

# Quick start guide for the WOWCube® Development Kit

# Intro

WOWCube® Development Kit is a set of tools that allows developing applications for WOWCube® devices. It gives access to the majority of features of CubiOS, the WOWCube's operating system.

The **WOWCube® Development Kit** has two main components: an extension to **Microsoft Visual Studio Code (VS Code)** and a **Software Development Kit (SDK)**. The files provided with the SDK are used for building the WOWCube applications, while VS Code extension makes the development process convenient and robust.

System requirements - see at <u>https://wowcube.com/devkit</u>.

# Installation

## Step 1

Download and install <u>Visual Studio Code</u> and then <u>WOWCube® SDK</u> Visual Studio Code Extension

### Step 2

Download Software Development Kit depending on your operating system:

- <u>SDK for macOS</u>
- SDK for Windows

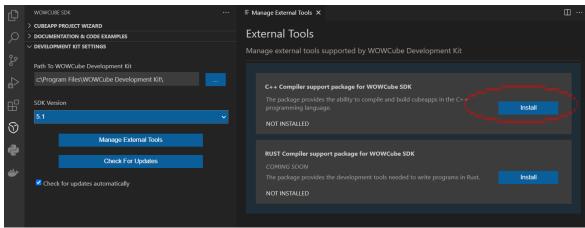
Follow the instructions on the screen for guidance through the installation process and setup.

#### Step 3 (optional)

Install the C++ compiler support package for building C++ projects

- In the Visual Studio Code go to the `**WOWCube SDK**` tab by pressing

the 🔯 icon, expand the 'Development Kit Settings' section, click 'Manage External Tools', and click 'Install'



# Working with the WOWCube® SDK Extension

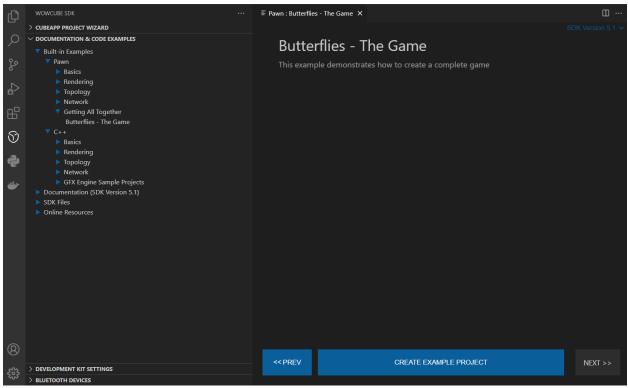
## Create project from template

- 1) Go to the `WOWCube SDK` tab by pressing the 🔯 icon
- 2) Expand the `Cubeapp Project Wizard` section
- 3) Press the `Open New Cubeapp Wizard` button
- 4) In the opened WOWCube Cubeapp project wizard tab:
  - a) Enter the **name** of your new project
  - b) Choose the project **folder**
  - c) Choose the **programming language**
  - d) Select **template**
  - e) Press the `Generate New Project` button

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		Select project template	
		<b>Empty project</b> Creates an empty project with a bare minimum of functions needed to build WOWCube cubeapp application	
		Basic cubeapp Creates a project of WOWCube cubeapp application with basic rendering support Demonstrates principles of work with a compound multi-screen device	
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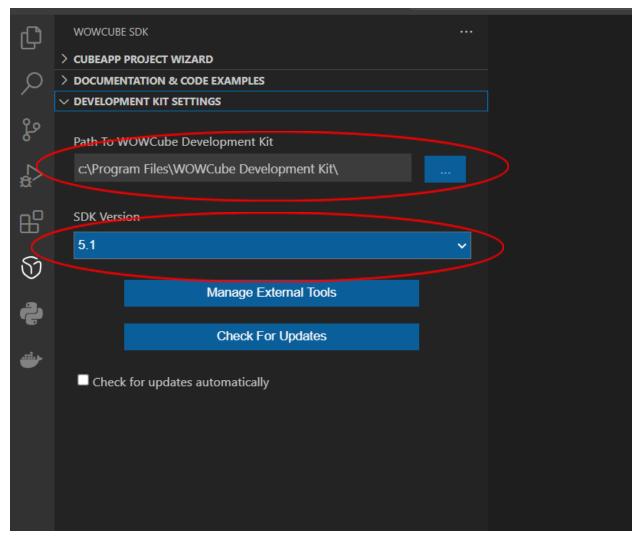
Generate an example project from Documentation

- 1. Go to the `WOWCube SDK` tab
- 2. Expand the `Documentation & Code Examples` section
- 3. Expand the `Built-in Examples` and choose one of the examples
- 4. Press the `Generate Example Project` button.
- Select folder for the project, and press 'Select folder and create project'



Run and debug project in Emulator

- Open your project in VS Code (File > Open Folder...)
- Go to the `WOWCube SDK` tab
- Expand the 'Development Kit Settings' section
- Make sure that the **Path** to the installed 'WOWCube® Development Kit' is correct, and the right **SDK version** is chosen



NOTE: path is different for Mac and Windows platforms!

Go to `Run and Debug` in the Activity bar of VS Code and choose
`Build and Run on WOWCube Emulator`

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• Choose Run > Start Debugging (or F5)

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 'WOWCube® Emulator' application opens automatically and project starts in Emulator NOTE: you can also download and run your project on a real WOWCube system (choose `Build and run on selected device` instead)

# Working with the WOWCube® Emulator

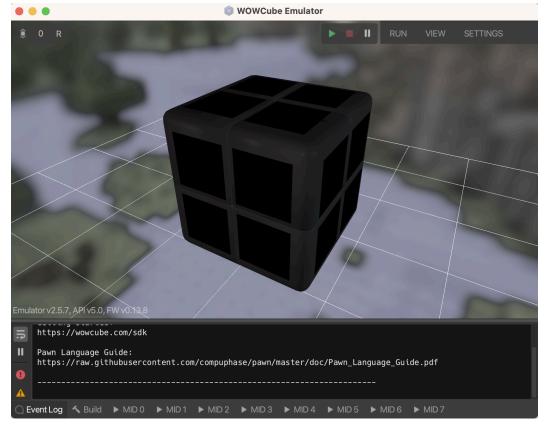
The Emulator is a program that mimics the WOWCube device, and is capable of running (in the Cube Emulation mode) its software, and is provided as a part of the WOWCube® SDK.

With the help of the WOWCube® Emulator you can run the developed application and see how your code works and troubleshoot the majority of things easily, without the need to have a real WOWCube system on hands

## Launching Emulator manually

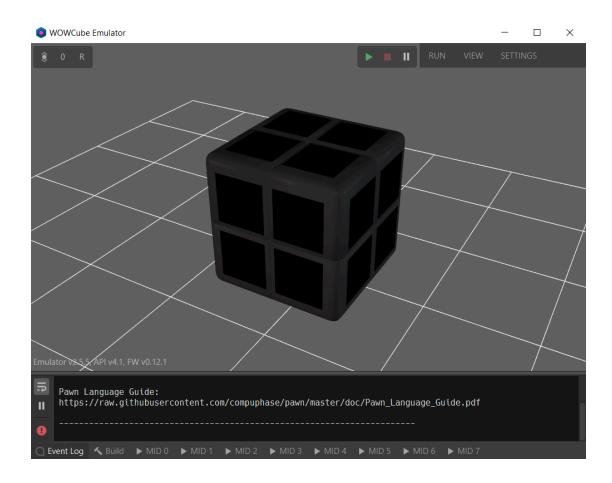
### Mac OS

• Open the Applications folder and double tap on the "WOWCube® Development Kit" icon. The 'WOWCube® Emulator' application starts



### Windows

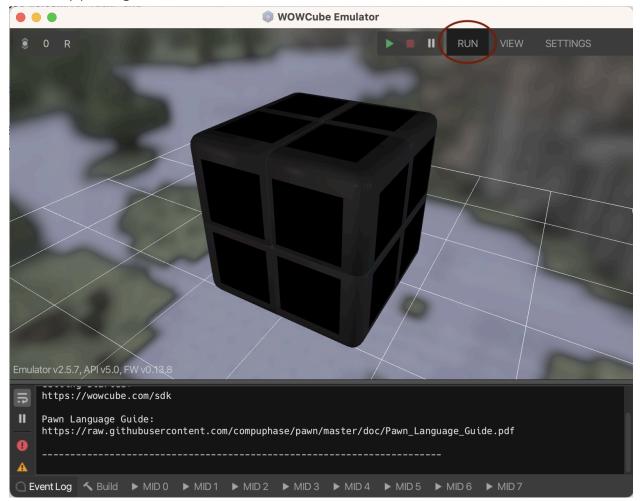
• Launch the 'WOWCube® Emulator' application from the list of installed apps/programs. 'WOWCube® Emulator' application starts

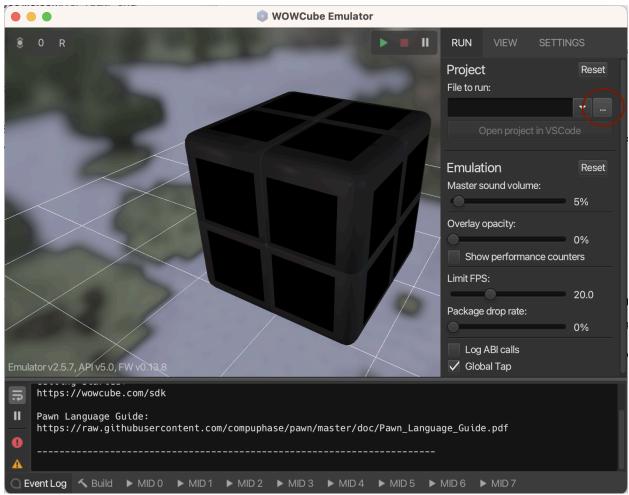


Launching any .cub file on Emulator manually

A. Open the 'WOWCube® Emulator' application

B. In the upper right corner choose the tab `RUN`



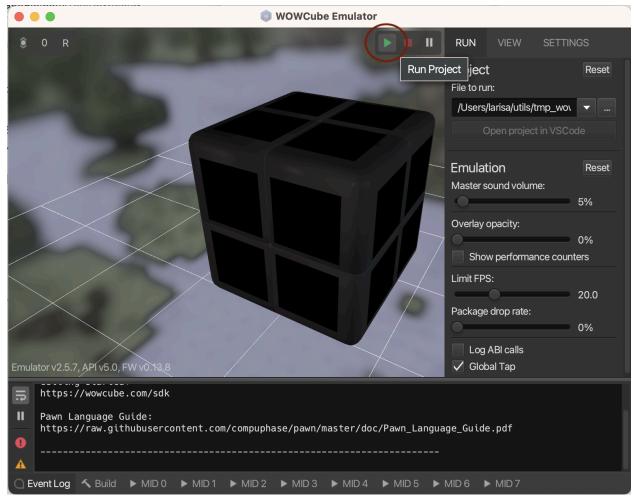


#### C. Press the `...` button in the `File to run` section

# D. Choose the desired project .cub file and press `Open`

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## E. Press the `Run project` button.



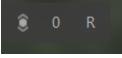
- . WOWCube Emulator Ш RUN Project Reset File to run: /Users/larisa/utils/tmp\_wow\_ 🔻 Emulation Reset Master sound volume: TWIST Overlay opacity: 0% Show performance counters Limit FPS: 92 MOVES 20.0 Package drop rate: 1024 DEST CHI 0% Log ABI calls 🗸 Global Tap sprite 1: off: 7972, size: 11728, enc: 1, name: ss\_back.png sprite 2: off: 19700, size: 704, enc: 1, name: ss\_board.png sprite 3: off: 20404, size: 35874, enc: 1, name: ss\_main.png sprite 4: off: 56278, size: 6308, enc: 1, name: ss\_mame.png sprite 5: off: 62586, size: 640, enc: 1, name: ss\_results.png sprite 6: off: 63226, size: 3128, enc: 1, name: ss\_tap.png sprite 7: off: 66354, size: 1754, enc: 1, name: ss\_twist\_1.png sprite 8: off: 68108, size: 1756, enc: 1, name: ss\_twist\_2.png Cannot get LB info from cache Cannot get short name LB from cache Î Event Log 🔨 Build 🕨 MID 0 🕨 MID 1 🕨 MID 2 🕨 MID 3 🕨 MID 4 🕨 MID 5 🕨 MID 6 🕨 MID 7
- F. Project successfully starts on Emulator

### Emulator controls

- Run, Stop, Pause emulation



- Shake, Reset modules position, Random move (twist)



- Double click on any module to trigger the 'double-tap' event
- Press and hold the left mouse button to start twisting the Cube
- Press and hold the **right** mouse button to start rotating the Cube around its axis

- Use the mouse wheel to change the camera distance
- Console Log options (wrap, pause, filter, clear)



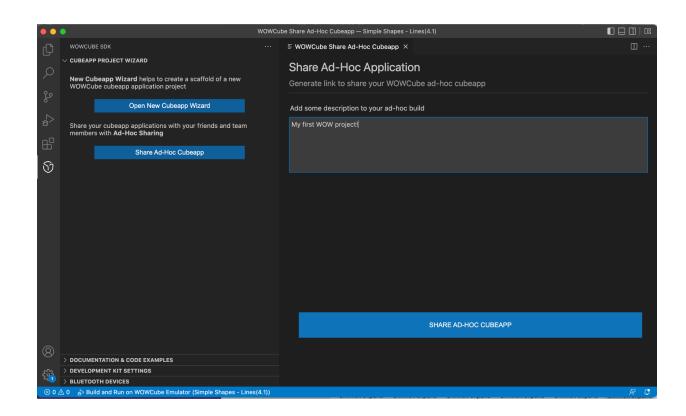
- Seeing Console log for a chosen Cube module. Click on the MID number to see the console log for the corresponding module



# Share your application/game with others

You can quickly share your .cub applications with other persons using the built-in `Ad-Hoc Sharing` utility, so that they can be run in Emulator or on a real Cube:

- Go to `Cubeapp Project Wizard` section in WOWCube® SDK extension and press `Share Ad-Hoc Cubeapp` button NOTE: Important!!! You need to build your project before sharing it via the 'Ad-Hoc'
- Add a description of your project and press the `Share Ad-Hoc Cubeapp` button



• A pop-up dialog with the link to the project shows up. Copy the link and send it to someone you want to share it with



• A person who received the shared link and opened it in a web-browser, will have the possibility to install the app on a real WOWCube by

pressing the '*Install*' button or by scanning a QR-code using a mobile phone (the 'WOWCube® Connect' mobile app needs to be installed on the mobile phone)

# Getting updates

- You will be notified about the new versions of the WOWCube® DevKit via the WOWCube® SDK extension. Every time you open the Visual Studio Code the extension automatically checks for the available updates
  - The automatic check for updates is enabled by default, and can be disabled/enabled by unchecking/checking a corresponding option under the Development Kit Settings section

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• Same applies to the updates for the 'WOWCube SDK extension' - the Visual Studio Code keeps track of the new releases automatically