**Part 1:**  Random Access Files Vs. Sequential Access Files

Random access files are faster in terms of search and access, due to the fixed length of each structure in a record. However, the fixed length can potentially waste memory and cut off information that exceeds the defined field length.

Sequential access files don’t have fixed record lengths, so users don’t have to worry about field lengths cutting off information or wasting memory. These types of files, however, often lack organization and are less efficient when seeking specific structures.

If there are going to be a huge amount of structures to keep track of, and search through, random access is the preferred method.

**Part 2:** Linked Lists Vs. Arrays

Arrays are pointers to a sequential store of information, with a defined number of elements at fixed intervals. Lists are built from structures which hold pointers to the next structure in the list.

Linked lists are preferred when you want to insert and delete ‘elements’ (meaning whole structures) anywhere within the file, or when the number of elements is unknown until runtime. Arrays are preferred when in need of random access to elements, the size is known, or memory is a concern (as you aren’t having to store pointers to the element of a list).