How Data Is stored?

Data storage is made up of several levels with files representing one format. Another format is what we identified earlier as "1s and 0s" called bits; a series of bits (8 bits) would produce a bytes another form of data storage; and you also have fields and records as other instances of data storage. It is computer literate to understand database storage hierarchy. As guided by your textbook, the following is a more detailed outline of data storage hierarchy:

- **Bits**—The bit is the smallest unit of data the computer can store in a database—represented by 0 for electricity being off or 1 for on.
- **Characters**—A character (**byte**) is a letter, number, or special character. A, B, C, 1, 2, 3, &, %, @ are all examples of single characters. A combination of bits represents a character.
- **Field**—A field (**column**) is a unit of data consisting of one or more characters (bytes). An example of a field is your first name, your street address, or your Social Security number.
- **Record**—A record (**row**) is a collection of related fields. Each record stores data about only one entity, which can be a person, a place, a thing, an occurrence, or a phenomenon. An example of a record would be your name and address and Social Security number.
- **File**—A file (often called **table**) is a collection of related records. An example of such a file is data collected on everyone employed in the same department of a company, including all names, addresses, and Social Security numbers. You use files (tables) a lot because the table is the collection of data or information that is treated as a unit by the computer.
- The file (**table**) is at the top of the data hierarchy. A collection of related files (tables) forms the **database**. A company database might include files on all past and current employees in all departments. There would be various files for each employee: payroll, retirement benefits, and so on.