**Chart**

Task Vector Search Tree Hash Table

Creating course object O O(log n) O

Reading file O O O

Advantages of Vector is that it is simple and easy to use, provides constant access to elements, resizing allows it to grow or shrink when needed, and the elements are stored in memory allowing access.

Disadvantages of vectors are insertion and deletion are expensive since it may require shifting elements and sorting the vector may be inefficient for large sets of data.

Advantages of hash tables are that it is fast and efficient to look up operations, it is well suited for handling unique keys and putting values to those keys, and it can handle large sets of data very well.

Disadvantages of hash tables are that collisions may occur which will decrease performance, resizing and rehashing can be time consuming when the load increases, and order is not guaranteed.

Advantages of tree is that it provides efficient searching, deleting, and inserting, guarantees an order, and it is suitable for instances where elements need to be sorted in a certain way.

Disadvantages of a tree are it requires additional memory, certain operations can be slower depending on the height and balance of the tree, and in can become unbalanced if it in not managed correctly.

I would recommend using hash tables and vectors based on the analysis of each structure. The reason for this is that vectors are simple and easy to use and allow for easy and fast access to add data and iterate over the elements. Using the hash table will allow for fast look up of the data.