



**VEL TECH MULTI TECH
Dr RANGARAJAN Dr.SAKUNTHALA
ENGINEERING COLLEGE**

(An ISO 9001: 2008 Certified Institution)

(Owned by Vel Trust)

(Approved by Govt. of Tamil Nadu and affiliated to Anna University and Accredited
by NBA, New Delhi)



SYLLABUS

WEEKLY SCHEDULE

III SEMESTER 2014 - 2015

**DEPARTMENT OF ELECTRONICS AND
COMMUNICATION ENGINEERING**

IV YEAR DEGREE COURSE

42, Avadi – Alamathi Road,

Chennai – 600062

Telefax – 044-26841061

E-mail: emailto@veltechmultitech.org

Website : www.veltechmultitech.org



WEEK DETAILS

SL.NO.	WEEK	FROM	TO
1	WEEK1	24-06-2014	27-06-2014
2	WEEK2	30-06-2014	04-07-2014
3	WEEK3	07-07-2014	11-07-2014
4	WEEK4	14-07-2014	18-07-2014
5	WEEK5	21-07-2014	25-07-2014
6	WEEK6	28-07-2014	01-08-2014
7	WEEK7	04-08-2014	08-08-2014
8	WEEK8	11-08-2014	14-08-2014
9	WEEK9	18-08-2014	22-08-2014
10	WEEK10	25-08-2014	28-08-2014
11	WEEK11	01-09-2014	05-09-2014
12	WEEK12	08-09-2014	12-09-2014
13	WEEK13	15-09-2014	19-09-2014
14	WEEK14	22-09-2014	26-09-2014
15	WEEK15	29-09-2014	01-10-2014
16	WEEK16	06-10-2014	10-10-2014
17	WEEK17	13-10-2014	17-10-2014
18	WEEK18	20-10-2014	24-10-2014
19	WEEK19	27-10-2014	31-10-2014

SUBJECT CONTENTS

SL.NO	SUBJECT CODE	SUBJECT NAME
THEORY		
1	MA6351	Transforms and Partial Differential Equations
2	EE6352	Electrical Engineering and Instrumentation
3	EC6301	Object Oriented Programming and Data Structures
4	EC6302	Digital Electronics
5	EC6303	Signals and Systems
6	EC6304	Electronic Circuits- I
PRACTICAL		
7	EC6311	Analog and Digital Circuits Laboratory
8	EC6312	OOPS and Data Structures Laboratory

TEST / EXAM SCHEDULE

SL.NO	SUBJECT CODE	SUBJECT NAME	UNIT TEST I	UNIT TEST II	UNIT TEST III	UNIT TEST IV	UNIT TEST V
1	MA6351	Transforms and Partial Differential Equations	08/07/14 FN	30/07/14 FN	20/08/14 FN	09/09/14 FN	29/09/14 FN
2	EE6352	Electrical Engineering and Instrumentation	08/07/14 AN	30/07/14 AN	20/08/14 AN	09/09/14 AN	29/09/14 AN
3	EC6301	Object Oriented Programming and Data Structures	09/07/14 FN	31/07/14 FN	21/08/14 FN	10/09/14 FN	30/09/14 FN
4	EC6302	Digital Electronics	09/07/14 AN	31/07/14 AN	21/08/14 AN	10/09/14 AN	30/09/14 AN
5	EC6303	Signals and Systems	10/07/14 FN	01/08/14 FN	22/08/14 FN	11/09/14 FN	01/10/14 FN
6	EC6304	Electronic Circuits- I	10/07/14 AN	01/08/14 AN	22/08/14 AN	11/09/14 AN	01/10/14 AN

SL.NO	SUBJECT CODE	SUBJECT NAME	MODEL EXAM
1	MA6351	Transforms and Partial Differential Equations	13-10-2014
2	EE6352	Electrical Engineering and Instrumentation	14-10-2014
3	EC6301	Object Oriented Programming and Data Structures	15-10-2014
4	EC6302	Digital Electronics	16-10-2014
5	EC6303	Signals and Systems	17-10-2014
6	EC6304	Electronic Circuits- I	20-10-2014

MA6351 TRANSFORMS AND PARTIAL DIFFERENTIAL EQUATIONS

WEEK 1

UNIT I PARTIAL DIFFERENTIAL EQUATIONS

Formation of partial differential equations – Singular integrals - Solutions of standard types of first order partial differential equations

WEEK 2

Lagrange's linear equation -- Linear partial differential equations of second and higher order with constant coefficients of both homogeneous

WEEK 3

Non-homogeneous types

WEEK 4 UNIT TEST-I

UNIT II FOURIER SERIES

Dirichlet's conditions – General Fourier series – Odd and even functions – Half range sine series

WEEK 5

Half range cosine series – Complex form of Fourier series

WEEK 6

Parseval's identity – Harmonic analysis

WEEK 7 UNIT TEST-II

WEEK 8

UNIT III APPLICATIONS OF PARTIAL DIFFERENTIAL EQUATIONS

Classification of PDE – Method of separation of variables - Solutions of one dimensional wave Equation

WEEK 9

One dimensional equation of heat conduction – Steady state solution of two dimensional

Equation of heat conduction (excluding insulated edges)

WEEK 10 UNIT TEST-III

UNIT IV FOURIER TRANSFORMS

Statement of Fourier integral theorem – Fourier transforms pair – Fourier sine

WEEK 11

Cosine transforms – Properties

WEEK 12

Transforms of simple functions – Convolution theorem – Parseval's identity

WEEK 13 UNIT TEST-IV

WEEK 14

UNIT V Z - TRANSFORMS AND DIFFERENCE EQUATIONS

Z- transforms - Elementary properties – Inverse Z - transform (using partial fraction and residues)

WEEK 15

Convolution theorem - Formation of difference equations

WEEK-16

Solution of difference equations using Z – transform

WEEK-17- UNIT TEST V

WEEK-18- MODEL EXAM

TEXT BOOKS:

1. Veerarajan. T., "Transforms and Partial Differential Equations", Tata McGraw Hill Education Pvt.Ltd., New Delhi, Second reprint, 2012.
2. Grewal. B.S., "Higher Engineering Mathematics", 42nd Edition, Khanna Publishers, Delhi, 2012.
3. Narayanan.S, Manicavachagom Pillay.T.K and Ramanaiah.G "Advanced Mathematics for Engineering Students" Vol. II & III, S.Viswanathan Publishers Pvt Ltd.1998.

REFERENCES:

1. Bali.N.P and Manish Goyal, "A Textbook of Engineering Mathematics", 7th Edition, Laxmi Publications Pvt Ltd , 2007.
2. Ramana.B.V., "Higher Engineering Mathematics", Tata McGrawHill Publishing Company Limited, New Delhi, 2008.
3. Glyn James, "Advanced Modern Engineering Mathematics", 3rd Edition, Pearson Education, 2007.
4. Erwin Kreyszig, "Advanced Engineering Mathematics", 8th Edition, Wiley India, 2007.
5. Ray Wylie. C and Barrett.L.C, "Advanced Engineering Mathematics" Tata Mc Graw Hill Education Pvt Ltd, Sixth Edition, New Delhi, 2012.
6. Datta.K.B., "Mathematical Methods of Science and Engineering", Cengage Learning India Pvt Ltd, Delhi, 2013

EE6352 ELECTRICAL ENGINEERING AND INSTRUMENTATION

WEEK 1

UNIT I DC MACHINES

Three phase circuits, a review. Construction of DC machines – Theory of operation of DC generators

WEEK 2

Characteristics of DC generators- Operating principle of DC motors

WEEK 3

Types of DC motors and their characteristics – Speed control of DC motors- Applications

WEEK 4 UNIT TEST-I

UNIT II TRANSFORMER

Introduction – Single phase transformer construction and principle of operation – EMF equation of transformer-Transformer no-load phasor diagram

WEEK 5

Transformer on-load phasor diagram — Equivalent circuit of transformer – Regulation of transformer

WEEK 6

Transformer losses and efficiency-All day efficiency –auto transformers

WEEK 7 UNIT TEST-II

WEEK 8

UNIT III LIPIDS

Principle of operation of three-phase induction motors – Construction – Types – Equivalent circuit –Construction of single-phase induction motors – Types of single phase induction motors – Double revolving field theory – starting methods

WEEK 9

Principles of alternator – Construction details – Types – Equation of induced EMF – Voltage regulation. Methods of starting of synchronous motors – Torque equation – V curves – Synchronous motors

WEEK 10 UNIT TEST-III

UNIT IV BASICS OF MEASUREMENT AND INSTRUMENTATION

Static and Dynamic Characteristics of Measurement – Errors in Measurement - Classification of Transducers – Variable resistive – Strain gauge, thermistor RTD – transducer

WEEK 11

Variable Capacitive Transducer – Capacitor Microphone - Piezo Electric Transducer

WEEK 12

Variable Inductive transducer – LVDT, RVDT

WEEK 13 UNIT TEST-IV

WEEK 14

UNIT V ANALOG AND DIGITAL INSTRUMENTS

DVM, DMM – Storage Oscilloscope. Comparison of Analog and Digital Modes of operation, Application of measurement system, Errors

WEEK 15

Measurement of R, L and C, Wheatstone, Kelvin, Maxwell, Anderson, Schering and Wien bridges

WEEK-16

Measurement of Inductance, Capacitance, Effective resistance at high frequency, Q-Meter

WEEK-17- UNIT TEST V

WEEK-18- MODEL EXAM

TEXT BOOKS:

1. I.J Nagarath and Kothari DP, “Electrical Machines”, McGraw-Hill Education (India) Pvt Ltd 4th Edition ,2010
2. A.K.Sawhney, “A Course in Electrical & Electronic Measurements and Instrumentation”, Dhanpat Rai and Co, 2004.

REFERENCES:

1. Del Toro, “Electrical Engineering Fundamentals” Pearson Education, New Delhi, 2007.
2. W.D.Cooper & A.D.Helfrick, “Modern Electronic Instrumentation and Measurement Techniques”, 5th Edition, PHI, 2002.
3. John Bird, “Electrical Circuit Theory and Technology”, Elsevier, First Indian Edition, 2006.

4. Thereja .B.L, “Fundamentals of Electrical Engineering and Electronics”, S Chand & Co Ltd, 2008.
5. H.S.Kalsi, “Electronic Instrumentation”, Tata Mc Graw-Hill Education, 2004.
6. J.B.Gupta, “Measurements and Instrumentation”, S K Kataria & Sons, Delhi, 2003.

EC6301 OBJECT ORIENTED PROGRAMMING AND DATA STRUCTURES

WEEK 1

UNIT I DATA ABSTRACTION & OVERLOADING

Overview of C++ – Structures – Class Scope and Accessing Class Members – Reference Variables – Initialization – Constructors – Destructors

WEEK 2

Member Functions and Classes – Friend Function – Dynamic Memory Allocation – Static Class Members

WEEK 3

Container Classes and Integrators – Proxy Classes – Overloading: Function overloading and Operator Overloading

WEEK 4 UNIT TEST-I

UNIT II INHERITANCE & POLYMORPHISM

WEEK 5

Base Classes and Derived Classes – Protected Members – Casting Class pointers and Member Functions – Overriding – Public, Protected and Private Inheritance – Constructors and Destructors in derived Classes – Implicit Derived

WEEK 6

Class Object To Base – Class Object Conversion – Composition Vs. Inheritance – Virtual functions – This Pointer – Abstract Base Classes and Concrete Classes – Virtual Destructors – Dynamic Binding

WEEK 7 UNIT TEST-II

WEEK 8

UNIT III LINEAR DATA STRUCTURES

Abstract Data Types (ADTs) – List ADT – array-based implementation – linked list implementation — singly linked lists

WEEK 9

Polynomial Manipulation - Stack ADT – Queue ADT - Evaluating arithmetic expressions

WEEK 10 UNIT TEST-III

UNIT IV NON-LINEAR DATA STRUCTURES

Trees – Binary Trees – Binary tree representation and traversals – Application of trees

WEEK 11

Set representation and Union-Find operations – Graph and its representations – Graph Traversals

WEEK 12

Representation of Graphs – Breadth-first search – Depth-first search - Connected components

WEEK 13 UNIT TEST-IV

WEEK 14

UNIT V SORTING AND SEARCHING

Sorting algorithms: Insertion sort

WEEK 15

Quick sort - Merge sort

WEEK-16

Searching: Linear search –Binary Search

WEEK-17- UNIT TEST V

WEEK-18- MODEL EXAM

TEXT BOOKS:

1. Deitel and Deitel, “ C++, How To Program”, Fifth Edition, Pearson Education, 2005.
2. Mark Allen Weiss, “Data Structures and Algorithm Analysis in C++”, Third Edition, Addison- Wesley, 2007.

REFERENCES:

1. Bhushan Trivedi, “ Programming with ANSI C++, A Step-By-Step approach”, Oxford University Press, 2010.
2. Goodrich, Michael T., Roberto Tamassia, David Mount, “Data Structures and Algorithms in C++”, 7th Edition, Wiley. 2004.
3. Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein, "Introduction to Algorithms", Second Edition, Mc Graw Hill, 2002.

4. Bjarne Stroustrup, "The C++ Programming Language", 3rd Edition, Pearson Education, 2007.
5. Ellis Horowitz, Sartaj Sahni and Dinesh Mehta, Fundamentals of Data Structures in C++, Galgotia Publications, 2007.

EC6302 DIGITAL ELECTRONICS

WEEK 1

UNIT I MINIMIZATION TECHNIQUES AND LOGIC GATES

Minimization Techniques: Boolean postulates and laws – De-Morgan's Theorem - Principle of Duality - Boolean expression - Minimization of Boolean expressions — Minterm – Maxterm - Sum of Products (SOP) – Product of Sums (POS) – Karnaugh map Minimization – Don't care conditions – Quine - Mc Cluskey method of minimization

WEEK 2

Logic Gates: AND, OR, NOT, NAND, NOR, Exclusive-OR and Exclusive-NOR Implementations of Logic Functions using gates, NAND-NOR implementations – Multi 38 level gate implementations

WEEK 3

Multi output gate implementations. TTL and CMOS Logic and their characteristics – Tristate gates

WEEK 4 UNIT TEST-I

UNIT II COMBINATIONAL CIRCUITS

Design procedure – Half adder – Full Adder – Half subtractor – Full subtractor – Parallel binary adder, parallel binary Subtractor

WEEK 5

Fast Adder - Carry Look Ahead adder – Serial Adder/Subtractor - BCD adder – Binary Multiplier

WEEK 6

Binary Divider - Multiplexer/ Demultiplexer – decoder - encoder – parity checker – parity generators – code converters - Magnitude Comparator

WEEK 7 UNIT TEST-II

WEEK 8

UNIT III SEQUENTIAL CIRCUITS

Latches, Flip-flops - SR, JK, D, T, and Master-Slave – Characteristic table and equation – Application table – Edge triggering – Level Triggering – Realization of one flip flop using other flip flops – serial adder/subtractor-

Asynchronous Ripple or serial counter – Asynchronous Up/Down counter - Synchronous counters – Synchronous Up/Down counters

WEEK 9

Programmable counters – Design of Synchronous counters: state diagram- State table –State minimization –State assignment - Excitation table and maps-Circuit implementation - Modulo-n counter, Registers – shift registers - Universal shift registers – Shift register counters – Ring counter – Shift counters - Sequence generators

WEEK 10 UNIT TEST-III

UNIT IV MEMORY DEVICES

Classification of memories – ROM - ROM organization - PROM – EPROM – EEPROM –EAPROM, RAM – RAM organization – Write operation – Read operation – Memory cycle - Timing wave forms – Memory decoding – memory expansion – Static RAM Cell- Bipolar RAM cell

WEEK 11

MOSFET RAM cell – Dynamic RAM cell –Programmable Logic Devices – Programmable Logic Array (PLA)

WEEK 12

Programmable Array Logic (PAL) – Field Programmable Gate Arrays (FPGA) - Implementation of combinational logic circuits using ROM, PLA, PAL

WEEK 13 UNIT TEST-IV

WEEK14

UNIT V SYNCHRONOUS AND ASYNCHRONOUS SEQUENTIAL CIRCUITS

Synchronous Sequential Circuits: General Model – Classification – Design – Use of Algorithmic State Machine – Analysis of Synchronous Sequential Circuits

WEEK 15

Asynchronous Sequential Circuits: Design of fundamental mode and pulse mode circuits – Incompletely specified State Machines

WEEK-16

Problems in Asynchronous Circuits – Design of Hazard Free Switching circuits. Design of Combinational and Sequential circuits using VERILOG.

WEEK-17- UNIT TEST V

WEEK-18- MODEL EXAM

TEXT BOOK:

1. M. Morris Mano, “Digital Design”, 4th Edition, Prentice Hall of India Pvt. Ltd., 2008 / Pearson Education (Singapore) Pvt. Ltd., New Delhi, 2003

REFERENCES:

1. John F.Wakerly, “Digital Design”, Fourth Edition, Pearson/PHI, 2008
2. John.M Yarbrough, “Digital Logic Applications and Design”, Thomson Learning, 2006.
3. Charles H.Roth. “Fundamentals of Logic Design”, 6th Edition, Thomson Learning, 2013.
4. Donald P.Leach and Albert Paul Malvino, “Digital Principles and Applications”, 6th Edition, TMH, 2006.
5. Thomas L. Floyd, “Digital Fundamentals”, 10th Edition, Pearson Education Inc, 2011
6. Donald D.Givone, “Digital Principles and Design”, TMH, 2003

EC6303 SIGNALS AND SYSTEMS

WEEK 1

UNIT I CLASSIFICATION OF SIGNALS AND SYSTEMS

Continuous time signals (CT signals) - Discrete time signals (DT signals) - Step, Ramp, Pulse, Impulse, Sinusoidal, Exponential, Classification of CT and DT signals - Periodic & Aperiodic signals, Deterministic & Random signals

WEEK 2

Energy & Power signals - CT systems and DT systems- Classification of systems – Static & Dynamic, Linear & Nonlinear

WEEK 3

Time-variant & Time-invariant, Causal & Noncausal, Stable & Unstable

WEEK 4 UNIT TEST-I

UNIT II ANALYSIS OF CONTINUOUS TIME SIGNALS

Fourier series analysis-spectrum of Continuous Time (CT) signals

WEEK 5

Fourier and Laplace Transforms in CT Signal Analysis

WEEK 6

Fourier and Laplace Transforms Properties

WEEK 7 UNIT TEST-II

WEEK 8

UNIT III LINEAR TIME INVARIANT- CONTINUOUS TIME SYSTEMS

Differential Equation-Block diagram representation-impulse response, convolution integrals

WEEK 9

Fourier and Laplace transforms in Analysis of CT systems

WEEK 10 UNIT TEST-III

UNIT IV ANALYSIS OF DISCRETE TIME SIGNALS

Baseband Sampling - DTFT

WEEK 11

Properties of DTFT.

WEEK 12

Z Transform – Properties of Z Transform

WEEK 13 UNIT TEST-IV

WEEK14

UNIT V LINEAR TIME INVARIANT-DISCRETE TIME SYSTEMS

Difference Equations-Block diagram representation-Impulse response

WEEK 15

Convolution sum- Discrete Fourier

WEEK-16

Z Transform Analysis of Recursive & Non-Recursive systems

WEEK-17- UNIT TEST V

WEEK-18- MODEL EXAM

TEXT BOOK:

1. Allan V.Oppenheim, S.Wilsky and S.H.Nawab, “Signals and Systems”, Pearson, 2007

REFERENCES:

1. B. P. Lathi, “Principles of Linear Systems and Signals”, Second Edition, Oxford, 2009.
2. R.E.Zeimer, W.H.Tranter and R.D.Fannin, “Signals & Systems - Continuous and Discrete”, Pearson, 2007.
3. John Alan Stuller, “An Introduction to Signals and Systems”, Thomson, 2007.

4. M.J.Roberts, “Signals & Systems Analysis using Transform Methods & MATLAB”, Tata McGraw Hill, 2007.

EC6304 ELECTRONIC CIRCUITS – I

WEEK 1

UNIT I BIASING OF DISCRETE BJT AND MOSFET

DC Load line, operating point, Various biasing methods for BJT-Design-Stability

WEEK 2

Stability-Bias compensation, Thermal stability

WEEK 3 UNIT TEST-I

Design of biasing for JFET, Design of biasing for MOSFET.

WEEK 4

UNIT II BJT AMPLIFIERS

Small signal Analysis of Common Emitter-AC Loadline, Voltage swing limitations

WEEK 5

Common collector and common base amplifiers – Differential amplifiers

WEEK 6

CMRR- Darlington Amplifier- Bootstrap technique - Cascaded stages - Cascode Amplifier

WEEK 7 UNIT TEST-II

WEEK 8

UNIT III JFET AND MOSFET AMPLIFIERS

Small signal analysis of JFT amplifiers- Small signal Analysis of MOSFET and JFET, Common source amplifier, Voltage swing limitations, Small signal analysis of MOSFET

WEEK 9

JFET Source follower and Common Gate amplifiers, - BiMOS Cascode amplifier

WEEK 10 UNIT TEST-III

UNIT IV FREQUENCY ANALYSIS OF BJT AND MOSFET AMPLIFIERS

Low frequency and Miller effect, High frequency analysis of CE and MOSFET CS amplifier

WEEK 11

Short circuit current gain, cut off frequency

WEEK 12

f_{α} And f_{β} unity gain and Determination of bandwidth of single stage and multistage amplifiers

WEEK 13 UNIT TEST-IV

WEEK 14

UNIT V IC MOSFET AMPLIFIERS

IC Amplifiers- IC biasing Current steering circuit using MOSFET- MOSFET current sources

WEEK 15

PMOS and NMOS current sources. Amplifier with active loads - enhancement load, Depletion load **WEEK-16**

PMOS and NMOS current sources load- CMOS common source and source follower- CMOS differential amplifier- CMRR

WEEK-17- UNIT TEST V

WEEK-18- MODEL EXAM

TEXT BOOK:

1. Donald .A. Neamen, Electronic Circuit Analysis and Design –2nd Edition, Tata Mc Graw Hill, 2009.

REFERENCES:

1. Adel .S. Sedra, Kenneth C. Smith, “Micro Electronic Circuits”, 6th Edition, Oxford University Press, 2010. 41
2. David A., “Bell Electronic Devices and Circuits”, Oxford Higher Education Press, 5th Editon, 2010
3. Behzad Razavi, “Design of Analog CMOS Integrated Circuits”, Tata Mc Graw Hill, 2007.
4. Paul Gray, Hurst, Lewis, Meyer “Analysis and Design of Analog Integrated Circuits”, 4thEdition ,John Willey & Sons 2005
5. Millman.J. and Halkias C.C, “Integrated Electronics”, Mc Graw Hill, 2001.
6. D.Schilling and C.Belove, “Electronic Circuits”, 3rd Edition, Mc Graw Hill, 1989.

EC6311 ANALOG AND DIGITAL CIRCUITS LABORATORY

LIST OF ANALOG EXPERIMENTS:

1. Frequency Response of CE / CB / CC amplifier
2. Frequency response of CS Amplifiers
3. Darlington Amplifier
4. Differential Amplifiers- Transfer characteristic.
5. CMRR Measurement
6. Cascode / Cascade amplifier
7. Determination of bandwidth of single stage and multistage amplifiers
8. Spice Simulation of Common Emitter and Common Source amplifiers

LIST OF DIGITAL EXPERIMENTS

9. Design and implementation of code converters using logic gates
(i) BCD to excess-3 code and vice versa (ii) Binary to gray and vice-versa
10. Design and implementation of 4 bit binary Adder/ Subtractor and BCD adder using IC 7483
11. Design and implementation of Multiplexer and De-multiplexer using logic gates
12. Design and implementation of encoder and decoder using logic gates
13. Construction and verification of 4 bit ripple counter and Mod-10 / Mod-12 Ripple counters
14. Design and implementation of 3-bit synchronous up/down counter
15. Implementation of SISO, SIPO, PISO and PIPO shift registers using Flip- flops

EC6312 OOPS AND DATA STRUCTURES LABORATORY

LIST OF EXPERIMENTS:

1. Basic Programs for C++ Concepts
2. Array implementation of List Abstract Data Type (ADT)
3. Linked list implementation of List ADT
4. Cursor implementation of List ADT
5. Stack ADT - Array and linked list implementations
6. The next two exercises are to be done by implementing the following source files
 - i. Program source files for Stack Application 1
 - ii. Array implementation of Stack ADT
 - iii. Linked list implementation of Stack ADT

- iv. Program source files for Stack Application 2
- v. An appropriate header file for the Stack ADT should be included in (i) and (iv)
- 7. Implement any Stack Application using array implementation of Stack ADT (by implementing files (i) and (ii) given above) and then using linked list
- 8. Implementation of Stack ADT (by using files (i) and implementing file (iii))
- 9. Implement another Stack Application using array and linked list implementations of Stack ADT (by implementing files (iv) and using file (ii), and then by using files (iv) and (iii))
- 10. Queue ADT – Array and linked list implementations
- 11. Search Tree ADT - Binary Search Tree
- 12. Implement an interesting application as separate source files and using any of the searchable ADT files developed earlier. Replace the ADT file alone with other appropriate ADT files. Compare the performance
- 13. Quick Sort