Advanced Programming
COEN 11

Lab 8

Lab 8

- Restaurant Waiting List with 4 ranges of group sizes
  - 1-2
  - 3-4
  - 5-6
  - >= 7
- Use an array of linked lists
  - One list per range
  - Use a switch to select the list

Lab 8

- The waiting list is created interactively with the following commands
  - 1 name number – insert a node with the name and number of people specified in the corresponding list
  - 2 table_size – show and delete the oldest node with number <= table_size from the best list (start from the closest and move up)
  - 3 – print the list for each range: name and number, from oldest to newest
  - 4 character (new) – count the occurrences of the given character in the names
  - 5 – show all the names backwards
  - 6 – save and quit

Lab 8

- Do not allow names to repeat
  - Check all the lists before inserting
- Keep your lists in the oldest-to-newest order
  - Always insert a new entry at the end of the appropriate list
  - Tail pointers make it more efficient
- To show the lists
  - Traverse each list using the the pointers
- To sit a group
  - Traverse each list, from the closest to the smallest range
  - Change pointers to eliminate the node
  - Free the node at the end

Lab 8

- Requirements
  - Array of lists
  - Names cannot repeat
  - Free all the nodes before quitting
    - (new) the function must be recursive
  - (new) When showing all the names backwards, use a recursive function which should be called for each name