

Setup Debuging for C Language (MAC)

topic

- variable
- data type
- condition
- loop
- string
- array

อ้างอิง : <https://code.visualstudio.com/docs/cpp/config-clang-mac>

launch.json

```
{
  "version": "0.2.0",
  "configurations": [
    {
      "name": "C++ Launch (LLDB)",
      "type": "cppdbg",
      "request": "launch",
      "program": "${fileDirname}/${fileBasenameNoExtension}",
      "args": [],
      "stopAtEntry": true, // แก้เป็น true ถ้าต้องการให้หยุดที่ main
      "cwd": "${fileDirname}",
      "environment": [],
      "externalConsole": false,
      "MIMode": "lldb", // window is gbd, mac is lldb
      "preLaunchTask": "C/C++: gcc build active file"
    }
  ]
}
```

tasks.json

```
{
  "version": "2.0.0",
  "tasks": [
    {
      "label": "C/C++: gcc build active file",
      "type": "shell",
      "command": "/usr/bin/gcc",
      "args": [
        "-g", // ต้องใส่ -g ถึงจะสามารถ debug ได้
        "${file}",
        "-o",
        "${fileBasenameNoExtension}"
      ]
    }
  ]
}
```

```
    ],
    "group": {
      "kind": "build",
      "isDefault": true
    },
    "problemMatcher": ["$gcc"],
    "detail": "Generated task by Debugger."
  }
}
```

Format String in C

อ้างอิง : <https://www.geeksforgeeks.org/format-specifiers-in-c/>

Format Specifier	Description
Juicy Apples	1.99
%c	For character type
%d	For signed integer type.
%e or %E	For scientific notation of floats.
%f	For float type.
%g or %G	For float type with the current precision.
%i	Unsigned integer
%ld or %li	Long
%lf	Double
%Lf	Long double
%lu	Unsigned int or unsigned long
%lli or %lld	Long long
%llu	Unsigned long long
%o	Octal representation
%p	Pointer
%s	String
%u	Unsigned int
%x or %X	Hexadecimal representation
%n	Prints nothing
%%	Prints % character