Shri Vaishnav Vidyapeeth Vishwavidyalaya

Bachelor of Technology (Information Technology)

Choice Based Credit System (CBCS) 2016-17

SEMESTER III

COURSE CODE	Category	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BTMA301		APPLIED MATHEMATICS-III	60	20	20	-	-	3	1	-	4

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;
*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:

1. To introduce the students with the Fundamentals of the Calculus of the Complex Variable, Random Variable and Fourier analysis.

Course Outcomes:

After the successful completion of this course, students will be able:

1. To understand and apply the basics of the Calculus of the Complex variables
2. To know the fundamentals of the Probability Theory and Random Process.
3. To apply the concepts of the Fourier Analysis
4. To know the techniques of the Fourier Transform
5. To find the solution of the PDE.

Syllabus

Unit-I: Complex Analysis

Complex numbers, geometric representation, powers and roots of complex numbers. Functions of a complex variable: Limit, Continuity, Differentiability, Analytic functions, Cauchy-Riemann equations, Harmonic functions, Harmonic conjugates. Elementary Analytic functions (polynomials, exponential function, trigonometric functions), Complex integration, Cauchy's integral theorem, Cauchy's integral formula.Taylor series and Laurent series.Zeros, Singularities and its classifications, Residues, Residue theorem and its applications.

Unit-II: Probability Theory and Random Process

Axiomatic construction of the theory of probability, independence, conditional probability, and basic formulae, random variables, binomial, poisson and normal random variable, probability distributions, functions of random variables; mathematical expectations, Definition and classification of random processes, discrete-time Markov chains, Poisson process, Correlation and

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Regression; Expectation and Variance.

Unit–III : Fourier series
Fourier Integral, Fourier series of 2p periodic functions, Fourier series of odd and even functions, Half-range series, Convergence of Fourier series, Gibb's phenomenon, Differentiation and Integration of Fourier series, Complex form of Fourier series.

Unit–IV: Fourier Transformation
Fourier Integral Theorem, Fourier Transforms, Properties of Fourier Transform, Convolution and its physical interpretation, Statement of Fubini's theorem, Convolution theorems, Inversion theorem

Unit–V: Partial Differential Equations
Introduction to PDEs, basic concepts, Linear and non-linear first order PDE, Higher order linear homogeneous PDE, Separation of variable and its application to the one dimensional wave and heat equation.

Text Book:

1. *R. V. Churchill and J. W. Brown, Complex Variables and Applications, 5th Edition, McGraw-*
2. *K. SankaraRao, Introduction to Partial Differential Equations, 2nd Edition, 2005.*
3. *G. R. Grimmett and D. R. Stirzaker, Probability and Random Processes, Oxford University Press, 2001.*
4. *P. G. Hoel, S. C. Port and C. J. Stone, Introduction to Probability Theory, Universal Book Stall, 2000.*
5. *W. Feller, An Introduction to Probability Theory and its Applications, Vol. 1, 3rd Edition, Wiley, 1968.*
6. *K. S. Trivedi, Probability and Statistics with Reliability, Queuing, and Computer Science Applications, Prentice Hall of India, 1998.*
7. *A. Papoulis and S. UnnikrishnaPillai, Probabilities, Random Variables and Stochastic Processes, 4th Edition, Tata McGraw-Hill, 2002*
8. *S.M. Ross, Stochastic Processes, 2nd Edition, Wiley, 1996.*
9. *J. Medhi, Stochastic Processes, New Age International, 1994.*
10. *B. S. Grewal, Higher Engineering Mathematics, Khanna Publishers, Delhi*

Reference books:

1. *J. H. Mathews and R. W. Howell, Complex Analysis for Mathematics and Engineering, 3rd Edition, Narosa, 1998.*
2. *I. N. Sneddon, Elements of Partial Differential Equations, McGraw-Hill, 1957.*
3. *E. Kreyszig, Advanced Engineering Mathematics, 5th / 8th Edition, Wiley Eastern / John Wiley, 1983/1999*

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			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BTIT302		OBJECT ORIENTED TECHNOLOGY	60	20	20	30	20	3	1	2	5

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;
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Course Objectives:

1. To learn and understand various O-O concepts along with their applicability contexts.
2. Given a problem, identify domain objects, their properties, and relationships among them.
3. Draw a class diagram for the interacting objects in problem domain.

Course Outcomes:

1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
2. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism
3. Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.
4. Demonstrate the use of various OOPs concepts with the help of program.
5. Demonstrate the use of various class relationships with the help of program

Syllabus

Unit-I:

Object oriented programming, Introduction, Application, characteristics, difference between object oriented and procedure programming, Comparison of C and C++, Cout, Cin, Data Type, Control Statement, Loops, Arrays and string arrays fundamentals, Abstract Data Types(ADT), Concept of OOP like Object, Class, Encapsulation, Inheritance, Polymorphism, Message passing, Dynamic binding and Abstraction.

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Unit-II:

Relationships between classes, Association of objects, Types of Association,, Multiplicities, Navigability, Aggregation of objects. Types of Aggregation, Generalization, Specialization Container Classes

Unit-III:

Implementation of class and object in C++, access modifiers, object as data type, constructor, destructor, Object as function arguments, default and copy constructor, parameterized constructor, returning object from function,, static class data, Arrays of object, Arrays as class Member Data, Run time and Compile time polymorphism, Function Overloading.

Unit-IV:

Operator overloading and Inheritance: Overloading unary operators, Overloading binary operators, data conversion, , Concept of inheritance, Derived class and base class, access modifiers, types of inheritance, Derived class constructors, member function, public and private inheritance

Unit-V:

Pointer and Virtual Function: Dynamic memory allocation, static function, exception handling, Templates, Study of C++ and other object oriented languages(java).

References:

1. *Object oriented programming in C++ by Robert Lafore:,Galgotia*
2. *Balagurusamy; Object oriented programming with C++,TMH*
3. *Object Oriented Modeling and Design by James Rambaugh.Pearson Education*
4. *Let us C++ by YashwantKanitkar,BPB*

List of experiments:

1. Write a program to find out the prime number using function.
2. Write a program to overload function AREA() to find area of triangle using heroes formula, area of rectangle , area of square and area of circle.
3. Write a program to implement complex numbers using operator overloading and type Conversion.
4. Write a program using class and object to print bio-data of the students.
5. Write a program which defines a class with constructor and destructor which will count number of object created and destroyed.
6. Write a program to implement single and multiple inheritances taking student as the sample base class.
7. Write a program to add two private data members using friend function.

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8. Write a program using dynamic memory allocation to perform 2x2 matrix addition and subtraction.
9. Describe various class relationships with example
10. Case study on ATM machine(use case diagram and class diagram).

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			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BTEC509		ANALOG AND DIGITAL COMMUNICATION	60	20	20	30	20	3	1	2	5

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;
*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objective:

1. To provide the basic fundamentals, principles, concepts of communication systems and various modulation techniques of analog and digital communication systems.

Course Outcomes:

After completion of this course the students are expected to be able to demonstrate following attributes:

1. Ability to analyze signals in the time domain and frequency domains.
2. Ability of demonstrating various analog modulation and demodulation techniques and apply suitable modulation techniques for various applications.
3. Ability of demonstrating various digital modulation and demodulation techniques and apply suitable modulation techniques for various applications.

Syllabus

Unit-I:

Signals: Classification of signals, Time Domain and Frequency Domain Representation, singularity functions for continuous time.

Spectral Analysis: Fourier series analysis, Fourier Transform and their Properties, Transform of singularity functions and Periodic Signal. Energy and Power Spectral Density of various types of

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signals.
Systems: Classification of systems, Impulse Response and Convolution integral.

Unit-II:
Amplitude modulation Techniques
Need of modulation, Amplitude modulation: mathematical representation of AM, modulation index, frequency spectrum, single tone and multi tone AM, generation of AM (square law modulator, switching modulator), Detection of AM (Square law detector , envelope detector), Power distribution, DSB-SC :generation and detection techniques, SSB: generation and detection techniques, VSB.

Unit-III:
Angle modulation Techniques
Frequency and phase modulation, spectrum and bandwidth, Narrowband FM, Wideband FM, FM Modulators: Direct and Indirect method of frequency modulation, FM Detectors: Slope Detector, Foster Seeley Discriminators, Ratio Detectors and PLL detectors.

Unit-IV:
Digital conversion of Analog Signals
Sampling theorem, types of sampling, signal reconstruction and reconstruction filters, Pulse Amplitude Modulation (PAM), Pulse Width Modulation (PWM), Pulse Position Modulation (PPM), Quantization, quantization error, Pulse Code Modulation (PCM), companding, TDM-PCM, Differential PCM, Delta modulation, Adaptive Delta modulation.

Unit-V:
Digital Modulation Techniques
Generation and Detection: Amplitude shift keying, Binary Phase shift Keying, differential PSK, Quadrature PSK, M-ary PSK. Frequency Shift Keying (FSK), M-ary FSK, Quadrature Amplitude Modulation, Bandwidth , spectrum and constellation diagram of various shift keying techniques.

Text Books:

1. *B.P. Lathi, Modern Digital and Analog Communication System; TMH*
2. *Simon Haykins, Communication System, John Willy*
3. *Singh &Sapre, Communication System, TMH*
4. *Taub& Shilling, Communication System, TMH*

References:

1. *Rao, Analog communication, TMH*
2. *P K Ghose, principal of communication of analog and digital, Universities press.*

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3. *H P. Hsu: Schaum's Outline Signals and Systems, TMH*
4. *H P. Hsu: Schaum's Outline Analog and Digital Communications, TMH*
5. *Proakis, Fundamental of communication system. (Pearson edition).*
6. *Wayne Tomasi, Electronic Communication system. (Pearson edition).*

List of experiments:

1. To Understand the Fourier Series Decomposition and Reconstruction for periodic Signals
2. To analyze characteristics of AM modulator & Demodulators.
3. To analyze characteristics of FM modulators& Demodulators.
4. Study of sampling process and signal reconstruction and aliasing
5. Study of PAM, PPM and PWM
6. Study of PCM transmitter and receiver.
7. Study of Time division multiplexing (TDM) and De multiplexing.
8. Study of Delta modulation
9. Study of Adaptive delta modulation
10. Study of ASK PSK and FSK transmitter and receiver

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			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BTIT304		FUNDAMENTALS OF OPERATING SYSTEM	60	20	20	30	20	3	1	2	5

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;
*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:

1. To Introduce basic concepts and functions of modern operating systems
2. To Understand the concept of process, and thread management
3. To Understand how the resources are scheduled and managed
4. To Understand the concepts of process synchronization and deadlock
5. To know the concept of I/O and File management
6. To Understand various Memory management techniques
7. To be aware of latest trends in Operating Systems

Course Outcomes:

At the end of this course, students would be able to

1. Possess knowledge of the role of Operating Systems and their types.
2. Apply the concept of a process, thread and scheduling algorithms.
3. Apply the concepts of process synchronization and how it is achieved.
4. Realize the concept of deadlock and different ways to handle it.
5. Realize various memory management techniques.
6. Realize the concept of I/O management and File system

Syllabus

Unit-I:

Introduction: Introduction to OS. Operating system functions, evaluation of O.S., Different types of O.S.: batch, multi-programmed, time-sharing, real-time, distributed, parallel operating system.

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Unit-II:

System Structure: Computer system operation, I/O structure, storage structure, storage hierarchy, different types of protections, operating system structure (simple, layered, virtual machine), O/S services, system calls.

Unit-III:

Process Management: Processes: Concept of processes, process scheduling, operations on processes, co-operating processes, inter-process communication.

Threads: overview, benefits of threads, user and kernel threads.

CPU scheduling: scheduling criteria, preemptive & non-preemptive scheduling, scheduling algorithms (FCFS, SJF, RR, and priority), algorithm evaluation, multi-processor scheduling.

Process Synchronization: background, critical section problem, critical region, synchronization hardware, classical problems of synchronization, semaphores.

Deadlocks: system model, deadlock characterization, methods for handling deadlocks, deadlock prevention, deadlock avoidance, deadlock detection, recovery from deadlock.

Unit-IV:

Storage Management:

Memory Management: background, logical vs. physical address space, swapping, contiguous memory allocation, paging, segmentation, segmentation with paging.

Virtual Memory: background, demand paging, performance, page replacement, page replacement algorithms (FCFS, LRU), allocation of frames, thrashing.

File Systems: file concept, access methods, directory structure, file system structure, allocation methods (contiguous, linked, and indexed), free-space management (bit vector, linked list, grouping), directory implementation (linear list, hash table), efficiency & performance.

I/O Management: I/O hardware, polling, interrupts, DMA, application I/O interface (block and character devices, network devices, clocks and timers, blocking and non-blocking I/O), kernel I/O subsystem (scheduling, buffering, caching, spooling and device reservation, error handling), performance.

Disk Management : disk structure, disk scheduling (FCFS, SSTF, SCAN,C-SCAN) , disk reliability, disk formatting, boot block, bad blocks.

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Unit-V:

Protection &Security: Goals of protection, domain of protection, security problem, authentication, one time password, program threats, system threats, threat monitoring, encryption.

References:

1. *Milenkovie M., "Operating System : Concept & Design", McGraw Hill.*
2. *Tanenbaum A.S., "Operating System Design & Implementation", Practice Hall NJ.*
3. *Silbersehatz A. and Peterson J. L., "Operating System Concepts", Wiley.*
4. *Dhamdhere: Operating System TMH*
5. *Stalling, William, "Operating Systems", Maxwell McMillan International Editions, 1992.*
6. *Dietel H. N., "An Introduction to Operating Systems", Addison Wesley*

List of experiment:

1. **Shell programming :**
   creating a script, making a script executable, shell syntax (variables, conditions, control structures, functions, commands).
2. **Process :**
   starting new process, replacing a process image, duplicating a process image, waiting for a process, zombie process.
3. **Signal :**
   signal handling, sending signals, signal interface, signal sets.
4. **Semaphore :**
   programming with semaphores (use functions semctl, semget, semop, set_semvalue,del_semvalue, semaphore_p, semaphore_v).
5. **POSIX Threads :**
   programming with pthread functions(viz. pthread_create, pthread_join, pthread_exit, pthread_attr_init, pthread_cancel)
6. **Inter-process communication:** pipes(use functions pipe, popen, pclose), named pipes(FIFOs, accessing FIFO

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			THEORY			PRACTICAL		Th	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BTIT305		ANALYSIS AND DESIGN OF ALGORITHM	60	20	20	30	20	3	1	2	5

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;
*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
At the end of the course

1. Ability to analyze asymptotic runtime complexity of algorithms including formulating recurrence relations. How to develop efficient algorithms for simple computational tasks and reasoning about the correctness of them?
2. The emphasis is on choosing appropriate data structures and designing correct and efficient algorithms to operate on these data structures.

Course Outcomes:

1. Define the basic concepts of algorithms and analyze the performance of algorithms.
2. Discuss various algorithm design techniques for developing algorithms.
3. Discuss various searching, sorting and graph traversal algorithms.
4. Understand NP completeness and identify different NP complete problems.
5. Discuss various advanced topics on algorithms.

Syllabus

Unit-I:
Algorithms, Designing Algorithms, Analyzing Algorithms, Asymptotic Notations, Heap and Heap Sort,Brief Review of Graphs, Sets and Disjoint Set Union, Sorting and Searching Algorithms and their Analysis in terms of Space and Time Complexity. Divide and Conquer: General Method, Binary Search, Merge Sort, Quick Sort, Selection Sort, Strassen's Matrix Multiplication Algorithms.

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Unit-II:
Greedy Method: General Method, Knapsack Problem, Job Sequencing with Deadlines, Minimum-Cost Spanning Trees, Single Source Shortest Paths.

Unit-III:
Dynamic Programming: General Method, Optimal Binary Search Trees, O/1 Knapsack, The Traveling Salesperson Problem, All Pairs Shortest Paths.

Unit-IV:
Backtracking: General Method, 8-Queens Problem, Graph Coloring, Hamiltonian Cycles, Sum of Subsets. Branch And Bound: Method, O/1 Knapsack Problem, Traveling Salesperson Problem, Efficiency Considerations, Techniques for Algebraic Problems, Some Lower Bounds Oon Parallel Computations.

Unit-V:
NP Hard and NP Complete Problems: Basic Concepts, Cook's Theorem, NP Hard Graph and NP Scheduling Problems, Some Simplified NP Hard Problems.

References:

1. *Fundamental of Computer Algorithms, Ellis Horowitz and SartajSahni, Galgotia Publication.*
2. *Introduction to Algorithms, Thomas H Cormen, Charles E Leiserson and Ronald L Rivest, TMH.*
3. *Fundamentals of Algorithms: The Art of Computer Programming Voll, Knuth, Naresh Publications.*
4. *Introduction to Design and Analysis of Algorithm, Goodman, S.E. &Hedetnieni, MGH.*
5. *Algorithms, Dasgupta, TMH.*
6. *Analysis & Design of Algorithm, Ullmann.*
7. *Algorithm Design, Michael T Goodrich and RobartoTamassia, Wiely India.*

List of experiments:-

1. Write a program for Iterative and Recursive Binary Search.
2. Write a program for Merge Sort.
3. Write a program for Quick Sort.
4. Write a program for Strassen's Matrix Multiplication.
5. Write a program for minimum spanning trees using Kruskal's algorithm.
6. Write a program for minimum spanning trees using Prim's algorithm.
7. Write a program for single sources shortest path algorithm.
8. Write a program for Floyd-Warshal algorithm.
9. Write a program for traveling salesman problem.

10. Write a program for Hamiltonian cycle problem.

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			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BTIT306		MOBILE APP AND DEVELOPMENT LAB	-	-	-	-	50	-	-	2	1

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;
*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:
The course content should be taught and implemented with the aim to develop required skills in the students so that they are able to acquire following competencies:

1. Explain functioning of different mobile communication technologies such as GSM and CDMA.
2. Explain development process of open source mobile application.

Course Outcomes:
The theory should be taught and practical should be carried out in such a manner that students are able to acquire different learning out comes in cognitive, psychomotor and affective domain to demonstrate following course outcomes.

1. Explain functioning of different mobile technology
2. Demonstrate Android activities life cycle
3. Execute operations on GUI objects
4. Perform Event driven programming
5. Apply various techniques on working with menu

Syllabus

Unit-I:

Introduction to Mobile Computing:
Concept of Mobile Communication, Different generations of wireless technology, Basics of cell, cluster and frequency reuse concept, Noise and its effects on mobile, Understanding GSM and CDMA, Basics of GSM architecture and Services like voice call, SMS, MMS, LBS, VAS. Different modes used for Mobile Communication, Architecture of Mobile Computing (3

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tier),Design considerations for mobile computing, Characteristics of Mobile communication, Application of Mobile Communication, Security Concern Related to Mobile Computing, Middleware and Gateway required for mobile Computing, Mobile IP, Basic Mobile Computing Protocol, Mobile Communication via Satellite.

Unit-II:

Introduction to Android:
Overview of Android, What does Android run On Android Internals? Android for mobile apps development, Environment setup for Android apps Development, Framework - Android- SDK, Eclipse, Emulators, Android Emulation – Creation and set up, First Android Application.

Unit-III:

Android Activities and GUI Design Concepts:
Design criteria for Android Application: Hardware Design Consideration, Design Demands for Android application, Intent, Activity, Activity Lifecycle and Manifest, Creating Application and new Activities. Simple UI -Layouts and Layout properties: Introduction to Android UI Design, Introducing Layouts. XML Introduction to GUI objects viz.: Push Button, Text / Labels, Edit Text, Toggle Button, Padding.

Unit-IV:

Advanced UI Programming:
Event driven Programming in Android (Text Edit, Button clicked etc.) Activity Lifecycle of Android

Unit-V:

Toast, Menu, Dialog, List and Adapters:
Menu Basics, Custom v/s System Menus, Create and Use Handset menu Button (Hardware) , Dialog : Creating and Altering Dialogs, Toast : List & Adapters, Demo Application Development and Launching Basic operation of SQLite Database, Android Application Priorities

References:

1. *Reto Meier, Professional Android 2 Application Development, Wiley India Pvt. Ltd*
2. *Mark L Murphy, Beginning Android, Wiley India Pvt. Ltd*
3. *Sayed Y Hashimi and SatyaKomatineni, Pro Android, Wiley India Pvt. Ltd*
4. *Building Android Apps In Easy Steps, McGraw Hill Education*

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List of experiments:-

1. Installation and setup of Java Development Kit (JDK), setup android SDK, setup eclipse IDE, setup Android Development Tools (ADT) plugins, create android virtual device.
2. Create "Hello World" application. That will display "Hello World" in the middle of the screen using Text View Widget in the red color
3. Create application for demonstration of android activity life cycle
4. Create Registration page to demonstration of Basic widgets available in android.
5. Create sample application with login module. (Check username and password) On successful login, Change Text View "Login Successful". And on failing login, alert user using Toast "Login fail".
6. Create login application where you will have to validate username and passwords. Till the username and password is not validated, login button should remain disabled.
7. Create and Login application as above. Validate login data and display Error to user using set Error () method.
8. Create an application for demonstration of Scroll view in android
9. Create an application for demonstration of Explicitly Starting New Activity using Intent.
10. Create an application that will pass two number using Text View to the next screen, and on the next screen display sum of that number.
11. Create an application that will get the Text Entered in Edit Text and display that Text using toast (Message).
12. Create an application that will Demonstrate Button on Click() Event and change the Text View Color based on button Clicked
13. Create an UI such that, one screen have list of all the types of cars. On selecting of any car name, next screen should show Car details like: name, launched date, company name
14. Create an application that will Demonstrate Dialog Box Control In Android.

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			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BTIT307		WEB DEVELOPMENT LAB-I(HTML & XML)	-	-	-	-	50	-	-	2	1

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;
*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:

1. This module introduces the concepts of web development and gives the students the opportunity to learn about different tools and techniques used in web designing and practically apply some of the tools.

Course Outcomes:

1. Create an HTML Documents, and establish adequate formatting for presentation purposes
2. Import, insert and modify images
3. Insert and manipulate tables
4. Establish and maintain internal and external link to available resources
5. Use special effect to make the expressive, evocative documents
6. Insert and manipulate multi-media objects

Syllabus

Unit-I:

What is HTML, HTML Documents, Basic structure of an HTML document, Creating an HTML document, Headers tags, Body tags, Paragraphs formattings,Text Elements, Tag Elements, Special Character elements, Image tags, HTML Table tags, Lists: Numbered list, Non-Numbered lists, Definition lists, Anchor tag, Name tag etc. Hyperlinks – FTP/HTTP/HTTPS, Links with images and buttons, Links to send email messages, Text fonts and styles, background colors/images, Marquee Behavior, Forms related tags. (action, method, name, input, submit etc.)

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SEMESTER III

Unit-II:

HTML Media Tags: Inserting audio files, Inserting video files, Screen control attributes, Media control attributes, HTML Object.

Unit-III:

HTML 5 :Introduction of different Web Technology, HTML5 Introduction, HTML5 New Elements, HTML5 Video, HTML5 Video/DOM, HTML5 Audio, HTML5 Drag and Drop, HTML5 Canvas, HTML5 SVG, HTML5 Geolocation, HTML5 Web Storage, HTML5 App Cache, HTML5 Web Workers, HTML5 SSE, HTML5 Tags

Unit-IV:

XML Introduction, Tree, Syntax, Elements, Attributes, Namespaces, XPath, DTD, Applications

Unit-V:

CSS Introduction :CSS Syntax CSS Id & Class. **CSS Styling**: styling Backgrounds ,styling Text, styling Fonts, styling Links, styling Lists, styling Tables. **CSS Box Model**: Border, Outline, Margin, Padding. **CSS Advanced**: Grouping/Nesting, Dimension, Display, Positioning, Floating, Align, Pseudo-class, Pseudo-element, Navigation Bar, Image Gallery, Imagecapacity, Image Sprites, Media Types, Attribute Selectors.

References:

1. *Steven M. Schafer, "HTML, XHTML, and CSS Bible", 5ed, Wiley India*
2. *John Duckett,"Beginning HTML, XHTML, CSS, and JavaScript ",Wiley India*
3. *Ian Pouncey, Richard York, "Beginning CSS: Cascading Style Sheets for Web Design",Wiley India*

List of experiments:-

1. Design a Web Page, Insert an image on to the web page such that image is of height 300 and width 300 pixels. The image should have an ALT text in it.
2. Create a Web page that holds a bulleted list of the names of your friends. Make sure that the bullets are in plain circle.
3. Create a Frame which would hold both the web page that was created earlier. The frame should be split row-wise into equal halves.
4. Create a Web Page to display the marks you got in all subjects of last semester using table.

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SEMESTER III

5. Create a Form having two boxes with labels as FirstName and LastName. The User should not be allowed to enter the names directly in the text boxes. The input has to be given in the prompt box and then entered values should be given in the text boxes.
6. Create a Web Page that has a button in the center of the page. Using mouse events change the Message in the status bar.
7. Design a Web page that accepts UserName and Password. Opens a new window when the password corresponds to a particular value is set by the developer
8. Design a Web page that consists of 2 text boxes. When the page is first loaded set the focus to the first textbox. The user should not be allowed to leave the box unless enters a value in it.

9. Design a Web Page, Insert an image on to the web page such that image is of height 300 and width 300 pixels. The image should have an ALT text in it.
10. Create a Web page that holds a bulleted list of the names of your friends. Make sure that the bullets are in plain circle.
11. Create a Frame which would hold both the web page that was created earlier. The frame should be split row-wise into equal halves.
12. Create a Web Page to display the marks you got in all subjects of last semester using table.
13. Create a Form having two boxes with labels as FirstName and LastName. The User should not be allowed to enter the names directly in the text boxes. The input has to be given in the prompt box and then entered values should be given in the text boxes.
14. Create a Web Page that has a button in the center of the page. Using mouse events change the Message in the status bar.
15. Design a Web page that accepts UserName and Password. Opens a new window when the password corresponds to a particular value is set by the developer
16. Design a Web page that consists of 2 text boxes. When the page is first loaded set the focus to the first textbox. The user should not be allowed to leave the box unless enters a value in it.