

ABSTRACT

The VOTER ID System provides a user-friendly, interactive Menu Driven Interface (MDI) based on local file systems. All data is stored in files on disk. The system uses file handles to access the files. This System is used by the person to view his/her VOTER ID details. The system is initially used to add person records containing the V_ID, name, dob, address, gender. The system can then be used to search, delete, modify or display existing records of all the citizens. In the VOTER ID System, the V_ID field is a character array that can hold a numeric value of some maximum size. The size of the array is larger than the longest string it can hold. We preserve the identity of fields by separating them with delimiters. We have chosen the vertical bar character, as the delimiter here.

In this System, we have a fixed number of fields, each with a maximum length, that combine to make a data record. Fixing the number of fields in a record does not imply that the size of fields in the record is fixed. The records are used as containers to hold a mix of fixed and variable-length fields within a record. We have 5 contiguous fields. We use a B-TREE of indexes to keep byte offsets for each record in the original file. The byte offsets allow us to find the beginning of each successive record and compute the length of each record. We look up the position of a record in the B-TREE, and then seek to the record in the data file. Our choice of a record delimiter for the data files is the end-of-line (new-line) character (\n).

A B-TREE of simple indexes on the primary key is used to provide direct access to data records. Each node in the B-TREE consists of a primary key and reference pair of fields. The primary key field is the V_ID field while the reference field is the starting byte offset of the matching record in the data file.