Run-Time Requirements – Shark’s Library

This document outlines the hardware and software requirements to run the Shark’s Library system in the intended development and demonstration environment.

Hardware Platform

The application is designed to run on:

- Device: Raspberry Pi Zero 2 W and a micro USB data cable

- Architecture: ARM Cortex-A53, Quad-core 64-bit SoC

- Storage: Minimum 8 GB microSD card (recommended 16 GB or more)

- Networking: 2.4GHz 802.11 b/g/n wireless LAN

Operating System

- Base OS: [DietPi](https://dietpi.com) (a lightweight Debian-based OS optimized for single-board computers)

- Version: Latest stable release compatible with Raspberry Pi Zero 2 W

- Headless setup recommended for lightweight performance

Software Packages

The following software packages must be installed and properly configured:

1. Web Server

- Apache2 (preferred) or Nginx

- Port: HTTP on port 80

2. PHP

- Version: PHP 7.4 or higher

- Modules: php-mysqli, php-gd

3. Database:

- Maria DB 10.x (MySQL-compatible relational database)