

With most of the HCMUT_SSPPS system' s data being structured data in addition to the high frequency in reading and writing of the data, a database storage model using a relational database management system will be most fitting for storing the data of the system. The database will be stored in an SPSO' s authorized server, connecting to the Application Server via the TCP/IP protocol. The Database Server stores the following data:

- Students, SPSO Staffs, Printers are stored in 3 tables with their own attributes
- Students' Files and Printing configurations: While unstructured data such as the various file types uploaded by students can be more efficiently stored as Binary Large Object (BLOB) files in the database, storing them as a database table allows for faster queries and better security of personal files for each students.
- Printing Log: To allow for filtering by student, by printer and by time period, printing log of all printers under the system is stored in an indexed table. A database also makes it easy to read and maintain.
- Monthly Report Database: The list of automatically-generated reports are stored as a table for query access to the reports of specific months.
- Other data entities with single instance such as SPSO' s configurations can be stored in the Database Server as BLOB files