Advanced Programming
COEN 11

Lab 6

Lab 6

- Surf School Waiting List
  - with 4 ranges of group sizes
    - 1-2
    - 3-4
    - 5-6
    - Greater than 6
- Use an array of linked lists
  - One list per range

Lab 6

- 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 opening – show and delete the oldest nodes that fit the opening, smallest first
    - Do not traverse lists with sizes larger than the opening
  - 3 – print the list for each range: name and number, from oldest to newest
  - 4 size – print the entries that have group <= size
    - Do not traverse lists with groups larger than the size
  - 0 – quit

Lab 6

- 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
  - Have tail pointers
- To show the lists
  - Traverse each list using pointers
- To remove entries
  - Traverse each list, from the smallest to the largest range
  - Change pointers to eliminate the node
  - Free the node at the end

Lab 6

- Requirements
  - Define a structure list with 2 members
    - Head and Tail (both are NODE pointers)
  - Define an array of struct list
    - Heads and Tails need to be initialized (NULL)
  - Free all the nodes before quitting
    - Create a new function for option zero

Lab 6

- Extra Credit (5 points)
  - Add an option to change the size of a group in the waiting list
    - 5 name old_size new_size – Traverse the right list searching for name

Lab 6

- To receive full credit
  - Pre-lab
    - No pre lab this time
  - Demo
  - Submit to Camino