

When run, the records file allows a user to modify a dynamic database, searching, sorting, printing, deleting, and adding by both EmployeeID and SIN number. At the end of the running of the program, the user will have the option of discarding changes, or updating the file.

The Records class holds all important information for modifying the database. An array of records (Record class is implemented to store these), the number of records in the array, the size of the array, and the root to a BST (Node class is implemented to construct the tree). The methods in this class allow a user to find, insert, delete, update, and print records. In its current form, this code is optimized to search and sort by EmployeeID and SIN, but the code could be easily modified to allow for sorting/printing by any field.

The records array is sorted using a heap sort, by employeeID. The BST is created from an array sorted by SIN number. This allows for a balanced tree. Both BST and records array are constructed at the start of the program, and inserted to/deleted from without sorting again.

SIN number must be the correct 9 digits long in order to allow for proper sorting, and employeeID should be of uniform format