# 5.Technology Survey

## 5.1. DESIGN APPROACH

In phase 2, we use the ER diagram in the phase 1 to know that what schemas do we need. Then we build the schemas first. According to ER diagram, we know the key constraint of schemas. Second, we state the FDs of schemas. According to FDs, we normalize it into BCNF. Then we create the tables and populate the data.

In phase 3, we will build the system according to the database. We can divide our system into 3 sides: front side, server side and database. We need to develop server side to achieve the logic and computation of the system, and to call the data in database. We need to develop front side to show the result of data to users. Combine the 3 sides, our system is finished.

## 5.2. TECHNOLOGY

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| Webpages | HTML5/JavaScript/CSS |
| Server side | Apache+PHP |
| Database | MySQL |
| Database IDE | PHPMyAdmin |
| Environment | General PC |

**Totally,** we implement our system as a website not local software system, because the website is more lightweight and convenient to show our works. We need to decide which technology we use to build the website.

**Webpages**: The most popular webpage technology – HTML5/JavaScript/CSS is our choice. This technology has high performance and strong functions. It also has a good compatibility. What’s more, it is easy for our team members to learn. So we choose it.

**Server side**: In the server side, we use PHP language. The first reason is that PHP is suitable to develop a simple website. Because of its lightweight framework, PHP will save more time than other programing language such as JAVA (JAVA is famous for its complexity of developing a simple website). PHP is descriptive language, it has a good compatibility, and it’s easy to learn. This is also an important reason.

**Database**: Of course, we will use SQL to build the database. The point is that we choose MySQL or SQL server. Because SQL server is Microsoft’s and it’s a little big for a simple project. So we choose MySQL.

**Database IDE**: Database IDE is also important. A good IDE can improve our efficiency. PHP has many mature frameworks and they are helpful. We choose PHPMyAdmin to manage our database.