

School of Computer Science and Software Engineering

CSE1303 Summer Semester 2002

Part A - Syllabus

Topic 1: Introduction/Revision

(Lecture 1)

- Important Information.
- C datatypes
- Strings
- Input/Output
- File I/O
- Arrays, structs and typedef.

Topic 2: Pointers

(Lecture 2)

- Revision of Pointers.
- Basic Pointer arithmetic.
- Pointers and Arrays.

Topic 3: Basic Data Structures

(Lectures 3-5)

- Stacks.
- Queues.
- Lists.
- Abstract Data Types.

Topic 4: Dynamic Memory

(Lecture 6)

- Allocating and deallocating memory.

Topic 5: Linked Structures

(Lectures 7-10)

- Nodes.
- Linked Stacks.
- Linked Queues.
- Simply Linked List.
- Double Linked List.

Topic 6: Recursion

(Lecture 11)

- The principle of recursion
- Relationship with Stacks.
- Comparison with iteration

Topic 7: Binary Trees

(Lecture 12)

- Definition
- Preorder, Inorder, and Postorder
- Expression Trees

Topic 8: Information Retrieval

(Lectures 13-16)

- Binary Search Trees.
- Hash Tables.
- Collision Resolution.

Topic 9: Advanced Sorting

(Lecture 17)

- Merge Sort
- Quick Sort

Revision (Lecture 18)