

Documentation Tool

Introduction

For the Game Hall Booking System, the documentation has been prepared using a combination of tools that support web-based development, code explanation, database structure representation, and project maintenance.

These tools allow the development team to create clear documentation for system architecture, coding structure, database schema, and user operations.

Documentation for this project is created using standard web development tools and manual documentation methods to ensure compatibility with **PHP**-based systems.

1. Platform & Environment Tools

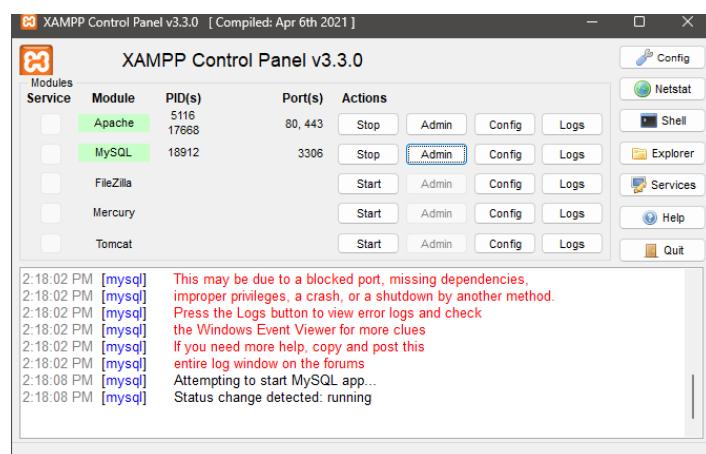
a. XAMPP (Apache +MySQL)

XAMPP is used as the local server environment for developing and testing the Game Hall Booking System.

It allows:

- Hosting PHP files
- Managing MySQL database using phpMyAdmin
- Running the entire system locally

Here is the XAMPP Control Panel we are using (Apache and MySQL)



XAMPP ensures a consistent execution environment for development and testing.

b. MySQL (via phpMyAdmin)

phpMyAdmin is used to:

- Document database tables
- Visualize relationships
- Export SQL structure
- Maintain ER diagrams and database

The screenshot shows the phpMyAdmin interface running on a local host at port 127.0.0.1. The left sidebar lists databases: information_schema, mysql, performance_schema, petshop_db, phpmyadmin, and test. The main area is divided into several panels:

- General settings:** Server connection collation is set to utf8mb4_unicode_ci.
- Appearance settings:** Language is English, and the theme is pmahomme.
- Database server:** Shows the server is 127.0.0.1 via TCP/IP, using MariaDB, with SSL not being used. It also shows the server version (10.4.32-MariaDB), protocol version (10), user (root@localhost), and server charset (UTF-8 Unicode).
- Web server:** Shows Apache/2.4.58 (Win64) OpenSSL/3.1.3 PHP/8.2.12, with database client version libmysql - mysqld 8.2.12, PHP extension mysqli, curl, mbstring, and PHP version 8.2.12.
- phpMyAdmin:** Shows version information (5.2.1, latest stable 5.2.3), documentation, official homepage, contribute, get support, list of changes, and license.

2. Development & Code Documentation Tools

a. Visual Studio Code (VS Code)

VS Code is used as the primary code editor for documenting and maintaining PHP, HTML, CSS, and SQL files.

It supports:

- Syntax highlighting
- Code auto-formatting
- Comment-based documentation
- Extensions for PHP, MySQL, and HTML development

Developers also use VS Code to maintain inline documentation through PHPDoc comment blocks.

b. PHPDoc (Inline Code Documentation)

PHPDoc-style comments are used inside PHP files to explain:

- Function purpose
- Parameters
- Return values
- Class descriptions

Steps to install PHPDumentor:

Step 1 — Confirm PHP location in XAMPP

```
C:\xampp\php\php.exe
```

Step 2 — Add PHP to Windows PATH

- Open Environment Variables
- Edit the PATH variable
- Under System variables, find Path and paste the php location

Step 3 — Test PHP and mbstring extension

```
C:\Users\hp>php -v
PHP 8.2.12 (cli) (built: Oct 24 2023 21:15:15) (ZTS Visual C++ 2019 x64)
Copyright (c) The PHP Group
Zend Engine v4.2.12, Copyright (c) Zend Technologies

C:\Users\hp>php -r "echo extension_loaded('mbstring') ? 'yes' : 'no';"
yes
C:\Users\hp>
```

Step 4 — Install phpDocumentor using PHAR

Click here: <https://phpdoc.org/phpDocumentor.phar>

Step 5 — Generate documentation

```
cd C:\xampp\htdocs\myproject
php phpDocumentor.phar run -d src -t docs
```

After running phpdock, it will generate documentation inside: docs/index.html

full API documentation website:

The screenshot shows a web browser displaying a detailed API documentation page. The URL in the address bar is file:///D:/xampp/htdocs/turfmate/docs/index.html. The page has a dark header with navigation icons and a search bar labeled "Search (Press "/" to focus)". On the left, there's a sidebar with links for "Documentation", "Packages" (Application, TurfmateBookingSystem, Turfmate), "Reports" (Deprecated, Errors, Markers), and "Indices" (Files). The main content area is titled "Documentation" and contains a "Table of Contents". Below it, under "Functions", are listed several methods with their descriptions:

- `M registerCustomer(): array<string|int, mixed>`
Registers a new customer.
- `M loginCustomer(): array<string|int, mixed>`
Logs in a customer.
- `M getGameHalls(): array<string|int, mixed>`
Returns available game halls.
- `M isSlotAvailable(): bool`
Checks if a given slot on a given date is available for booking.
- `M createBooking(): array<string|int, mixed>`
Creates a new booking.
- `M processPayment(): array<string|int, mixed>`
Processes payment for a booking.