µC++ Extension
User Manual and Deployment Information

Group 27

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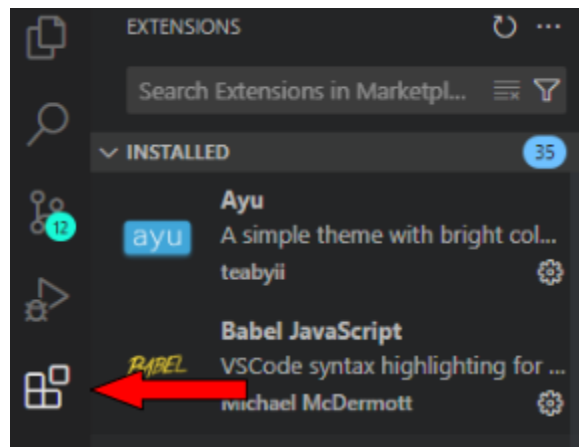
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Disclaimer on Environment

We expect you to install the extension and develop on linux.student.cs.uwaterloo.ca servers. If you are developing anywhere else, be aware that it may be unstable or even unsupported.
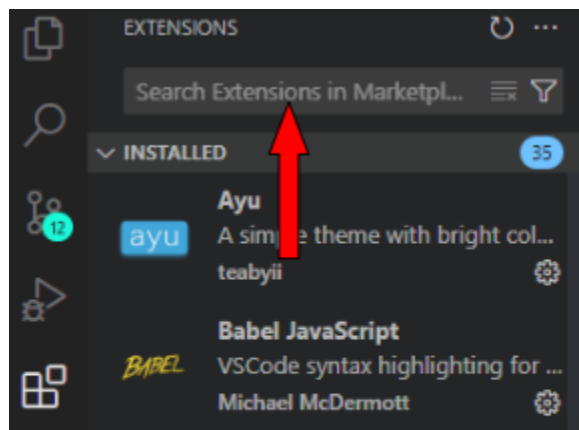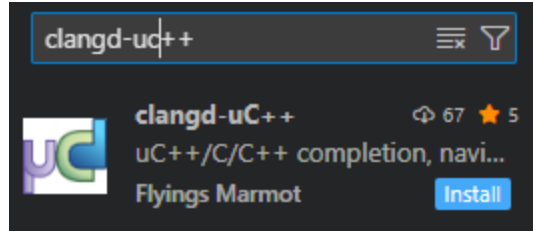
Installing the Extension

From the VSCode Marketplace

1. Open **VSCode**.
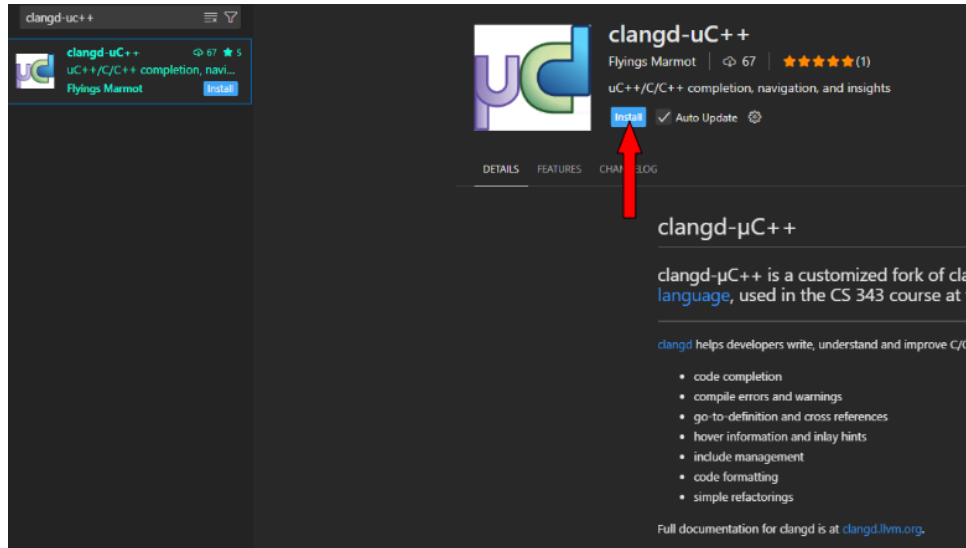2. Go to the **Extensions Panel** (Ctrl+Shift+X or Cmd+Shift+X).

3. Search for "clangd-uC++" (uC++ should also suffice)

4. When the result comes up, click **Install**.

Using the Extension

To use the extension, simply open a .cpp file. The extension automatically activates and connects to the language server.

Syntax Highlighting
Open a .ucpp or .cpp file. µC++ keywords, types, and structures will be automatically colorized in the editor to improve readability.

Autocomplete
Start typing any µC++ keyword, variable, or function name. A list of context-aware suggestions will appear. Use Tab or Enter to select one.

Hover Information
Hover your mouse over a function or variable to view its signature, including parameter types, return type, and any documentation.

Go to Definition

Hold Alt (or Cmd/Ctrl, depending on your system) and click on a function, class, or variable name. This will take you directly to its definition, even if it's in another file.

Find All References

Hold Alt (or Cmd/Ctrl, depending on your system) and click on a symbol definition (like a variable or function) to see all places it is used in the codebase. A panel will show all occurrences, organized by file.

Formatting

Open the Command Palette (Ctrl+Shift+P or Cmd+Shift+P), search for "Format Document", and run it. You can also configure auto-formatting on file save in your VSCode settings.

Troubleshooting

Conflicts with other extensions

Ensure that no other conflicting C++ extension is installed. This includes clangd and C/C++. If you have a conflicting extension installed:

1. Disable or uninstall the conflicting extensions through the Extensions Panel
2. Open the Command Palette (Ctrl+Shift+P or Cmd+Shift+P) and search for and run "Developer: Reload Window"
3. Install / rerun clangd-uC++

Install Didn't Automatically Run / No Language Server Installed

Ensure that no other conflicting C++ extension is installed. This includes clangd and C/C++. If you have a conflicting extension installed:

1. This step is actually optional, but to be safe remove the contents (if any) in the following folder on linux.student.cs.uwaterloo:
   /u4/<your_username>/.vscode-server/data/User/globalStorage/flyingsmarmot.vscode-clangd-ucpp/install
2. Install clangd-uC++
3. Open the Command Palette (Ctrl+Shift+P or Cmd+Shift+P) and run "clangd: Manually activate extension". You should be prompted for an install in the bottom right if the binary is not installed