Setting Up VS Code to Run C/C++ Code with a Shell Script

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Step 1: Ensure Your Shell Script is Executable

Before running the script, make sure it has execution permissions.

```bash
chmod +x <your_script_name>
```

Step 2: Create a Task in VS Code

1. Open **VS Code Command Palette** (`Ctrl + Shift + P` or `Cmd + Shift + P` on Mac).

2. Search for **"Tasks: Configure Tasks"** and select it.

3. Click **"Create tasks.json file from template"**, then select **"Others"**.

4. Modify `tasks.json` inside `.vscode/`:

```json
{
    "version": "2.0.0",
    "tasks": [
        {
            "label": "Build and Run C++ Project",
            "type": "shell",
            "command": "${workspaceFolder}/<your_script_name>",
            "group": {
```

```json
            "kind": "build",

            "isDefault": true

        },

        "problemMatcher": ["$gcc"],

        "detail": "Runs the build script"

    }

  ]

}
```

Step 3: Configure Debugging (launch.json)

1. Open **Command Palette** (`Ctrl + Shift + P`).

2. Search for **"C++ (GDB/LLDB): Create launch.json"**.

3. Modify `launch.json` inside `.vscode/`:

```json
{

    "version": "0.2.0",

    "configurations": [

        {

            "name": "Run C++ Executable",

            "type": "cppdbg",

            "request": "launch",

            "program": "${workspaceFolder}/<your_executable_name>",

            "args": [],

            "stopAtEntry": false,

            "cwd": "${workspaceFolder}",
```

```
        "console": "integratedTerminal",

        "MIMode": "lldb",

        "preLaunchTask": "Build and Run C++ Project"

    }

  ]

}
```

Step 4: Running with the Run Button

Important: You Must Be on the Shell Script File (`<your_script_name>`)

When running the program, **ensure that the active file in VS Code is your shell script (`<your_script_name>`)**.

If you attempt to run from another file (e.g., `main.c` or `main.cpp`), VS Code might not execute the correct commands.

To run:

1. **Open `<your_script_name>` in VS Code**.

2. Click **Run and Debug** (`Ctrl + Shift + D` or `Cmd + Shift + D` on Mac).

3. Select **"Run C++ Executable"**.

4. Click the **Run > button** or press **F5**.

Your C++ project should now build and run correctly using the **Run button in VS Code**!