

## Lesson Plan

Name of the Faculty	<b>Mr. Vijay</b>
Department	<b>Applied Science</b>
Semester	<b>4th</b>
Subject	<b>Maths ( AS-201N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topics to be covered (including assignment/test)
1st	1	<b>UNIT 1:</b> Fourier series: Euler's formulae
	2	Orthogonality conditions for the Sine and Cosine functions.
	3	Dirichlet's conditions, Fourier expansion of functions having points of discontinuity.
2nd	4	Change of interval, Odd and even functions, Half-range series.
	5	Odd and even functions.
	6	Half range series.
3rd	7	<b>Revision test</b>
	8	Fourier Transforms: Fourier integrals .
	9	Fourier transforms, Fourier Cosine and Sine transforms
4th	10	Properties of Fourier transforms, Convolution theorem, Parseval's identity.
	11	Fourier transforms of the derivative of a function, Application of transforms to boundary value problems (Heat conduction and vibrating string).
	12	<b>Revision test.</b>
5th	13	<b>UNIT 2:</b> Introduction about Partial Differential Equations and LPP.
	14	Formation and Solutions of PDE,
	15	Lagrange's Linear PDE.
6th	16	First order non-linear PDE,
	17	Charpit's method,
	18	Homogeneous linear equations with constant coefficients
7th	19	Method of separation of variables
	20	Revision Test
	21	Solution of linear programming problems: using Graphical method.
8th	22	Simplex method.
	23	<b>Revision test</b>
	24	<b>UNIT 3:</b> Complex Variables review of concept of functions of a complex variable
9th	25	Limit, continuity, differentiability and analyticity of a function.
	26	Basic elementary complex functions (exponential functions)
	27	Trigonometric & Hyperbolic functions

10th	28	Logarithmic functions
	29	<b>Revision test.</b>
	30	Cauchy-Riemann Equations. Line integral in complex plane.
11th	31	Line integral in complex plane.
	32	Definition of the complex line integral, basic properties, Cauchy's integral theorem, and Cauchy's integral formula.
	33	Brief of Taylor's, Laurent's and Residue theorems (without proofs).
12th	34	<b>Revision test.</b>
	35	<b>UNIT 4: Probability theory: A review of concepts of probability and random variables</b>
	36	Definitions of probability, addition rule, conditional probability
13th	37	Multiplication rule, Conditional Probability, Mean, median, mode and standard deviation,
	38	Bayes' Theorem
	39	Discrete and continuous random variables, probability mass, probability density and cumulative distribution functions,
14th	40	Moments, moment generating function.
	41	Binomial Distribution
	42	Poisson Distribution.
15th	43	Normal distribution.
	44	mathematical expectation, moments, moment generating function.
	45	<b>Revision test.</b>

## Lesson Plan

Name of the Faculty	<b>Ms. Bandana Sharma</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>4th</b>
Subject	<b>Object Oriented Programming (CSE-202N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topics to be covered (including assignment/test)
1st	1	Introduction to C++, C++ Standard Library
	2	Illustrative Simple C++ Programs, Header Files
	3	Namespaces, Application of object oriented programming <b>Assignment</b>
2nd	4	Object Oriented Concepts
	5	Introduction to objects and object oriented programming
	6	<b>Test</b> -Concepts of object oriented
3rd	7	Encapsulation ,Polymorphism, Overloading, Inheritance
	8	Abstract Classes, Accessifier
	9	Class Scope and Accessing Class Members <b>Assignment</b> - Encapsulation, Polymorphism, Overloading, Inheritance
4th	10	Controlling Access Function, Constant, Class Members
	11	Structure and Class
	12	<b>Test</b> - Controlling Access Function, Structure and Class
5th	13	Friend Function and Friend Classes
	14	This Pointer, Dynamic Memory Allocation and DE allocation
	15	Static Class Members, <b>Assignment</b> -This Pointer and Static Class Members
6th	16	Constructors, Parameter Constructor and Copy Constructor
	17	De-constructors
	18	<b>Test</b> - Constructors, Parameter Constructor and Copy Constructor
7th	19	Introduction to Inheritance, Types Of Inheritance, Base Class members in a Derived Class
	20	Public, Protected and Private Inheritance
	21	Effect of constructors and Deconstructors of base class in Derived Classes <b>Assignment: Inheritance</b>
8th	22	Polymorphism, Pointer to Derived Class
	23	Virtual and Pure Virtual Function
	24	<b>Test:</b> Virtual and Pure Virtual Function

9th	25	Abstract Base Classes, Static and Dynamic Binding
	26	Virtual Destructors
	27	Fundamentals of Operator Overloading, <b>Assignment:</b> Static and Dynamic Binding
10th	28	Rules for operator Overloading, Implementation of operator Overloading
	29	Implementation of operator Overloading of Unary Operator
	30	Implementation of operator Overloading of Binary Operator <b>Assignment:</b> Implementation of operator Overloading of Unary Operator
11th	31	Test Streams
	32	Binary Streams
	33	<b>Test:</b> Text Streams
12th	34	Sequential and Random Access File
	35	Stream Input/Output
	36	Stream Manipulators, <b>Assignment:</b> Sequential and Random Access File
13th	37	Basics of C++ Exception Handling, try, catch ,throw
	38	Multiple Catch, Re-throwing the Exception
	39	<b>Test:</b> try, catch and throw and Multiple catch
14th	40	Exception specification
	41	Templates: Function Templates
	42	Overloading Function Templates, <b>Assignment:</b> Templates
15th	43	Class Templates
	44	Class Templates and Non-Class Template type arguments
	45	<b>Test</b>

#### **Text Books:**

1. Object Oriented Programming in Turbo C++ by Robert Lafore, 1994, The WAITE Group Press.
2. The complete reference C ++ by Herbert shieldt Tata McGraw Hill

#### **References Books**

1. Shukla, Object Oriented Programming in c++, wiley india
2. C++ How to Program by H M Deitel and P J Deitel, 1998, Prentice Hall
3. Programming with C++ By D Ravichandran, 2003, T.M.H

## Lesson Plan

Name of the Faculty	<b>Ms. Payal Monga</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>4th</b>
Subject	<b>Internet Fundamental (CSE-204N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topics to be covered (including assignment/test)
1st	1	Introduction to networks and internet
	2	History of Internet, Intranet & Extranet
	3	Working of Internet, Internet, <b>Assignment-</b> Internet, Intranet & Extranet
2nd	4	Congestion, Internet culture
	5	Business culture on internet, Collaborative computing & the internet
	6	<b>Test-</b> Collaborative computing & the internet
3rd	7	Modes of Connecting to Internet Internet Service Providers(ISPs),
	8	Internet address, standard address
	9	domain name, DNS, <b>Assignment-</b> Internet address, standard address
4th	10	IP.v6.Modems
	11	Speed and time continuum, communications software, internet tools.
	12	<b>Test-</b> IP.v6.Modems
5th	13	Introduction, Miscellaneous Web Browser details,
	14	Searching the www: Directories search engines and meta search engines,
	15	Search fundamentals, search strategies, <b>Assignment-</b> Directories search engines and meta search engines
6th	16	Working of the search engines
	17	Telnet and FTP, HTTP, Gopher Commands
	18	<b>Test-</b> Telnet and FTP
	19	TCP/IP
7th	20	Introduction to Browser, Coast-to-coast surfing
	21	hypertext markup language, <b>Assignment:</b> hypertext markup language
8th	22	Web page installation
	23	Web page setup, Basics of HTML & formatting
	24	<b>Test:</b> Basics of HTML & formatting
9th	25	Hyperlink creation. Using FrontPage Express, Plug-ins.
	26	Introduction, advantages and disadvantages, User Ids
	27	Pass words, e-mail addresses <b>Assignment:</b> hyperlink creation, Using FrontPage Express

10th	28	Message components, message composition
	29	mailer features, E-mail inner workings
	30	E-mail management, MIME types <b>Assignment:</b> E-mail inner workings
11th	31	Newsgroups, mailing lists
	32	chat rooms, secure-mails
	33	<b>Test:</b> Newsgroups, mailing lists
12th	34	SMTP, PICO
	35	Pine, Library cards catalog, online ref. works
	36	<b>Languages:</b> Basic and advanced HTML, <b>Assignment:</b> Library cards catalog, online ref. works
13th	37	Introduction to Web Servers: PWS, IIS
	38	Apache, Microsoft Personal Web Server
	39	<b>Test:</b> PWS, IIS
14th	40	Accessing & using these servers.
	41	<b>Privacy and security topics:</b> Introduction, Software Complexity
	42	Attacks, security and privacy levels, <b>Assignment:</b> security policy
15th	43	accessibility and risk analysis, Encryption schemes
	44	Secure Web document, Digital Signatures,
	45	Firewalls, Intrusion detection systems

#### **Text Books:**

1. Internet & World Wide Programming, Deitel, Deitel & Nieto, 2012, Pearson Education
2. Fundamentals of the Internet and the World Wide Web, Raymond Greenlaw and Ellen Hepp, TMH-2012

#### **Reference Books/Websites:**

1. Complete idiots guide to java script,. Aron Weiss, QUE, 2013
2. Network firewalls, Kironjeet syan -New Rider Pub.2014

## Lesson Plan

Name of the Faculty	<b>Mr. Suveg Moudgil</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>4th</b>
Subject	<b>Digital Data Communication (CSE-206N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including Assignment/test)
1st	1	<b>Unit 1:</b> Introduction, Communication model, Basic constituents of communication system
	2	Need of modulation, Amplitude modulation, spectrum of AM wave
	3	Modulation Index, DSBSC modulation
2nd	4	SSB Modulation, vestigial side band modulation
	5	Angle modulation: Frequency and phase modulation, <b>Assignment No 1:</b> Spectrum of FM wave,
	6	Modulation Index and bandwidth of FM signal, NBFM and WBFM
3rd	7	<b>Test 1:</b> Amplitude and Angle Modulation
	8	<b>Unit 2:</b> Digital data, Digital signals
	9	Encoding schemes: NRZ-L, NRZ-I
4th	10	Manchester-diff-Manchester encoding, Pseudoternary-Bipolar-AMI
	11	B8ZS-HDB3-Evaluation factors-Digital Data
	12	Analog signals: Encoding techniques- ASK-FSK
5th	13	Encoding techniques-PSK, QPSK-Performance comparison- Analog data
	14	Digital signals: Quantization- Sampling theorem
	15	PCM- Delta Modulation- Errors- comparison- Analog data
6th	16	Analog signals: Need for modulation
	17	Modulation methods- Amplitude modulation- Angle modulation
	18	<b>Assignment No 2:</b> Comparison- Amplitude modulation- Angle modulation
7th	19	<b>Test 2:</b> Encoding Techniques: ASK, FSK, PSK, QPSK
	20	<b>Unit 3:</b> Introduction: Digital data communication techniques
	21	Asynchronous and synchronous transmission
8th	22	Error detection techniques: Parity checks- cycle redundancy checks
	23	Parity checks- cycle redundancy checks -checksum
	24	Error Correcting codes: forward and backward error corrections
9th	25	DTE and DCE interface
	26	Characteristics of DTE- DCE interface
	27	Interfaces: Rs-232-C, Rs-449/422, A/423-A
10th	28	<b>Test 3:</b> Error detection techniques
	29	<b>Unit 4:</b> Introduction to satellite communication
	30	Multiplexing: Advantages- Types of multiplexing- FDM

11th	31	Statistical TDM or Asynchronous TDM
	32	Synchronous TDM
	33	Statistical TDM or Asynchronous TDM
12th	34	Study of their characteristics
	35	Satellite communication systems: satellite parameters and configurations
	36	Capacity allocation
13th	37	FDMA, TDMA
	38	Fixed assigned multiple access(FAMA)
	39	Demand assigned multiple access (DAMA)
14th	40	The concept of spread spectrum: FHSS,DSSS-CDMA- Transmission and reception
	41	The concept of spread spectrum: FHSS,DSSS-CDMA- Transmission and reception (contd..)
	42	<b>Test 4:</b> FDMA, TDMA, FAMA, DAMA, FHSS, DSSS
15th	43	REVISION

**Text Books:**

1. William Stallings, Data and Computer Communications, PHI, Eighth Edition
2. Forozan, "Data Communication & Networking", Tata McGraw Hill.

**Reference Books:**

1. Proakin, "Digital Communications", Mc Graw Hill.
2. Stallings, "Data & Computer Communications", PHI.



## Lesson Plan

Name of the Faculty	<b>Ms. Ritu</b>
Department	<b>Electronics and Communication Department</b>
Semester	<b>4th</b>
Subject	<b>Microprocessor &amp; Interfacing (CSE-208N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including Assignment/test)
1st	1	<b>Unit 1: Evolution of Microprocessor</b>
	2	Introduction to 8085 - 8085 architecture
	3	Pin Details
2nd	4	Addressing Modes
	5	Instruction Set and Assembler Directives
	6	Instruction Timing Diagram
3rd	7	<b>Unit 2: 8086 Block diagram</b>
	8	description of data registers, address registers; pointer and index registers
	9	PSW
4th	10	Queue
	11	BIU and EU
	12	8086 Pin diagram descriptions
5th	13	Generating 8086 CLK and reset signals using 8284
	14	WAIT state generation
	15	Microprocessor BUS types and buffering techniques
6th	16	8086 minimum mode and maximum mode CPU module
	17	MAIN MEMORY SYSTEM DESIGN: Memory devices
	18	8086 CPU Read/Write timing diagrams in minimum mode and maximum mode
7th	19	Address decoding techniques
	20	Interfacing SRAMS, ROMS/PROMS.
	21	Interfacing and refreshing DRAMS
8th	22	<b>Unit 3: Instruction formats</b>
	23	addressing modes
	24	Data transfer instructions
9th	25	String instructions
	26	Logical instructions
	27	Arithmetic instructions
10th	28	Transfer of control instructions
	29	Process control instructions
	30	Assembler directives

11th	31	Writing assembly Language programs for logical processing
	32	Arithmetic processing
	33	Timing delays, Loops, data conversions.
12th	34	<b>Unit 4:</b> Parallel and Serial I/O Port design and address decoding
	35	Memory mapped I/O Vs Isolated I/O
	36	Intel's 8255 description and interfacing with 8086
13th	37	Intel's 8251 description and interfacing with 8086
	38	ADCs and DACs, - types, operation and interfacing with 8086
	39	Interfacing Keyboards
14th	40	Alphanumeric displays
	41	Multiplexed displays, and stepper motor, optical encoder with 8086
	42	8086 Interrupt mechanism; interrupt types and interrupt vector table
15th	43	Applications of interrupts
	44	Intel's 8259
	45	DMA operation. Intel's 8237

## Lesson Plan

Name of the Faculty	<b>Ms. Alisha</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>4th</b>
Subject	<b>Operating Systems (CSE-210)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1	<b>File &amp; CPU Management</b> Operating system functions & characteristics
	2	Historical evolution of operating systems
	3	Real time systems, Distributed system
	4	Assignment 1- Operating Systems Call
2nd	5	System programs
	6	Interrupt mechanisms
	7	Concept of threading
	8	Test 1
3rd	9	Directory systems: Structured Organization, directory and file protection mechanisms
	10	Implementation issues, and hierarchy of file and device management.
	11	CPU Scheduling: Levels of Scheduling,
	12	CPU Scheduling: Levels of Scheduling, Assignment 2: Directories System
4th	13	Comparative study of scheduling algorithms, multiple processor scheduling.
	14	<b>Unit 2: Storage and Device Management</b> Storage Management: storage allocations methods: Single contiguous allocations
	15	Multiple contiguous allocations, Paging, Segmentation
	16	Test 2
5th	17	Virtual memory concepts
	18	Demand Paging
	19	Page replacement Algorithm
	20	Page replacement Algorithm, Assignment 3: Paging
6th	21	Thrashing
	22	Device Management: Hardware Organization
	23	Device scheduling
	24	Test 3
7th	25	Protection: Mechanisms and Policies, Implementations.
	26	Protection: Mechanisms and Policies, Implementations.
	27	<b>Deadlocks and Concurrency control:</b> Deadlock: Deadlock characterization
	28	Deadlock prevention and avoidance, Assignment 3: Protection Management
8th	29.	Deadlock prevention and avoidance
	30.	Deadlock detection and recovery, practical consideration
	31.	Concurrent Process: Critical section problem
	32.	Test 4

9th	33.	Semaphores
	34.	Classical process coordination Problems and their solutions
	35.	Inter-process Communication
	36.	Multithreading, Assignment 4: Semaphores
10th	37.	Study of DOS with reference to storage management
	38.	Device management
	39.	File system
	40.	Test 5
11th	41.	UNIX: Study of UNIX with reference to storage management
	42.	UNIX: Study of UNIX with reference to storage management
	43.	File system
	44.	Concurrency control, CPU scheduling.
12th	46.	<b>Case Studies</b> DOS: Study of DOS
	47.	Methodologies for implementation of O/S service system calls
	48.	Test 6
	49.	File System: Functions of the system, File access & allocations methods
13th	50.	Combination of Paging & Segmentation
	51.	Policies and I/O management
	52.	Assignment 6: File System
	53.	Concurrent Process: Critical section problem
14th	54.	Interrupt mechanism.
	55.	Revision and exercise
	56.	<b>Test 7</b>

**Books:**

1. Peterson, J.L.& Silbersehatz, A. Operating System Concepts, Addison, Wesley.
2. Tanenbaum, A.S.: Operating Systems

## Lesson Plan

Name of the Faculty	<b>Ms. Bandana Sharma</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>4th</b>
Subject	<b>Object Oriented Programming Lab (CSE-212N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Practical Day	Practical
		Topic
1st	1	<p><b>Functions</b></p> <p>Raising a number n to a power p is the same as multiplying n by itself p times. Write a function called power ( ) that takes a double value for n and an int value for p, and returns the result as double value. Use a default argument of 2 for p, so that if this argument is omitted, the number will be squared. Write a main ( ) function that gets values from the user to test this function.</p>
2nd	2	<p><b>Classes and Objects</b></p> <p>A point on the two dimensional plane can be represented by two numbers: an X coordinate and a Y coordinate. For example, (4,5) represents a point 4 units to the right of the origin along the X axis and 5 units up the Y axis. The sum of two points can be defined as a new point whose X coordinate is the sum of the X coordinates of the points and whose Y coordinate is the sum of their Y coordinates. Write a program that uses a structure called point to model a point. Define three points, and have the user input values to two of them. Then set the third point equal to the sum of the other two, and display the value of the new point. Interaction with the program might look like this:</p> <p>Enter coordinates for P1: 3 4            Enter coordinates for P2: 5 7            Coordinates of P1 + P2 are : 8, 11</p>
3rd	3	<p><b>Classes and Objects</b></p> <p>Create the equivalent of a four function calculator. The program should request the user to enter a number, an operator, and another number. It should then carry out the specified arithmetical operation: adding, subtracting, multiplying, or dividing the two numbers. (It should use a switch statement to select the operation). Finally it should display the result. When it finishes the calculation, the program should ask if the user wants to do another calculation. The response can be 'Y' or 'N'. Some sample interaction with the program might look like this.</p> <p>Enter first number, operator, and second number: 10/ 3            Answer = 3.333333 Do another (Y/ N)? Y            Enter first number, operator, second number 12 + 100            Answer = 112 Do another (Y/ N) ? N</p>

4th	4.	<p><b>Classes and Objects</b></p> <p>A phone number, such as (212) 767-8900, can be thought of as having three parts: the area code (212), the exchange (767) and the number (8900). Write a program that uses a structure to store these three parts of a phone number separately. Call the structure phone. Create two structure variables of type phone. Initialize one, and have the user input a number for the other one. Then display both numbers. The interchange might look like this:  Enter your area code, exchange, and number: 415 555 1212  My number is (212) 767-8900  Your number is (415) 555-1212</p>
5th	5.	<p><b>Constructors</b></p> <p>Create a class rational which represents a numerical value by two double values- NUMERATOR &amp; DENOMINATOR. Include the following public member Functions:</p> <ul style="list-style-type: none"> <li>• constructor with no arguments (default).</li> <li>• constructor with two arguments.</li> <li>• void reduce() that reduces the rational number by eliminating the highest common factor between the numerator and denominator.</li> </ul>
6th	6.	<p><b>Polymorphism</b></p> <p>Consider the following class definition class father { protected : int age; public; father (int x) {age = x;} virtual void iam () { cout &lt;&lt; "I AM THE FATHER, my age is : "&lt;&lt; age&lt;&lt; endl; } Derive the two classes son and daughter from the above class and for each, define iam () to write our similar but appropriate messages. You should also define suitable constructors for these classes. Now, write a main () that creates objects of the three classes and then calls iam () for them. Declare pointer to father. Successively, assign addresses of objects of the two derived classes to this pointer and in each case, call iam () through the pointer to demonstrate polymorphism in action.</p>
7th	7.	<p><b>Inheritance</b></p> <p>Create two classes DM and DB which store the value of distances. DM stores distances in metres and centimeters and DB in feet and inches. Write a program that can read values for the class objects and add one object of DM with another object of DB. Use a friend function to carry out the addition operation. The object that stores the results maybe a DM object or DB objects, depending on the units in which the results are required. The display should be in the format of feet and inches or metres and cenitmetres depending on the object on display</p>
8th	8.	<p><b>Operator Overloading</b></p> <ul style="list-style-type: none"> <li>• Overload + operator to add two rational number.</li> <li>• Overload &gt;&gt; operator to enable input through cin.</li> <li>• Overload &lt;&lt; operator to enable output through cout.</li> </ul>

9th	9.	<p><b>Virtual Function</b>  Create a base class called shape. Use this class to store two double type values that could be used to compute the area of figures. Derive two specific classes called triangle and rectangle from the base shape. Add to the base class, a member function get_data( ) to initialize baseclass data members and another member function display_area( ) to compute and display the area of figures. Make display_area( ) as a virtual function and redefine this function in the derived classes to suit their requirements. Using these three classes, design a program that will accept dimensions of a triangle or a rectangle interactively and display the area. Remember the two values given as input will be treated as lengths of two sides in the case of rectangles and as base and height in the case of triangles and used as follows:  Area of rectangle = <math>x * y</math>  Area of triangle = <math>\frac{1}{2} * x * y</math></p>
10th	10.	<p><b>String Handling</b>  Make a class <b>Employee</b> with a name and salary. Make a class <b>Manager</b> inherit from <b>Employee</b>. Add an instance variable, named department, of type string. Supply a method to <b>to String</b> that prints the manager's name, department and salary. Make a class <b>Executive</b> inherits from <b>Manager</b>. Supply a method <b>to String</b> that prints the string "<b>Executive</b>" followed by the information stored in the <b>Manager</b> superclass object. Supply a test program that tests these classes and methods.</p>
11th	11.	<p><b>String Handling</b>  Write a function called reversit ( ) that reverses a string (an array of char). Use a for loop that swaps the first and last characters, then the second and next to last characters and so on. The string should be passed to reversit ( ) as an argument. Write a program to exercise reversit ( ). The program should get a string from the user, call reversit ( ), and print out the result. Use an input method that allows embedded blanks. Test the program with Napoleon's famous phrase, "Able was I ere I saw Elba".</p>
12th	12.	<p><b>String Handling</b>  Create some objects of the string class, and put them in a Deque-some at the head of the Deque and some at the tail. Display the contents of the Deque using the for Each( ) function and a user written display function. Then search the Deque for a particular string, using the first That ( ) function and display any strings that match. Finally remove all the items from the Deque using the getLeft ( ) function and display each item. Notice the order in which the items are displayed: Using getLeft ( ), those inserted on the left (head) of the Deque are removed in "last in first out" order while those put on the right side are removed in "first in first out" order. The opposite would be true if getRight ( ) were used.</p>

13th	13.	<p><b>File Handling</b>  Assume that a bank maintains two kinds of accounts for customers, one called as savings account and the other as current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. Create a class account that stores customer name, account number and type of account. From this derive the classes cur_acct and sav_acct to make them more specific to their requirements. Include necessary member functions in order to achieve the following tasks:</p> <ul style="list-style-type: none"> <li>• Accept deposit from a customer and update the balance</li> <li>• Display the balance</li> <li>• Compute and deposit interest</li> <li>• Permit withdrawal and update the balance</li> <li>• Check for the minimum balance, impose penalty, necessary and update the balance</li> <li>• Do not use any constructors. Use member functions to initialize the class members</li> </ul>
14th	14	<p><b>File Handling</b>  Write a program that creates a binary file by reading the data for the students from the terminal. The data of each student consist of roll no., name ( a string of 30 or lesser no. of characters) and marks</p>
15th	15	<p><b>File Handling</b>  A hospital wants to create a database regarding its indoor patients. The information to store include</p> <ol style="list-style-type: none"> <li>a) Name of the patient</li> <li>b) Date of admission</li> <li>c) Disease</li> <li>d) Date of discharge</li> </ol> <p>Create a structure to store the date (year, month and date as its members). Create a base class to store the above information. The member function should include functions to enter information and display a list of all the patients in the database. Create a derived class to store the age of the patients. List the information about all the to store the age of the patients. List the information about all the pediatric patients (less than twelve years in age).</p>



## Lesson Plan

Name of the Faculty	<b>Ms. Ritu</b>
Department	<b>Electronics &amp; Communication Engineering</b>
Semester	<b>4th</b>
Subject	<b>Microprocessor Lab (CSE-214N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Practical Day	Practical
		Topic
1st	1.	Introduction to Microprocessor Lab and instruments.
2nd	2.	Add / Sub two 16 bit numbers.
3rd	3.	Find sum of series of numbers.
4th	4.	Multiply two 16 bit unsigned/ signed numbers.
5th	5.	Divide two unsigned/ signed numbers (32/16 , 16/8, 16/16, 8/8 )
6th	6.	Add / Sub / multiply / Divide two BCD numbers.
7th	7.	Find smallest/ largest number from array of n numbers.
8th	8.	Arrange numbers in array in ascending/ descending order.
9th	9.	Perform block transfer data using string instructions / without using string instructions.
10th	10.	Compare two strings using string instructions / without using string instructions.
11th	11.	Display string in reverse order, string length, Concatenation of two strings.
12th	12.	Viva

### Text Books:

1. Barry B. Brey, "The Intel Microprocessor 8086/8088, 80186", Pearson Education, Eighth Edition, 2009
2. D.V. Hall, Microprocessors and Interfacing, McGraw Hill 2nd ed.

### Reference Books:

1. Liu, Gibson, "Microcomputer Systems: The 8086/88 Family", 2nd Edition, PHI, 2005
2. Kenneth Ayala, "The 8086 Microprocessor: Programming & Interfacing the PC", Cengage Learning, Indian Edition, 2008
3. Kip Irvine, "Assembly language for IBM PC", PHI, 2nd Edition, 1993
4. Peter Abel, "Assembly language programming", Pearson Edu, 5th Edition, 2002

## Lesson Plan

Name of the Faculty	<b>Ms. Payal</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>4th</b>
Subject	<b>Internet Lab (CSE-216N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Practical Day	Practical
		Topic
1st	1	<b>MS WORD</b> To prepare the Your Bio Data using MS Word
2nd	2	<b>MS EXCEL</b> To prepare the list of marks obtained by students in different subjects and show with the help of chart/graph the average, min and max marks in each subject.
3rd	3	<b>MS POWER POINT\</b> Prepare a presentation explaining the facilities/infrastructure available in your college/institute.
4th	4	<b>HTML</b> Design Web pages containing information of the Deptt.
5th	5	<b>HTML</b> Create a new document that takes the format of a business letter. Combine <P> and   tags to properly separate the different parts of the documents. Such as the address, greeting, content and signature. What works best for each?
6th	6	<b>HTML</b> Create a document that uses multiple   and <P> tags, and put returns between <PRE> tags to add blank lines to your document see if your browser sends them differently
7th	7	<b>HTML</b> Create a document using the <PRE>tags to work as an invoice or bill of sale, complete with aligned dollar values and a total. Remember not to use the Tab key, and avoid using emphasis tags like <B> or <EM> within your list.
8th	8	<b>HTML</b> Create a seven-item ordered list using Roman numerals. After the fifth item, increase the next list value by 5.
9th	9	<b>HTML</b> Beginning with an ordered list, create a list that nests both an unordered list and a definition list
10th	10.	<b>HTML</b> Use the ALIGN attribute of an <IMG> tags to align another image to the top of the first image.. play with this feature, aligning images to TOP, MIDDLE and BOTTOM

11th	11	<b>HTML</b> Create a 'table of contents' style page (using regular and section links) that loads a different document for each chapter or section of the document
12th	12	<b>Internet</b> Installing internet & external modems, NIC and assign IP address
13th	13	<b>Internet</b> Study of E-mail system
14th	14	<b>Internet</b> Create your own mail-id in yahoo and indiatimes.com
15th	15	<b>Internet</b> Add names (mail-id's) in your address book, compose and search an element.

## Lesson Plan

Name of the Faculty	<b>Mr. Ravinder Chauhan</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Compiler Design (CSE-302N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1	<b>Unit 1: Introduction to Compiling</b> Analysis of the source program
	2	Phases of a compiler,
	3	<b>Assignment No 1:</b> Cousins of the Compiler
2nd	4	Grouping of Phases
	5	Compiler construction tools, Lexical Analysis- Regular Expression
	6	<b>Test 1:</b> Lexical Analysis –Regular Expression
3rd	7	Introduction to Finite Automata and Regular Expression
	8	Conversion of Regular Expression to NFA
	9	<b>Assignment No 2:</b> Role of Lexical Analyzer
4th	10	Input Buffering
	11	Specification of Tokens
	12	<b>Test 2:</b> Input Buffering
5th	13	<b>Unit 2:</b> Syntax Analysis, Role of the Parser ,Writing Grammars
	14	Symbol Table
	15	<b>Assignment No 3:</b> Context-Free Grammars
6th	16	Top Down Parsing with or without Backtracking
	17	Recursive Descent Parsing, Non-Recursive Descent Parsing
	18	<b>Test 3:</b> Recursive Descent Parsing
7th	19	SLR Parser
	20	Canonical LR Parser
	21	<b>Assignment No 4:</b> LALR Parser
8th	22	<b>Unit 3:</b> Intermediate Code Generation and Code, Intermediate
	23	Declarations, Assignment Statements
	24	<b>Test 4:</b> Assignment Statements
9th	25	Boolean Expressions
	26	Case Statements
	27	<b>Assignment No 5:</b> Case Statements
	28	DAG representation of Basic Blocks
10th	29	A simple Code generator from DAG
	30	<b>Test 5:</b> A simple Code generator from DAG

11th	31	Issues in the design of code generator
	32	The target machine, Runtime Storage management
	33	<b>Assignment No 6:</b> Error Handling- Type checking
12th	34	<b>Unit 4:</b> Code Optimization and Run Time Environments: Principal Sources of Optimization
	35	Optimization of Basic Blocks
	36	<b>Test 6:</b> Optimization of Basic Blocks
	37	Peephole Optimization
	38	Introduction to Global Data Flow Analysis
	39	<b>Assignment No 7:</b> Source Language issues
13th	40	Storage Organization
	41	Static Storage Management, Heap Storage management
	42	<b>Test 7:</b> Heap Storage management
14th	43	Access to non-Local Names
	44	Parameter Passing
15th	45	<b>Assignment No 8:</b> Parameter Passing

## Lesson Plan

Name of the Faculty	<b>Mr. Brij Pal Kamboj</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Essential of Information Technology (CSE-304N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1.	<b>Unit 1:</b> Introduction to problem solving
	2.	Computational problem and its classification - Logic and its types
	3.	Introduction to algorithms <b>Assignment No.1:</b> flowchart
2nd	4.	Searching algorithms: linear search, binary search
	5.	sorting algorithms: insertion, quick, merge, selection sort
	6.	<b>Test 1:</b> Searching
3rd	7.	Introduction and classification to Data Structures
	8.	Basic Data Structures: array
	9.	stack, and queue, <b>Assignment No 2:</b> Identifiers, variables, data types
4th	10.	<b>Unit 2:</b> Operators, control structures, type conversion, Casting, arrays,
	11.	Strings, Object Oriented Concepts fundamentals: class & object
	12.	<b>Test 2: Class and Objects Concept.</b>
5th	13.	Instance variables & methods
	14.	Access specifiers, reference variables
	15.	Parameter passing techniques: <b>Assignment No 3:</b> Constructors, this reference
6th	16.	Static, and command line arguments
	17.	Introduction to UML: Use case diagrams – Class diagrams
	18.	<b>Unit 3:</b> Relationships: aggregation
7th	19.	Association
	20.	Inheritance, types of inheritance
	21.	<b>Test 3: Inheritance and its Program</b>
8th	22.	Static Polymorphism: method overloading
	23.	Constructor overloading
	24.	Dynamic polymorphism: method overriding <b>Assignment No 4:Destructor</b>
9th	25.	Abstract
	26.	Interface
	27.	<b>Test 4:Constructor</b>
10th	28.	Introduction to packages Industry Coding Standards and Best Practices
	29.	code tuning & optimization
	30.	clean code & refactoring <b>Assignment No 5:</b> Data Models
11th	31.	<b>Unit 4:</b> RDBMS- data processing
	32.	the database technology
	33.	<b>Test 5: RDBMS</b>

12th	34.	Data models
	35.	ER modelling concept, Notations
	36.	Converting ER diagram into relational schema <b>Assignment No 6: ER Diagram Examples</b>
13th	37.	Logical database design, DDL statements
	38.	normalization (1NF, 2NF and 3NF)
	39.	<b>Test 6: SQL: DDL statements</b>
14th	40.	DCL statements
	41.	Joins, Sub queries
	42.	<b>Assignment No 7:SQL Queries</b>
15th	43.	Views, Database design Issues
	44.	SQL fine-tuning
	45.	<b>Test 7: Logical Data base Design</b>

### Books on Java

1. **Java™: The Complete Reference**,. Seventh Edition. Herbert Schildt
2. Programming with **Java 3e A Primer** by E **Balagurusamy**
3. Introduction to Java Programming by K. Somasundaram , Jaico Publishing House; 1 edition

### Books on RDBMS, Oracle, MYSQL

1. Fundamentals of Database Systems, with E-book (3rd Edition) by Shamkant B. Navathe, Ramez Elmasri, Published January 15th 2002 by Addison Wesley Longman
2. MySQL by Paul DuBoisNew Riders Publishing
3. Murach's MySQL Paperback – 2012, by Joel Murach , Publisher: Shroff/Murach (2012)
4. SQL: The Complete Reference by James R. Groff, Paul N. Weinberg, Published March 1999 by McGraw-Hill Companies
5. Schaum's Outline of Fundamentals of Relational Databases by Ramon Mata-Toledo, Published November 15th 2000 by McGraw-Hill

## Lesson Plan

Name of the Faculty	<b>Ms. Sonali</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Mobile Computing (CSE-306N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1.	<b>Unit 1:</b> Introduction
	2.	Issues in mobile computing
	3.	Overview of wireless telephony: Cellular concept <b>Assignment 1:</b> Explain the cell working.
2nd	4.	Mobile computing Architecture
	5.	Design considerations for mobile computing
	6.	<b>Test 1: Architecture of Mobile computing</b>
3rd	7.	Mobile Computing through Internet Making existing applications mobile enabled
	8.	GSM: air-interface, channel structure
	9.	location management: HLR-VLR Hierarchical, <b>Assignment 2:</b> How GSM works.
4th	10.	Handoffs
	11.	WCDMA, GPRS 3G, 4G.
	12.	<b>Test 2:</b> Handoff, Location Management
5th	13.	<b>Unit 2:</b> Wireless LAN Overview:
	14.	MAC issues
	15.	IEEE 802.11 <b>Assignment 3:</b> Explain wireless communication.
6th	16.	Blue Tooth, Wireless
	17.	Multiple access protocols, TCP over wireless
	18.	<b>Test 3: Multiple Access Protocol</b>
7th	19.	Wireless applications, Networking data broadcasting
	20.	Mobile IP
	21.	WAP : Architecture, Traditional TCP, Classical TCP <b>Assignment 4:</b> Explain TCP.
8th	22.	Improvements in WAP, WAP applications.
	23.	<b>Unit 3:</b> Data management issues,
	24.	<b>Test 4: Mobile IP, WAP Architecture</b>
9th	25.	Data replication for mobile computers, adaptive clustering for mobile wireless networks
	26.	File system
	27.	Disconnected operations Mobile Agents computing, security and fault tolerance <b>Assignment 5:</b> What is clustering. Explain with help of an example.



10th	28.	Transaction processing in mobile computing environment.
	29.	Cloud Architecture model,
	30.	Types of Clouds: Public Private & Hybrid Clouds <b>Assignment 6:</b> Explain Cloud computing.
11th	31.	Resource management and scheduling, Clustering
	32.	Data Processing in Cloud: Introduction to Map Reduce for Simplified data
	33.	<b>Test 5: Cloud Architecture.</b>
12th	34.	Processing on Large clusters.
	35.	<b>Unit-4:</b> Ad hoc networks, ,
	36.	Localization <b>Assignment 7:</b> Structure of Adhoc network.
13th	37.	MAC issues
	38.	Routing protocols, Global state routing (GSR)
	39.	<b>Test 6:Routing Protocol(GSR)</b>
14th	40.	Destination sequenced distance vector routing (DSDV)
	41.	Dynamic source routing (DSR)
	42.	Ad Hoc on demand distance vector routing (AODV) <b>Assignment 8:</b> Explain Routing with help of an example.
15th	43.	Temporary ordered routing algorithm (TORA)
	44.	QoS in Ad Hoc Networks, Applications.
	45.	<b>Test 7:DSR, AODV</b>

#### **Text Books:**

1. Rajkamal, Mobile Computing, 2/E Oxford University Press,2011.
2. J. Schiller, Mobile Communications, Addison Wesley
3. Yi Bing Lin, Wireless and Mobile Networks Architecture , John Wiley.

#### **Reference Books**

1. Mehrotra , GSM System Engineering.
2. M. V. D. Heijden, M. Taylor, Understanding WAP, Artech House.
3. Charles Perkins, Mobile IP, Addison Wesley.
4. Charles Perkins, Ad hoc Networks, Addison Wesley.
5. Judith Hurwitz, Robin Bllor, Marcia Kaufmann, Fern Halper, Cloud Computing forDummies, 2009.

## Lesson Plan

Name of the Faculty	<b>Ms. Prerna Bhatia</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Web Technology (CSE-308N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1	The role of information architect, collaboration and communication
	2	Organizing information, Organizational challenges.
	3	Organizing web site and intranets. <b>Assignment-</b> about information architect and organizing information
2nd	4	Creative Cohesive organization system
	5	Designing Navigation system, Type of navigation system
	6	<b>Test-</b> Navigation System and its type
3rd	7	Integrated navigation elements, designing elegant navigation systems
	8	Searching systems, searching your web site
	9	Designing the search interface, indexing the right stuff <b>Assignment-</b> about searching system
4th	10	To search or not to search grouping content, conceptual design
	11	High level Architecture blueprint, Architecture page mockups, Design Sketches
	12	<b>Test-</b> indexing the right stuff,search grouping content
5th	13	Origin and evolution of html and xhtml
	14	Basic syntax, standard xhtml
	15	Document structure <b>Assignment-</b> standard html
6th	16	Basic text markup, images, hypertext link
	17	List, tables, forms
	18	<b>Test-</b> text markup and images
7th	19	Html 5,syntactic
	20	Difference between HTML and XHTML
	21	Introduction about CSS <b>Assignment:</b> Difference between html and XHTML
8th	22	Levels of style sheets, style specification format
	23	Selector forms, property value forms
	24	<b>Test:-</b> about CSS

9th	25	Font properties, List properties
	26	Color ,alignment of text, box model
	27	Background images,conflict resolution <b>Assignment:</b> about forms
10th	28	Overview of java script, object orientation and java script
	29	General syntactic characteristics
	30	Primitives, Operations and Expressions, <b>Assignment:</b> object orientation and java script
11th	31	Screen Output and Keyboard Input,
	32	Control Statements, Object Creation and Modification
	33	<b>TEST:</b> Screen Output and Keyboard Input,
12th	34	Arrays, Functions
	35	Constructors
	36	<b>Assignment:</b> Arrays, Functions
13th	37	Pattern Matching Using Regular Expressions
	38	Errors in Scripts
	39	<b>Test:</b> Pattern Matching Using Regular Expressions
14th	40	Introduction to Python, Data Types and Expressions
	41	Control Statements
	42	Strings and Text Files <b>Assignment:</b> Data types and Expressions
15th	43	Lists and Dictionaries
	44	Design with Functions
	45	Design with Classes

### Text Books

1. By Peter Morville, Louis Rosenfeld, “Information Architecture on the World Wide Web”, O'Reilly Media, 2006.
2. Robert W. Sebesta, “Programming The World Wide Web”, Eight Edition, Pearson India, 2015.
3. Kenneth A. Lambert, “The Fundamentals of Python: First Programs”, 2011, Cengage Learning.

### Reference Book

1. Thomas A Powell, “HTML The Complete Reference”, Tata McGraw Hill Publications.

## Lesson Plan

Name of the Faculty	<b>Ms. Jaya Dhawan</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Software Engineering (CSE-310N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1	Introduction to Software engineering
	2	Characteristics of SE
	3	Software crisis <b>Assignment</b> -Software Engineering and its Characteristics
2nd	4	The Evolving Role Of Software Water Fall Model
	5	Software Development Life Cycle (SDLC) Models: Prototype Model, Spiral Model, Evolutionary Development Models
	6	<b>Test</b> -SDLC Models
3rd	7	Software Development Life Cycle(SDLC) Models: Iterative Enhancement Models, RAD, V MODEL
	8	Software Requirement Specification, Requirement Engineering Process, Elicitation, Analysis
	9	Documentation, Review and Management of User Needs <b>Assignment</b> -Requirement Engineering Process
4th	10	Feasibility Study, Data Flow Diagrams
	11	Decision Tables, SRS Documents, IEEE Standard for SRS
	12	<b>Test</b> -SRS Documents
5th	13	Software Quality , Concept Of Software Quality Assurance(SQA)
	14	SEI-CMM Model
	15	Introduction to Software Risk Management <b>Assignment</b> -Phases Of SEI-CMM Model
6th	16	Software Configuration Management
	17	Software Design: Basic Concept, Characteristics of Good Software Design, Modularization
	18	<b>Test</b> -Software Configuration Management
7th	19	Design Structure Charts
	20	Pseudo Codes , Flow Charts
	21	Coupling and Cohesion <b>Assignment</b> : Types of Coupling and Cohesion
8th	22	Design Strategies: Function Oriented Design, Object Oriented Design
	23	Top-Down and Bottom-Up Design
	24	<b>Test</b> : Top-Down and Bottom-Up Design

9th	25	Software Measurement and Metrics: Various Size Oriented Measure
	26	Halstead's Software Science
	27	Function Point(FP) Based Measures <b>Assignment:</b> Various Size Oriented Measure
10th	28	COCOMO MODEL
	29	COCOMO-I MODEL
	30	Cyclomatic Complexity Measures, Control Flow Graph <b>Assignment:</b> COCOMO Model
11th	31	Software Construction: Fundamentals of Software Constructions
	32	Minimizing Complexity Top-Down and Bottom-Up Programming
	33	<b>TEST:</b> Top-Down and Bottom-Up Programming
12th	34	Structured Programming
	35	Structured Programming
	36	Compliance with Design and Coding Standards <b>Assignment:</b> Structured Programming
13th	37	<b>Testing:</b> Testing Objective
	38	Unit Testing Integration Testing
	39	<b>Test:</b> Unit Testing Integration Testing
14th	40	System Testing, Acceptance Testing
	41	White Box Testing Black box testing
	42	Regression Testing, Structural Testing, Functional Testing <b>Assignment:</b> White Box Testing Techniques
15th	43	Maintenance characteristics, key Issues Maintainability Types Of Software Maintenance
	44	Cost of Software Maintenance
	45	Software Re-Engineering CASE Tools

**Text Books:**

1. Pressman S. roger, software Engineering
2. Jalote Pankaj, An integrated approach to software engineering

**Reference Books/Websites:**

1. Software engineering , Rahul Khurana
2. Software engineering ,Rajiv Mall

## Lesson Plan

Name of the Faculty	<b>Ms. Sugandha</b>
Department	<b>MBA</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Business Intelligence &amp; Entrepreneurship (HS-303N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 04</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1.	Entrepreneurship: Concept And Definitions
	2.	Entrepreneurship And Economic Development
	3.	Classification Of Entrepreneurs
2nd	4.	Types Of Entrepreneurs
	5.	Entrepreneurial Competencies
	6.	Factor Affecting Entrepreneurial Growth
3rd	7.	Economic, Non-Economic Factors
	8.	Test 1
	9.	Assignment 1
4th	10.	EDP Programmes
	11.	Entrepreneurial Training
	12.	Traits/Qualities Of An Entrepreneurs
5th	13.	Entrepreneur; Manager Vs. Entrepreneur
	14.	Opportunity / Identification And Product Selection
	15.	Entrepreneurial Opportunity Search & Identification
6th	16.	Criteria To Select A Product
	17.	Conducting Feasibility Studies
	18.	Project Finalization
7th	19.	Sources Of Information
	20.	Small Enterprises And Enterprise Launching Formalities
	21.	Definition Of Small Scale
8th	22.	Rationale Objective & Scope Of SSI
	23.	Role Of SSI In Economic Development Of India
	24.	SSI Registration
9th	25.	NOC From Pollution Board
	26.	Machinery And Equipment Selection
	27.	Project Report Preparation
10th	28.	Specimen Of Project Report
	29.	Project Planning And Scheduling Using Networking Techniques Of PERT / CPM
	30.	Test 2
11th	31.	Assignment 2
	32.	Methods Of Project Appraisal
	33.	Role Of Support Institutions And Management Of Small Business

12th	34.	Director Of Industries
	35.	DIC; SIDO; SIDBI;
	36.	Small Industries Development Corporation (SIDC)
13th	37.	SISI; NSIC; NISBUD; State Financial Corporation; SIC
	38.	Marketing Management
	39.	Production Management
14th	40.	Finance Management
	41.	Human Resource Management
	42.	Export Marketing
15th	43.	Case Studies
	44.	Test 3
	45.	Assignment 3

## Lesson Plan

Name of the Faculty	<b>Ms. Prerna Bhatia</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Web Engineering Lab (CSE-312N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Practical Day	Practical
		Topic
1st	1.	<b>HTML</b> Create your own page with your favorite hobbies using HTML, JavaScript and CSS.
2nd	2.	<b>Frameset In HTML</b> Create a frameset in HTML that is divided into three sections. The frameset should have three zones. <ol style="list-style-type: none"> <li>a. The Topmost section of the frameset should take up about just 15% of the browser window. Name this frame title.</li> <li>b. The middle section should be 75% of the browser window. Name this frame title.</li> <li>c. The lower section should be 10% of the browser window. Name this frame menu.</li> </ol>
3rd	3.	<b>Frameset In HTML</b> Create pages for each section. For the lowermost section, create page that loads the content into the middle section. The topmost section should contain a page describing the web page itself.
4th	4.	<b>Navigation using HTML</b> Create a web page, which displays the map of your country Link, each city /state on the image map, such that the respective HTML page of the city/state is displayed when the user selects an area.
5th	5.	<b>Applet</b> Add the tickertape applet to your page by customizing it for the following settings: <ol style="list-style-type: none"> <li>a. Increase the count by one.</li> <li>b. Accordingly update the message count.</li> <li>c. Change the text color to (237,192,171)</li> <li>d. Experiment with changing the scrolling speed.</li> <li>e. Customize the message text as per your page requirement.</li> </ol>
6th	6.	<b>Validation In Java Script</b> Incorporate a quest book into the Diary Food Webpage and use Java Script to build validations into the form
7th	7.	<b>Cascading Style Sheet</b> Use Cascading Style sheets (CSS) to modify the following: <ol style="list-style-type: none"> <li>a. Change background.</li> <li>b. Change font type, face and color.</li> <li>c. Align Text.</li> <li>d. Remove underlines from hyperlinks.</li> </ol>



8th	8.	<b>Loops In JavaScript</b> Write the program for using JavaScript by using for – loops (through a block of code a number of times), for/in - loops (through the properties of an object), while - loops (through a block of code while a specified condition is true), do/while - loops (through a block of code while a specified condition is true).
9th	9.	<b>Call By Value and Call By Reference</b> Write a program in Java Script for the following: <ol style="list-style-type: none"> <li>Copying, passing, and comparing by value</li> <li>Copying, passing, and comparing by reference</li> <li>References themselves are passed by value</li> </ol>
10th	10.	<b>Pattern Matching</b> Write program in Java Script for pattern matching using regular expressions and errors in scripts
11th	11.	<b>Beginning of Python Programming</b> Write a Python function/program that accepts the lengths of three sides of a triangle as inputs. The program output should indicate whether or not the triangle is an equilateral triangle.
12th	12.	<b>Searching using Python</b> Write the Python functions for linear search, binary search, selection sort, Bubble Sort, Insertion Sort and converting Fibonacci to a linear algorithm.
13th	13.	<b>Control Statement in Python</b> Write program in Python using Lists and dictionaries, Control statements and Strings and text files.

## Lesson Plan

Name of the Faculty	<b>Mr. Brij Pal Kamboj</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Essentials of Information Lab (CSE-312N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

<b>Week</b>	<b>Practical Day</b>	<b>Practical Topic</b>
1st	1.	Introduction to java programming basics
2nd	2.	Java variables, constants, Introduction about the basic java syntax
3rd	3.	Introduction about the Java-Objects & classes
4th	4.	Introduction about the Java-Objects & classes. (Continued)
5th	5.	Basic program in Java
6th	6.	Electricity Bill Program in Java
7th	7.	Write a program using JAVA to calculate the GPA of the students.
8th	8.	Review and viva-voce of the students.
9th	9.	Write a program in JAVA to add two matrices
10th	10.	Write a java program to multiply two matrices.
11th	11.	Write a java program to transpose a matrix.
12th	12.	Write a java program to calculate Average of Marks
13th	13.	Basic commands of SQL for creating the databases and tables.
14th	14.	WAP for the implementation of JOINS.
15th	15.	WAP to implement the DCL statements.

## Lesson Plan

Name of the Faculty	<b>Ms. Jaya Dhawan</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>6<sup>th</sup></b>
Subject	<b>Software Engineering Lab (CSE-316N)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Practical Day	Practical
		Topic
1st	1.	<b>Need Of Software Engineering</b> To identify the role of the software in today's world across a few significant domains related to day to day life.
2nd	2.	<b>Software Crisis</b> To identify the problem related to software crisis for a given scenario.
3rd	3.	<b>Functional and Non-Functional Requirement</b> To classify the requirement into functional and non-functional requirements.
4th	4.	<b>Software Metrics</b> To implement at least four software metrics
5th	5.	<b>Software Requirement and Specification</b> Preparation of requirement document for standard application problems in standard format for Library Management System
6th	6.	<b>Software Requirement and Specification</b> Preparation of requirement document for standard application problems in standard format for Railway Reservation System
7th	7.	<b>Software Requirement and Specification</b> Preparation of requirement document for standard application problems in standard format for Hospital Management System
8th	8.	<b>Software Requirement and Specification</b> Preparation of requirement document for standard application problems in standard format for University Admission System
9th	9.	<b>Project Scheduling</b> To prepare Project Schedule for standard application problems in standard format.
10th	10.	<b>Coding</b> To Implement the given System in any Language
11th	11.	<b>Testing</b> To implement the functional testing techniques
12th	12.	<b>Testing</b> To implement the functional testing techniques
13th	13.	<b>Testing</b> To implement the Structural testing techniques
14th	14.	<b>Testing</b> To implement the Structural testing techniques
15th	15.	VIVA

## Lesson Plan

Name of the Faculty	<b>Mr. Aashdeep Singh</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>8<sup>th</sup></b>
Subject	<b>Distributed Operating Systems (CSE-440)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1.	<b>Unit 1:</b> Architecture of distributed operating system
	2.	Introduction
	3.	Motivation <b>Assignment No 1:</b> Issues in distributed system
2nd	4.	System architecture type
	5.	Communication primitive
	6.	<b>Test 1:</b> Different Architecture Of Distributed OS
3rd	7.	<b>Unit 2:</b> Distributed mutual exclusion:
	8.	Introduction
	9.	Classification preliminaries simple solution <b>Assignment No 2:</b> Types of Operating System
4th	10.	Non token based algorithm, Ricart algorithm
	11.	Lamport algorithm
	12.	<b>Test 2:</b> Ricart Algorithm
5th	13.	Mackawa's algorithm
	14.	Token based algorithm
	15.	Broad cast algorithm <b>Assignment No 3:</b> Heuristic algorithm
6th	16.	Tree based algorithm
	17.	Comparative
	18.	<b>Test 3:</b> Token Based Algorithm
7th	19.	Performance analysis
	20.	Distributed dead lock detection
	21.	<b>Assignment No 4:</b> Non Token Based
8th	22.	<b>Unit 3:</b> Introduction ,dead lock handling
	23.	Strategies, issues in deadlock detection & resolution
	24.	<b>Test 4:</b> Deadlock
9th	25.	Control organization
	26.	Centralized, distributed
	27.	<b>Assignment No 5:</b> hierarchical detection algorithm
10th	28.	<b>Unit 4:</b> Distributed file system
	29.	Introduction, architecture mechanism for building
	30.	<b>Test 5:</b> File System
11th	31.	Distributed Scheduling
	32.	Log structure file system
	33.	<b>Assignment No 6:</b> Design issues

12 <sup>th</sup>	34.	Introduction
	35.	Motivation, issues in load distribution
	36.	<b>Test 6:</b> Load distribution
13 <sup>th</sup>	37.	Component of load algorithm
	38.	Stabilizing load distribution algorithm
	39.	<b>Assignment No 7:</b> performance comparison
14 <sup>th</sup>	40.	selection of a suitable load sharing algorithm
	41.	load sharing algorithm, Load distribution
	42.	<b>Test 7:</b> Load Distribution Algorithm
15 <sup>th</sup>	43.	Requirement for load distribution
	44.	Task migration
	45.	<b>Assignment No 8:</b> Issues in task migration

**Books :**

45 Mukesh Singhal & N.G. Shivaratri : Advanced concepts in operating systems, TMH 2001.

46 A S Tanenbaum : Modern Operating System

47 A. Silberschatz, P. Galving, G. Gahne : Applied operating system concepts, Wiley.

## Lesson Plan

Name of the Faculty	<b>Mr. Navdeep Kumar Chopra</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>8<sup>th</sup></b>
Subject	<b>Data Warehousing &amp; Data Mining (CSE-476)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1.	Data Warehousing: Definition
	2.	Data Warehousing: Scope
	3.	Data Warehousing: Practical Implications,
	4.	Data Warehousing: Practical Implications, Assignment 1: Introduction to Data Warehousing
2nd	5.	Data Warehousing: Structures
	6.	Data Warehousing: Structures
	7.	Data Warehousing: functions.
	8.	Test 1
3rd	9.	Technologies & Rules
	10.	Technologies & Rules Contd...
	11.	platform tools & tool characteristics,
	12.	Platform tools & tool characteristics, Assignment 2: Data Mining Process
4th	13.	Operational vs. information systems.
	14.	Operational vs. information systems.
	15.	Revision & Test
	16.	Test 2
5th	17.	Types of Data Warehouses: Single stage
	18.	Types of Data Warehouses: Multistage
	19.	Types of Data Warehouses: Stationary distributed
	20.	Types of Data Warehouses: Virtual data-warehouses Assignment 5: Types of Data Warehousing
6th	21.	Types of Data Warehouses: Host based
	22.	Types of Data Warehouses: Single stage
	23.	Types of Data Warehouses: Multistage
	24.	Test 3
7th	25.	Data warehouse architecture model 2-tier data warehouses.
	26.	Data warehouse architecture model 3-tier data warehouses.
	27.	Data warehouse architecture model 4-tier data warehouses.
	28.	OLAP & DSS support in data warehouses. Assignment 6: DW Modeling

8th	29.	OLAP & DSS support in data warehouses.
	30.	OLAP & DSS support in data warehouses.
	31.	Revision & test
	32.	Test 4
9th	33.	Data Mining : Knowledge discovery through statistical techniques
	34.	Data Mining : Knowledge discovery through statistical techniques
	35.	Data Mining : Knowledge discovery through neural network
	36.	Neural network Assignment 7: Neural Network
10th	37.	Data Mining : Knowledge discovery through neural network
	38.	Data Mining: Fuzzy tech. & genetic algorithms
	40.	Revision & Test
	41.	Hot based vs Single Stage
11th	42.	Revision of distributed system
	43.	Data Warehouses and Stationary distribute
	44.	Data Mining Assignment 8: Knowledge discovery through statistical techniques
	45.	Data Mining : Knowledge discovery through neural network
12th	46.	Data Mining: Fuzzy tech. & genetic algorithms
	47.	Genetic Algorithm
	49.	Genetic Algorithm vs Data Mining
	50.	Brief discussion Hot based vs Single Stage
13th	51.	Distribution system and uses
	52.	OLAP vs OLTP
	53.	OLTP and uses
	54.	OLAP & OLTP support in data warehouses.
14th	55.	Assignments: OLAP Vs OLTP
	56.	<b>Test 7</b>
15th	57.	Revision

### Books

1. J. Han & M. Kamber, Data Mining Concepts and Techniques, Morgan Kaufmann/ Elsevier, India,

### Reference Books/Websites:

1. J. Han & M. Kamber, Data Mining: Concepts and Techniques, Morgan Kaufmann 2001.
2. "Fayyad, Usama M Advances in knowledge discovery & Data Mining.
3. Dr. Sachin Kumar, Kadambri Agarwal, "Data Mining & Data Warehousing",

## Lesson Plan

Name of the Faculty	<b>Mr. Jasbeer Narwal</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>8<sup>th</sup></b>
Subject	<b>Neural Networks And Fuzzy Logic (CSE-402)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 04</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1	Introduction : Concepts of neural networks
	2	Concepts of neural networks
	3	Characteristics of Neural Networks
	4	Historical Perspective & Applications of Neural Networks Assignment 1, Concepts in short
2nd	5	The biological prototype
	6	Neuron concept
	7	Single layer Neural Networks
	8.	Test 1, biological prototype
3rd	9	Multi-Layer Neural Networks
	10	Terminology , Notation & representation of Neural Networks
	11	Training of Artificial Neural Networks
	12	Representation of perceptron and issues Assignment 2, Training of ANN
4th	13	Perceptron learning & training
	14	Classification
	15	linear Separability
	16.	Test 2, Classification
5th	17	Hopfield nets: Structure
	18	Training
	19	Hopfield Net : application
	20	Stability Assignment 3, Hopfield nets, Structure
6th	21	Back Propagation : Concept
	22	Back Propagation Training Algorithms.
	23	Applications
	24	Test 3, Algorithm of back propagation.



7th	25	Counter Propagation Networks: Kohonon Network
	26	Grossberg Layer & Training,
	27	Applications of counter propagation
	28	Applications of counter propagation Assignment 4, Grossberg training method
8th	29	Image classification.
	30	Bi-directional Associative Memories: Structure
	31	Retrieving a stored association
	32	Test 4, Image classification
9th	33	Encoding associations
	34	Memory capacity
	35	ART: ART architecture
	36	ART classification operation Assignment 5, ART
10th	37	ART implementation
	38	characteristics of ART
	39	Image Compression Using ART
	40	Test 5, Image compression using ART
11th	41	Optical Neural Networks : Vector Matrix Multipliers
	42	Hop field net using Electro optical matrix multipliers
	43	Holographic correlator
	44	Optical Hopfield net using Volume Holograms Assignment 6, Optical neural networks
12th	45	The Cognitrons : Structure and training.
	46	Necognitrons: Structure and training.
	47	Genetic Algorithms: Elements, a simple genetic algorithm
	48	Test 6, neocognitron, cognitrons
13th	49	Working of genetic algorithms evolving Neural Networks.
	50	Fuzzy logic
14th	51	Fuzzy logic
	52	Assignment 7, Genetic algorithm
15th	53	Test 7,Fuzzy logic

### Books

- Li Min Fu, “Neural Networks in Computer Intelligence”, McGraw-Hill, Inc.
- Philip D. Wasserman, “Neural Computing Theory and Practice”, ANZA Research Inc.
- Melaine Mitchell,”An Introduction to Genetic Algorithms”,PHI.
- M. H. Hassun,”Fundamentals of Artificial Neural Networks”, PHI.

## Lesson Plan

Name of the Faculty	<b>Ms. Shilpi Sehgal</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>8<sup>th</sup></b>
Subject	<b>Interactive Computer Graphics (CSE-404)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 04</b>

Week	Lecture Day	Theory
		Topic (including assignment/test)
1st	1.	<b>Unit 1: Display Devices:</b> Line and point plotting systems:
	2.	Raster, vector
	3.	Pixel and point plotters,
	4.	Continual refresh and storage displays (contd. To Next Lecture) <b>Assignment 1:</b> Raster and Random Graphics
2nd	5.	Continual refresh and storage displays
	6.	Digital frame buffer, Plasma panel display,
	7.	Very high resolution devices, High-speed drawing
	8.	<b>Test 1:</b> Plotting Systems
3rd	9.	Colour Display techniques –shadowmask
	10.	penetration CRT, colour look-up tables,
	11.	analog false colours, hard copy colour printers. (contd. To Next Lecture)
	12.	analog false colours, hard copy colour printers <b>Assignment 2:</b> CRT
4th	13.	<b>Unit 2:</b> Display Description: Screen co-ordinates, user co-ordinates
	14.	Graphical data structures compressed incremental list,
	15.	vector list, use of homogeneous coordinates
	16.	<b>Test 2:</b> Data Structures used in Graphics
5th	17.	Display code generation
	18.	Graphical functions: the view algorithm
	19.	two-dimensional transformation,
	20.	Line drawing <b>Assignment 3:</b> 2-D Trasformations
6th	21.	Line drawing Algorithms (contd.)
	22.	Line drawing Algorithms (contd.)
	23.	Line drawing Algorithms
	24.	<b>Test 3:</b> DDA Algorithms
7th	25.	Circle drawing algorithms. (contd)
	26.	Circle drawing algorithms.
	27.	<b>Unit 3:</b> Interactive graphics: Pointing and position devices
	28.	Cursor, lightpen, digitizing tablet, the mouse, track ball <b>Assignment 4:</b> Pointing and position devices
8th	29.	Interactive graphical techniques
	30.	Positioning : Elastic or Rubber Bank lines,
	31.	Linking , zooming ,panning clipping
	32.	<b>Test 4:</b> Circle drawing Algorithms

9th	33.	windowing, scissoring
	34.	Mouse Programming (contd.)
	35.	Mouse Programming
	36.	Mouse Programming <b>Assignment 5: Positioning Methods</b>
10th	37.	<b>Unit 4: 3-D Graphics</b>
	38.	Wire-Frame
	39.	Perspective display (contd.)
	40.	<b>Test 5: Clipping Methods</b>
11th	41.	Perspective display
	42.	Perspective depth (contd.)
	43.	Perspective depth
	44.	Projective transformations <b>Assignment 6:3-D Graphics Examples</b>
12th	45.	projective transformations
	46.	hidden line and surface elimination (contd.)
	47.	hidden line and surface elimination
	48.	<b>Test 6: Transformations</b>
13th	49.	hidden line and surface elimination
	50.	Transparent solids, shading,
	51.	Two dimensional Transformations
	52.	3-dimensional Transformations <b>Assignment 7: Rotaion Scaling</b>
14th	53.	3-dimensional Transformations
	54.	Interactive Graphical Technique GUI (contd.)
	55.	Interactive Graphical Technique GUI.
	56.	<b>Test 7: Hidden Line Algorithms</b>

### **Text Books:**

- Hern & Baker – Computer graphics, 2nd Ed. Phi
- Newmann, W., Sproul, R.F., Principles of Interactive Graphics, McGraw Hill

### **Reference Books:**

- a Foley-Fundamental of Interactive Computer Graphics-Addison Wesley
- b Giloi, W.K., Interactive Computer Graphics, Prentice-Hall
- c Harrington, s., Computer Graphics : A Programming Approach, Tata McGram Hill
- d Hears, d., Basker, Computer Graphics, Prentice Hall
- e Kelley Bootle, Mastering Turbo C
- f Roggers , D.F., Procedural Elements for Computer Graphics,. McGraw Hill
- g Foley, J.D., Van Dam A, Fundamentals of Interactive Computer Graphics, Addison Wesley.
- h Tosijasu. L.K. Computer Graphics, Springer Verilag.

## Lesson Plan

Name of the Faculty	<b>Mr. Jasbeer Narwal</b>
Department	<b>Computer Sc. &amp; Engineering</b>
Semester	<b>8<sup>th</sup></b>
Subject	<b>Neural Networks Pr (CSE-406)</b>
Lesson plan	<b>15 Weeks (From January, 2018 to April, 2018)</b>
Lecture per Week (in Hours)	<b>Lectures - 03</b>

Week	Practical Day	Practical
		Topic
1 <sup>st</sup>	1	Introduction to MATLAB
2 <sup>nd</sup>	2	NN for AND , OR gate using perceptron.
3 <sup>rd</sup>	3	Perceptron to classify add and even numbers.
4 <sup>th</sup>	4	NN for alphabet recognition using back propagation.
5 <sup>th</sup>	5	Hopfield network for recognizing patterns such as '+' and
6 <sup>th</sup>	6	NN for EXOR classification using Back propagation.
7 <sup>th</sup>	7	CPN for image classification.
8 <sup>th</sup>	8	Name and Telephone number recognition system