Complete Setup & Run Guide

This document explains everything required to build and run the Wolf Game project on a new laptop. No Makefile changes are required. Follow the steps exactly.

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1. **Requirements (Install Once)**
- **MinGW (C++ Compiler)**
  - Download: https://www.mingw-w64.org/
  - After installation, ensure `g++` and `mingw32-make` are available in `PATH`.
- **GLFW 3.4 (Graphics Library)**
  - Download Source: https://www.glfw.org/download.html
  - GLFW is NOT included in the repository and must be built locally.
- **ImGui (Immediate Mode GUI)**
  - Download Source: https://github.com/ocornut/imgui
  - Clone the repo and place it in the project root as `imgui/`.

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2. **Building GLFW (One-Time Step)**
3. **Extract GLFW to a folder (example):** `D:/glfw-3.4/glfw-3.4`
4. **Open a terminal in that folder.**
5. **Run the following commands to build the static library:**

cmake -G "MinGW Makefiles" -S . -B build

cmake --build build

4. **After successful build, copy the generated `libglfw3.a` from `build/src` into the project folder `lib/`.**
5. **Ensure the include folder `glfw-3.4/include` is correctly referenced in the Makefile.**

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3. **Project Folder Structure**

FixingDemo/ <-- Root folder

├── src/ <-- All .cpp files

├── include/ <-- Header files (like app.h)

├── imgui/ <-- ImGui source folder cloned from GitHub

│ ├── imgui.cpp

│ ├── imgui_draw.cpp

│ └─ **backends/**

├─ **lib/ <-- Contains libglfw3.a after building GLFW**

├─ **obj/ <-- Generated object files (auto)**

├─ **bin/ <-- Executable output (auto)**

└─ **Makefile**

- **Notes:**
  - **Do NOT commit `obj/` or `bin/` folders.**
  - **Everyone should build locally.**

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4. **Building the Game**
5. **Clone the repository:**

git clone <repo-url>

cd WolfGame

2. **Ensure `lib/libglfw3.a` exists (built from GLFW step) and `imgui/` folder is present.**
3. **Clean previous builds (if any):**

mingw32-make clean

4. **Build the project:**

mingw32-make

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5. **Running the Game**

After successful build, run the executable:

bin\app.exe

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6. **Cleaning the Build**

mingw32-make clean

This removes the `obj/` and `bin/` folders to allow a fresh build.

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7. **Common Errors & Fixes**
- **Error: `cannot find -lglfw3`**
    - **Fix: Ensure `lib/libglfw3.a` exists (build GLFW) and path is correct in Makefile.**
- **Error: `glfw3.h not found`**
    - **Fix: Ensure GLFW include folder exists and Makefile includes `-ID:/glfw-3.4/glfw-3.4/include`.**
- **Error: `imgui.h not found`**
    - **Fix: Make sure the `imgui/` folder is cloned correctly in the project root.**

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8. **Important Rules**
- **Do NOT change the Makefile unless absolutely necessary.**
- **Do NOT commit `bin/` or `obj/` folders.**
- **GLFW must be built locally for each machine.**
- **ImGui must be cloned into the project root.**
- **All team members must follow the same steps for consistent builds.**

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9. **Final Notes**

This project is ready-to-run once the dependencies are installed and paths are correct. Following this guide ensures everyone can compile and run the project without issues.