**Data Design**

A description of all data structures including internal, global, and temporary data structures, database design (tables), file formats.

Internal software data structure

Stack, Queue.

Global data structure

Hashmap.

Temporary data structure

Stack, Queue.

Database description

MySQL: MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation. The MySQL Web site (http://www.mysql.com/) provides the latest information about MySQL software.

MySQL is a database management system.

A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

**SQLite Database**

SQLite is an embedded SQL database engine. Unlike most other SQL databases, SQLite does not have a separate server process. SQLite reads and writes directly to ordinary disk files. A complete SQL database with multiple tables, indices, triggers, and views, is contained in a single disk file. The database [file format](https://www.sqlite.org/fileformat2.html) is cross-platform - you can freely copy a database between 32-bit and 64-bit systems or between [big-endian](http://en.wikipedia.org/wiki/Endianness) and [little-endian](http://en.wikipedia.org/wiki/Endianness) architectures. These features make SQLite a popular choice as an [Application File Format](https://www.sqlite.org/appfileformat.html). Think of SQLite not as a replacement for [Oracle](http://www.oracle.com/database/index.html) but as a replacement for [fopen()](http://man.he.net/man3/fopen)