CS 240: Data Structures and Data Management **Fall 2024**

Tutorial 07: Nov 1

1. **MTF/Transpose**
   Consider a linked list with the keys $k_1, k_2, ..., k_n$ in that order. Give a sequence of n searches such that the Move-To-Front Heuristic uses $O(n)$ comparisons, while the Transpose Heuristic uses $\Omega(n^2)$ comparisons.

2. **Creating Tries**
   Draw the binary trie, pruned trie and compressed trie containing the following keys 101, 1001, 1001000, 10011, 1110, 11111, 11100, 111110, 111101.

3. **Space of Compressed Tries**
   Show that the space used by a compressed trie is in $O(n)$ where n is the number of elements in the trie.