecosystem: Chaco and mayavi.

Total No. of Hours: 45

REFERENCES

1. Wesley J. Chun. "Core Python Programming", Second Edition, Pearson, 2007.
2. Mitch Garnaat. "Python and AWS Cookbook", First Edition, O'Reilly Media, Inc., 2012.
3. Wes Mckinney. "Python for Data Analysis", First Edition, O'Reilly Media, Inc., 2012.
4. John M. Stewart. "Python for Scientists". Cambridge University Press, 2015.
5. Allen B. Downey. "Think Python". First Edition, O'Reilly Media, Inc., 2012.


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515CAE09 – DIGITAL MARKETING MANAGEMENT

UNIT – I INTRODUCTION

9

Going Digital – The changing face of advertising – The Technology behind digital marketing – Strategic thinking: Why you need a digital marketing strategy – Defining your digital marketing strategy – Understanding the digital marketing strategy – Understanding the digital consumer – Mind your Ps – Your window to the digital world.

UNIT – II SEARCH ENGINE MARKETING

9

The search for success: Search: the online marketer's holy grail – About the engines – Optimizing your site for the engines – Advertising on the search engines – Black Hat, the darker side of search – Bringing in the pros – Universal search – more opportunities to rank – Website intelligence and return on investment.

UNIT – III MARKETING TRENDS

9

E-mail marketing: The new direct mail – what exactly is e-mail marketing – Planning your campaign – Dos and Don'ts of an e-mail marketing campaign – Measuring your success – Still a vital component of digital marketing – Social media and online consumer engagement: join the conversation – What is social media – The different forms of social media – The rules of engagement – Adding social media to your own site – Online PR and reputation management.

UNIT – IV AFFILIATE AND MARKETING ON INTERNET

9

Affiliate marketing and strategic partnerships: Recognizing opportunities for strategic partnership – What is affiliate marketing – The click that really counts – What advertisers should do – Digital media creative: Creative application of digital media – using an agency Digital creative: what works and what doesn't – The age of new information-Based marketing – Advertising on internet – Charting the on-line Marketing Process.

UNIT – V CONSUMER SEARCH AND RESOURCE DISCOVERY

9

Search and resource discovery paradigms – Information search and retrieval – Information filtering – On-demand education and digital copy rights: Computer based education and training – Digital copy rights and Electronics commerce – Multimedia and digital video: Key multimedia concepts – Desk top video processing – Desk top video conferencing.

Total No. of Periods: 45


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REFERENCES

1. Damian Ryan , Understanding Digital Marketing : Marketing Strategies for Engaging the Digital Generation, Kogan Page publisher, 3rd Edition, 2014.
2. Ravi Kalakota and Andrew B.Whinston. 'Frontiers of Electronic Commerce'. Pearson Edu Inc., 9th Ed, 2009.
3. Deepak Bansal, A Complete Guide To Search Engine Optimization, B.R Publishing Corporation. 1st Edition, 2009.
4. Grienstein and Feinman- 'E-commerce –Security, Risk Management and Control', McGraw-Hill Inc.,US, Ed 2, 2009.
5. Jonah Berger. Contagious Why Things Catch On, Simon & Schuster, 2013.
6. E-Marketing: The essential guide to marketing in a digital world, Rob Stokes, Quirk eMarketing (Pty) Ltd, 5th Ed, 2013.



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Lab Elective – V

515CAL01 – MOBILE APPLICATION DEVELOPMENT LAB

LIST OF EXPERIMENTS

1. Design a simple Mobile Application using Button Control
2. Design a User Registration Form
3. Implement View and Activity
4. Design Image and video album
5. Implement notification through
 - a. SMS
 - b. E –mail
 - c. Mobile Calls
6. Create an address book using database.
7. Design a Game application.
8. Design student information using Framework.
9. Display text using iOS.
10. Create an interactive iOS application.

Total No. of Periods: 45



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515CAL02 – OPEN SOURCE TECHNOLOGIES LAB

LIST OF EXPERIMENTS

1. Implement File/Image uploading using Python Django.
2. Design login page using Python Flask web application.
3. Create a MDI GUI component using Python PyQt.
4. Create a QMessageBox using Python language.
5. Draw an API for geometric shapes using wxPython.
6. Performing basic cloud storage operations using python.
7. Explore the basic plot interface using Matplotlib.
8. Performing data analysis using Pandas.

Total No. of Periods: 45



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