

CSE205

Data Structures

Lecture #0

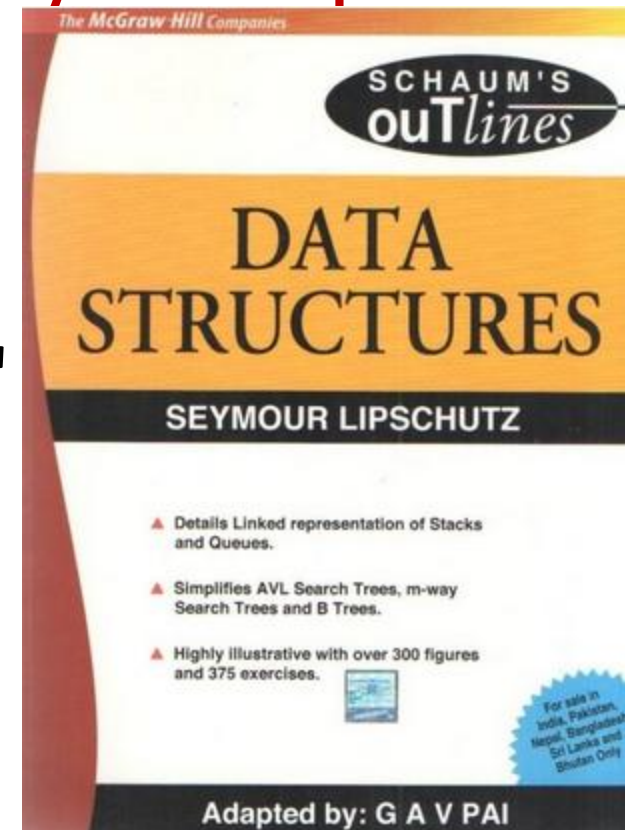
The kick start session

Course details

- CSE205
- LTP – 3 1 0 [Three lectures/week]
- **Book to Follow**
- Data Structures and Algorithms (Special Indian Edition) (Schaums' Outlines Series)

ISBN 9780070601680

Author - Seymour Lipschutz



Course Orientation – CSE205

- 1 :DISCIPLINE KNOWLEDGE,
- 5 :PLACEMENT EXAMINATION,
- 6 :PLACEMENT EXAMINATION(Mass Recruiters),
- 7 :COMPETITIVE EXAMINATION(Higher Education)

Course Assessment Model

• CSE205	Marks break up*
• Attendance	5
• CA (Two best out of Three ATs)	20
• MTT	25
• ETE	50
• Total	<hr/> 100

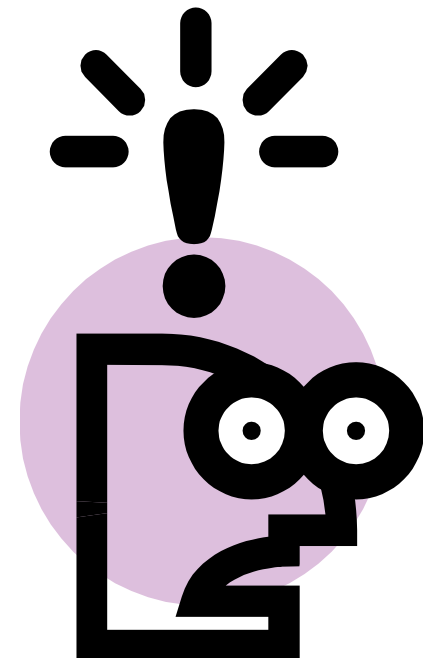
Detail of Academic Tasks

CSE205

- AT1: Test 1 (Algo. based) Lecture No12
- AT2: Test 2 (Algo. based) Lecture No31 (After MTT)
- AT3: Test3 (Algo. based) Lecture No36 (After MTT)

The course contents CSE205

- Introduction to data structures
- Computation of complexity
- Arrays, Sorting & Searching
- Linked List
- Stack and Queues
- Trees
- Hashing
- Graphs



The hitch...

The BURNING questions in mind...

- **Why are we learning data structures?**
- **What will be the course outcome?**



Why are we learning data structures?

- 1.Helps us get an idea of running time of algorithm
- 2.Helps us implement Efficient Algorithms
- 3.Helps us decide on hardware requirements
- 4.Help us decided What is feasible Vs. What is impossible
- 5.Job Interviews purpose
- 6.Programs are comprised of two things: data and algorithms. The algorithms describe the way the data is to be transformed. The reason for learning about data structures is because adding structure to our data can make the algorithms much simpler, easier to maintain, and often faster.

What will be the course outcome?

- Assess how the choice of data structures and algorithm design methods impacts the performance of programs.
- Choose the appropriate data structure and algorithm design method for a specified application.
- Solve problems using data structures such as linear lists, stacks, queues, hash tables, binary trees, heaps, binary search trees, and graphs and writing programs for these solutions.



Next Class: Basic Data Structures