Foundation Exam Review Class Lesson Plan – Week 1 (October 16, 2014)

1. Intro
2. Hand out survey (attached file Survey.pdf)
3. Tips from "How to learn how to learn" course
   - https://www.coursera.org/course/learning
   - See attached document (Coursera-FinalPaper.pdf)
   - See attached document (FndPrepare.pdf)
4. Homework Questions – Linked List Coding from Scratch

   a) Write a function that adds a value c to each node in a linked list. The prototype is given below.

   ```
   void addC(struct node* front, int c);
   ```

   b) Write a function that moves the first node in a linked list to the end and returns a pointer to the new front of the list. The prototype is given below.

   ```
   struct node* frontToBack(struct node* front);
   ```

   c) Write a function that takes in a pointer to the front of a linked list and duplicates each node in the list, inserting the duplicates right after the node they are copying. For example, the list 3, 6, 7 would become 3, 3, 6, 6, 7 and 7. The prototype is given below.

   ```
   struct node* doubleList(struct node* front);
   ```

   Note: The return of the pointer isn't necessary. The function could be void and still work.

   d) Write a function that takes in a pointer to the front of a linked list and a value and deletes each instance of that value from the list and returns a pointer to the front of the resulting list. The prototype is given below.

   ```
   struct node* delValue(struct node* front, int value);
   ```

   e) Write a function that takes in a pointer to the front of a linked list, reverses the list and returns a pointer to the resulting list. Feel free to add helper functions. The prototype is given below.

   ```
   struct node* reverse(struct node* front);
   ```

5) Give practice exam (Computer Science May 2009)