Server-side of the project was built on Wampserver 3.1.0 (64 bit) software stack. Configuration of the server is following: Apache version 2.4.27, PHP version 5.6.31 with default loaded extensions, MySQL version 4.7.19 and Maria DB version 10.2.8.

Wampserver stack is for Microsoft Windows operating system, and it uses the previous components in commonly Windows Apache MySQL PHP (WAMP) -stack style presented in Fig 1. Interface of client to server is through web browser, that communicates with Apache.
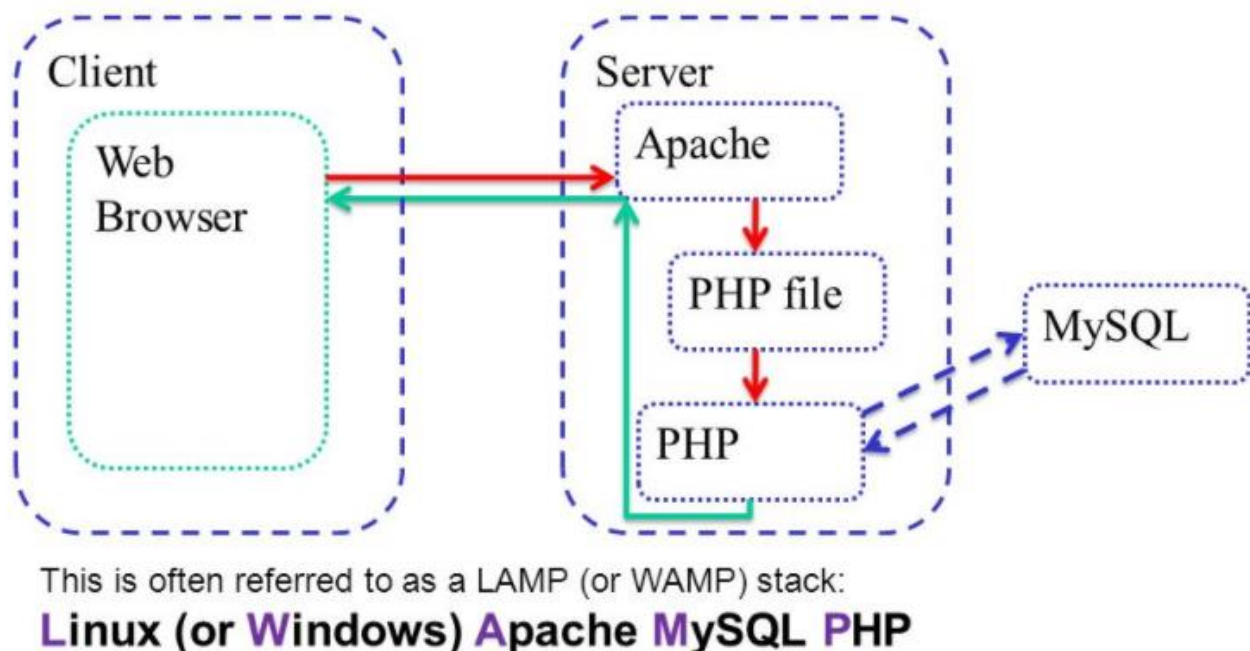

Figure 1 WAMP stack

Wampserver handles the configuration of server side automatically, and user only needs to add functionality with PHP-files.

MySQL-database is created with *create_db.php* file.

In MySQL database we have three tables:

- *user*-table, that contain user id, username, password and corresponding rfid
- *door*-table, that has door id and doorname
- *access*-table, that is used to link users and doors to create accesses. It contains id, doorname of door, rfid of user which are linked together to create access.

We built a php login system, consisting of:

- *register.php*, where new user adds parameters username, password, confirm password and rfid. Successful add to database will direct to login-page.
- *login.php*, where user can login with correct username and password. Successful login directs to welcome-page.
- *welcome.php*, which is the main page. It has three options: sign out, and rfid control and door control only for admin.
- *config.php* is used to include database credentials in shorter format.
- *logout.php* script is used to destroy the session.
- *admin-access.php*, where admin can link doorname and user rfid to create new access instance in access table.
- *door_control.php*, where admin can add doors to door-table.
- *display.php*, that returns the access table, to make it easier to build the server-side.
- *httpget.php*, which is the interface for gateway. Script returns all rows of access-table, when it receives http get call.
- *delete.php*, is used to delete user rfid from access-table via get call.