

- 1 Creating program
  - 1.1 Using the ed
  - 1.2 Adding a prc
    - 1.2.1 Create a
    - 1.2.2 Set-up tl
    - 1.2.3 For the 1
    - 1.2.4 Update t
  - 1.3 How to creat
- 2 Troubleshooting
  - 2.1 Build proble
  - 2.2 How to enab
  - 2.3 How to run '
  - 2.4 Build's clean

## STM32CubeIDE: creating programs, and build troubleshooting

This web-page provides info on using STM32CubeIDE, for working-through the book *Hands-On RTOS with Microcontrollers*. The info here does not appear to be in the book, and it is needed to create programs and troubleshoot build-problems.

This web-page's sections are listed in the table-of-contents.

### 1 Creating programs

#### 1.1 Using the editor

- Word completion, e.g., for variable names
  - Ctrl+space

#### 1.2 Adding a program-file to a chapter's folder

To gain skill with FreeRTOS, it's helpful to write programs based on the code and features presented in the book. This section describes how to create an empty program-file (e.g., a C-file). It can then be coded and built using STM32CubeIDE.

The book's programs are stored in a GitHub repo. In the repo, there is a *chapter-folder* for each chapter in the book, e.g., /Chapter\_8. This section describes how to add a new program-file to a chapter-folder.

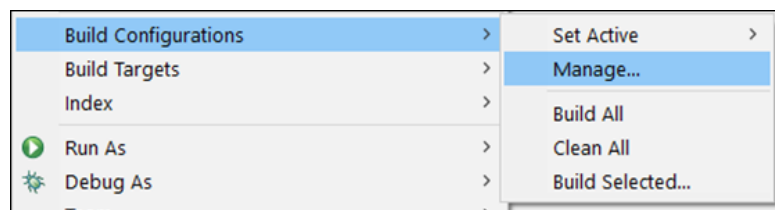
It appears that each chapter-folders is a STM32CubeIDE *project*. Each chapter-folder has a folder *Src*, which contains the chapter's example-programs, e.g., /Chapter\_8/Src. Each project has multiple *configurations*, typically one for each example program. A configuration has its own build-scripts for its example program.

For a project configuration, it appears that the build-scripts are constructed automatically, for the configuration's example-program, e.g., Chapter\_8/Src/mainSoftwareTimers.c. Just adding a program-file (e.g., a C-file) to the *Src* folder is likely to result in corrupted build-scripts for the configurations. (How to fix that problem is described in a trouble-shooting section, below.)

Instead, when adding a new program-file, a new configuration should first be added for the project. And, the new program-file should then be added for use by the new configuration. The following sections describe how to do this.

##### 1.2.1 Create a new configuration

- In the Project Explorer, right-click on the chapter-folder, and select:
  - "Build Configurations": "Manage..."



- In the next GUI, select "New"
- The "Create New Configuration" GUI is shown below
  - At "Existing configuration", select a configuration to copy
    - Here, the mutexExample configuration is being copied
  - Provide a "Name" and "Description"
  - Click "OK"

