Project build guide

Acknowledgement

- We would like to thank JetBrains for their donating licenses to their excellent products to develop **Salvia**.

- In this project we are using:

    - PyCharm
    - CLion
    - Reshaper C++

Requirements and build steps

Prerequisites for ALL platforms

- Git with LFS
- CMake 3.23+
- vcpkg

Note: CMake and Git may installed with OS, IDEs or build essentials. Please check the installed versions and the activated toolchains.

Windows 10/11

1. Install latest Visual Studio 2022 with C++, CMake, and Git.
2. Install vcpkg side-by-side with source code. For example, if your project is located at `D:\path\salvia`, then vcpkg should be installed at `D:\path\vcpkg`. Otherwise, you need to specify the vcpkg toolchain file by the config `_windows`/`toolchainFile` in `CMakePreset_Woodblocks.json`.
3. Open the folder `D:\path\salvia` with Visual Studio 2022
4. Select the preset `msvc_dbg_win` or `msvc_rel_win` in the CMake Presets tab and build it.

Linux/WSL

1. `gcc` above 12.0 or `clang` above 14.0 is required
2. Clone the project to `path-to-salvia`.
3. Install vcpkg by your OS package system (for e.g. `apt` on ubuntu). The default installation path of vcpkg is at ~/`vcpkg`. If it was installed elsewhere, you need to specify the vcpkg toolchain file by the config `_linux`/`toolchainFile` in `CMakePreset_Woodblocks.json`.
4. Open the folder `path-to-salvia` with your IDE (VSCode, VIM or CLion).

NOTE for CLion on WSL: If you are working on WSL with CLion, please make sure that the correct CMake and Git and compiler in CLion was selected. You can check or edit the toolchains in `Settings > Build, Execution, Deployment > Toolchains`.

Mac

1. Install latest XCode Commad Line Tools.
2. `gcc` above 12.0 or `clang` above 14.0 is required.
3. Clone the project to `path-to-salvia`.
4. Install vcpkg by your OS package system (for e.g. `brew` on Mac). The default installation path of vcpkg is at ~/`Library`/`vcpkg`. If it was installed elsewhere, you need to specify the vcpkg toolchain file by the config `_macos`/`toolchainFile` in `CMakePreset_Woodblocks.json`.
5. Open the folder `path-to-salvia` with your IDE (VSCode, VIM or CLion).

NOTE for CLion on Mac: Please download M1 version of CLion if you are using M1 Mac. Otherwise, you may encounter some issues when building the project.

Suggestions for IDEs

- Windows: We recommend using Visual Studio 2022 and open *salvia* as folder. VSCode is also available, but only the official C++ intellisense plugin was supported when build with MSVC and its experience is relatively bad.
- Linux/WSL: CLion is our recommended IDE. If you are using VSCode, we suggest use clangd as the language server. For your convience, the build script generates `compile_commands.json` and copy to root for clangd by default. And we also highly recommend you to install `clang-tidy` and `clang-format` for better code quality.
- Mac: Same as Linux.

Known issues

All interactive demos are not supported on Linux and Mac because we don't have GUI support on these platforms.

Support Info

If you have any question, please contact: wuye9036 *at* gmail *dot* com