1. Implementation of a dictionary where the dictionary words along with their meanings are saved in a file e.g. dictionary file. The application reads the file when started and save the words and their meanings in a data structure. The user can search any word and the application will give the meanings of that word. If the word is not found, the application gives a message and offers the user to enter this word and its meaning into the dictionary. When user gives a word and its meaning to be added in the dictionary, the application saves the word and its meaning in the dictionary file. The problem can be extended to create an Urdu dictionary or by additional features such as synonyms of a word, antonyms of a word, examples of the word used in a sentence etc.
2. Use general trees to implement a simple algorithm which can list all of the possible words from a string of given length. For example, all possible alphabetic strings of size 3 will yield e.g. *abc, abd, abx, aby, abz, baa, bab* and so on. Such an algorithm can be used to build a naive dictionary attack to crack a set of passwords. This algorithm can be implemented without trees but it will be an interesting project to practice the concepts of trees in DSA.
3. Library management system where the data of the books is loaded from a file. The data will contain several important attributes of a book e.g. title, author, publisher, ISBN, date of publishing, type of book (genre) etc. When the application starts, it reads the data from the file and load it into a data structure e.g. tree, heap, hash map etc. A user can then search a book by its title, author name, ISBN or any other field. User can also add new books (insert), can delete a book (delete), can update an existing record and so on. Every edit should update the data file.
4. The idea given in point 3 can be extended to:
   1. school/college management system,
   2. university management system,
   3. hospital management system,
   4. airport arrival, departure management system,
   5. airport passport control system,
   6. airport radar control system,
   7. software house management system,
   8. e-tag based gate control system,
   9. e-tag based auto tolling system on highways,
   10. railway reservation system
   11. movies’ tickets booking system
   12. contacts management system
   13. calendar management system
   14. banking data management system,
   15. disaster management system,
   16. fire fighters management system and so on.