



2014/07/02
v1.0

CoverageMaster General: Setup

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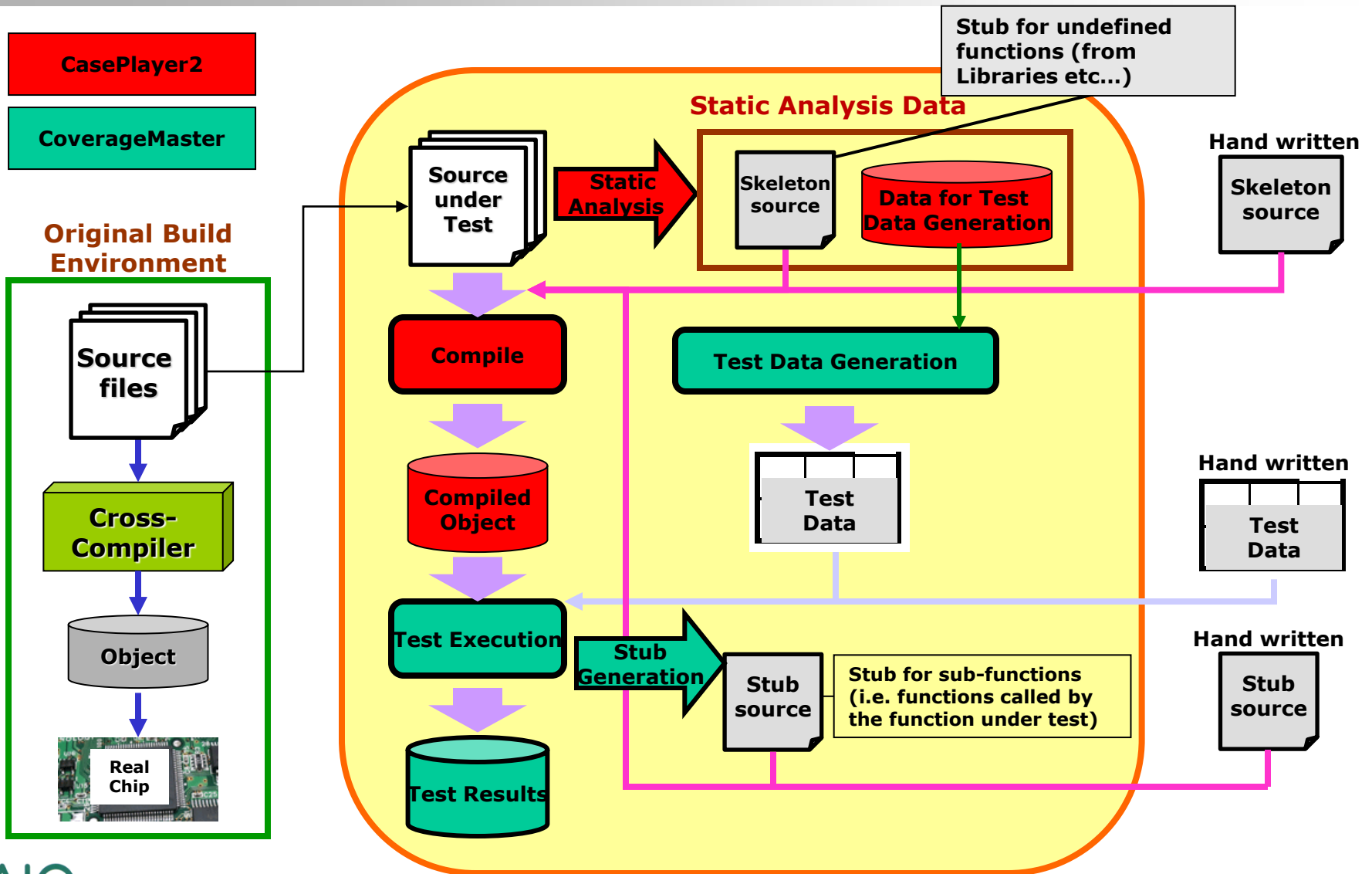


What is included in CoverageMaster General

- Reverse CASE tool: CasePlayer2
 - Static Analysis for test data generation
 - Create skeletons for undefined functions
 - Compile code into an object file for running tests

- Unit Test Tool: CoverageMaster
 - Generate Test Data
 - Using CasePlayer2's analysis data
 - Run tests on simulated processor
 - Output tests results and Code Coverage measurements

Global Workflow for General





Setup Process

Create a New CasePlayer2 Project

The screenshot shows the CaseViewer v5.6.2 interface. The 'File' menu is open, and the 'Project...' option is highlighted with a red box. A blue arrow points from this menu item to the 'New Project' dialog box. The dialog box has several fields and options:

- Project Name:** A text input field highlighted with a red box. A yellow callout box with the text "1. Enter the Project's name" points to it.
- Save Location:** A text input field containing "C:\Users\GAIO-test\Documents".
- Additional Info:** A section with a yellow callout box containing "3. Click [OK]" pointing to the 'OK' button.
- Project Type:** A section with radio buttons for "Create documents only" (selected), "Copy comments to source files", and a checked checkbox for "Save original source files".
- Parameter File:** A section with checkboxes for "C Language" and "Assembly", each with a "Default" text field and a "Browse..." button.
- Language Settings:** A section with radio buttons for "ANSI-C" (selected), "GNU-C", "C99", and "VC++". Below are text fields for "Source File Extension" (".c") and "Header File Extension" (".h").
- C++ Source:** A section with a checkbox for "Analyze C++ files" and text fields for "Source File Extension" (".cpp.cxx.cc.c+") and "Header File Extension" (".hpp.hxx.hh.h+").
- Assembly Source:** A section with radio buttons for "XASS-V Assembler (GAIO)" (selected), "Macro RA78K (NEC upd78K series)", "Macro SRA74 (Renesas m740/38k)", "Macro (Renesas H8/300,300H,H8S)", "Macro (Fujitsu FMC-8L)", and "Macro (Renesas M16C)". Below is a text field for "File Extension" (".xas").
- Enable source subfolders:** A checked checkbox highlighted with a red box. A yellow callout box with the text "2. Check 'Enable source subfolders'" points to it.
- Project Settings File:** A text input field with a "Browse..." button.
- Buttons:** "OK" and "Cancel" buttons are highlighted with red boxes.

At the bottom of the CaseViewer window, there is a status bar that says "Creates new project file".

Add the Source Files

The screenshot shows the CaseView IDE interface. The 'Project' menu is open, and the 'Add Source File (by Folder)' dialog box is displayed. The dialog box contains the following elements:

- Folder:** C:\winAMS_CM1_DEMO\target
- Look in subfolders:**
- Add to user include path:**
- Filter:**
 - C Source File
 - Assembler Source File
 - Header file
 - C++ Source File
 - C++ Header file
- Refresh:** Button
- File list:** .\irq.c, .\main.c, .\MEM_DEFINE.h
- Buttons:** Select, Select All, Unselect, Unselect All
- Bottom:** Add source file with folder unit, OK, Cancel, Help

Five numbered callouts provide instructions:

- 1. Enter the path to the source files** (points to the Folder field)
- 2. Check "Look in subfolders" and "Add to user include path"** (points to the respective checkboxes)
- 3. Check "C Source File" and "Header file" (Assembly code is not supported for General)** (points to the C Source File and Header file checkboxes)
- 4. Check "Add source file with folder unit" to keep the folder structure** (points to the checkbox at the bottom of the dialog)
- 5. Click [OK]** (points to the OK button)

Preprocessor Settings

1. Go to the "Settings" tab

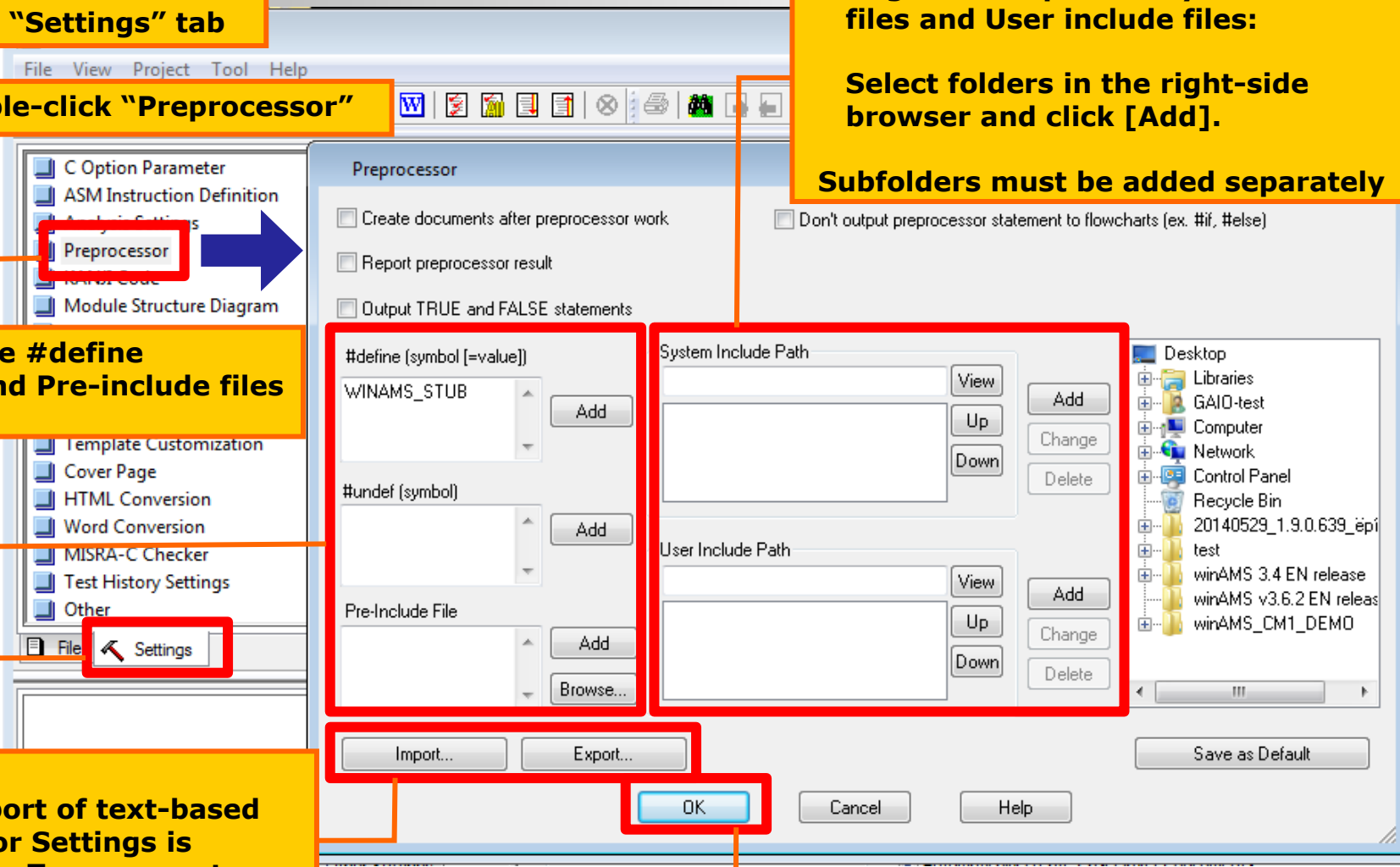
2. Double-click "Preprocessor"

4. Set the #define flags and Pre-include files (if any)

3. Register the path to System Include files and User include files:

Select folders in the right-side browser and click [Add].

Subfolders must be added separately



Note:
Import/Export of text-based Preprocessor Settings is possible (ex: To copy-paste long Include paths)

5. Click [OK]

Analysis Settings

The image shows the 'Analysis Settings' dialog box in CaseViewer v5.6.2. The dialog is divided into several sections: 'Adjustment of Generation', 'KANJI code', 'Project Management', 'VC++ Analysis Settings', and 'Advanced Mode'. Five numbered callouts in yellow boxes with red borders point to specific settings:

- 1. Double-click "Analysis Settings"**: Points to the 'Analysis Settings' menu item in the left sidebar.
- 2. Check "Enable advanced mode" and "#define List"**: Points to the 'Enable advanced mode' checkbox and the '#define List' checkbox in the 'Advanced Mode' section.
- 3. Check "Create WinAMS analysis data", "Create General" and "Create data for func/var skeletons"**: Points to the 'Create WinAMS analysis data', 'Create General', and 'Create data for func/var skeletons' checkboxes in the 'Advanced Mode' section.
- 4. Check "Use typedef name as structure tag name"**: Points to the 'Use typedef name as structure tag name' checkbox in the 'Adjustment of Generation' section.
- 5. Click [OK]**: Points to the 'OK' button at the bottom of the dialog.

Reference: C Parameter Settings

1. Double-click "C Option Parameter"

CaseViewer v5.6.2

File View Project Tool Help

C Option Parameter

CP2Project.rvc

C Option Parameter Def...

User Keyword

Keyword Replacement Keyword Non-selection Comment Module Specification/Sa... Structure Specification/S... #pragma Definition

Keyword Class Postposition statement

TYPE

Keyword	Style	Postfix Notation
near	TYPEATT	
far	TYPEATT	

Add Edit Delete

Set 2 items

2. For more details on the C Parameters setup, please refer to CasePlayer2's Manual

First Compilation

- The first compilation will find the functions and variables with no definition (to generate skeletons in the next step)

1. Select Project -> Re-create all Documents

2. Confirm that the object for General (*.xlo) was created successfully

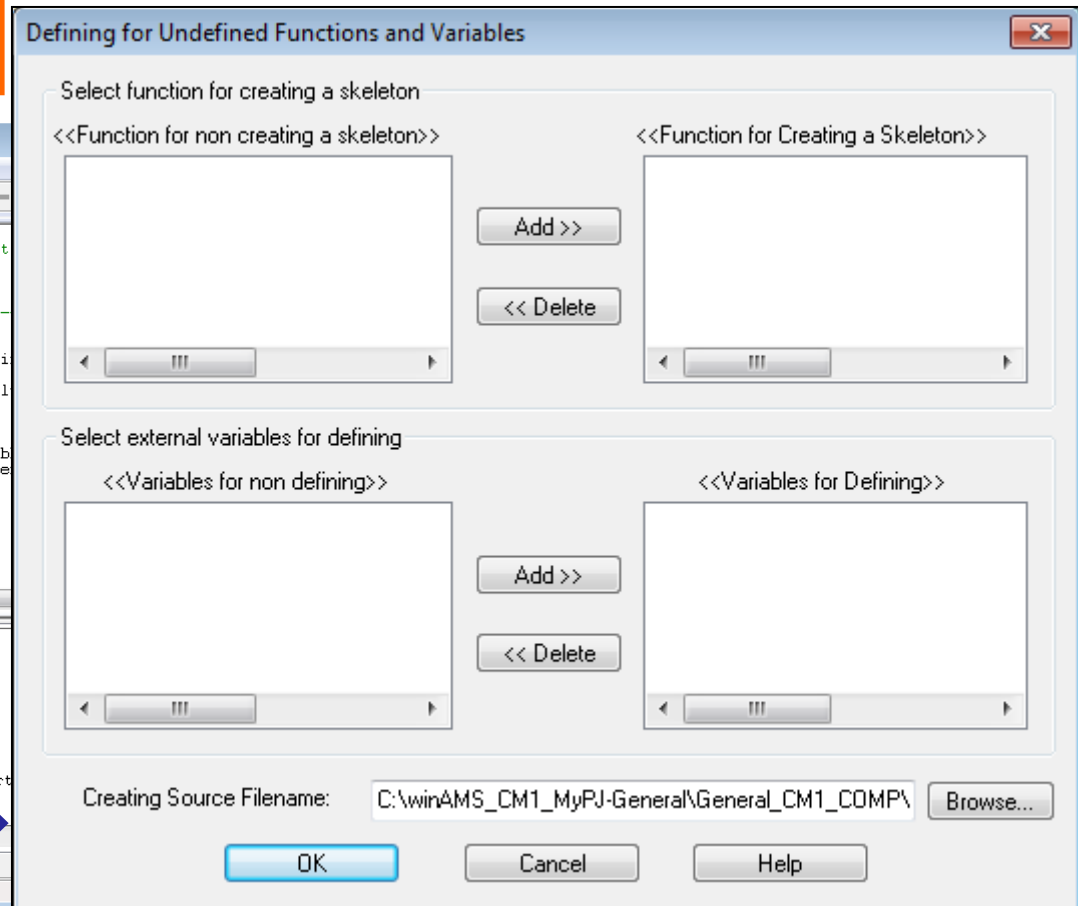
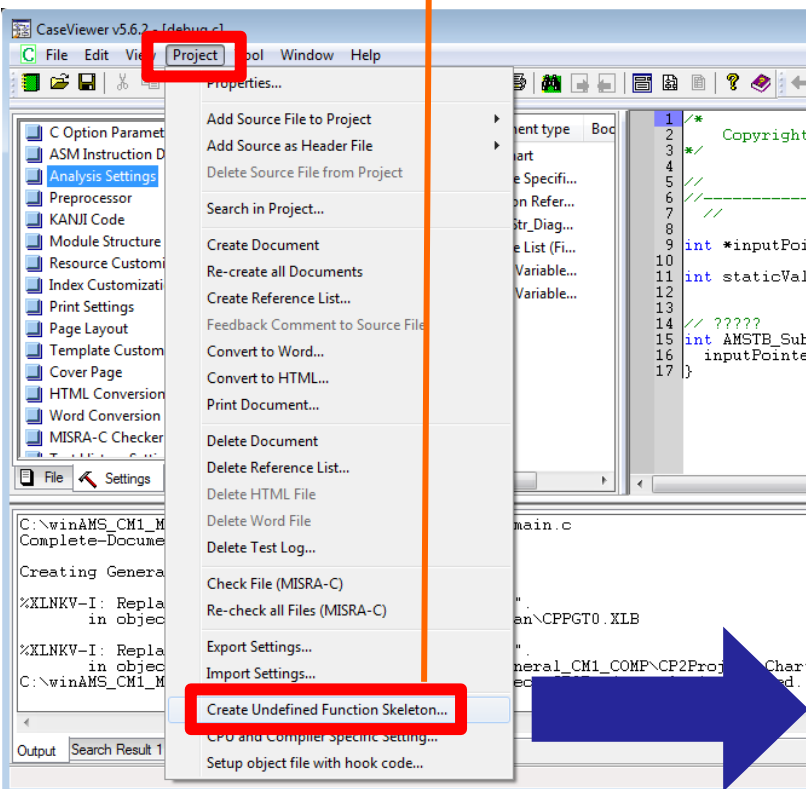
```
C:\winAMS_CM1_MyPJ-General\General_CM1_COMP\target\main.c
Complete-Documentation-Generation.

Creating General code object...
C:\winAMS_CM1_MyPJ-General\General_CM1_COMP\CP2Project\CP2Project.xlo is created.
```

Generate skeletons for undefined func/var

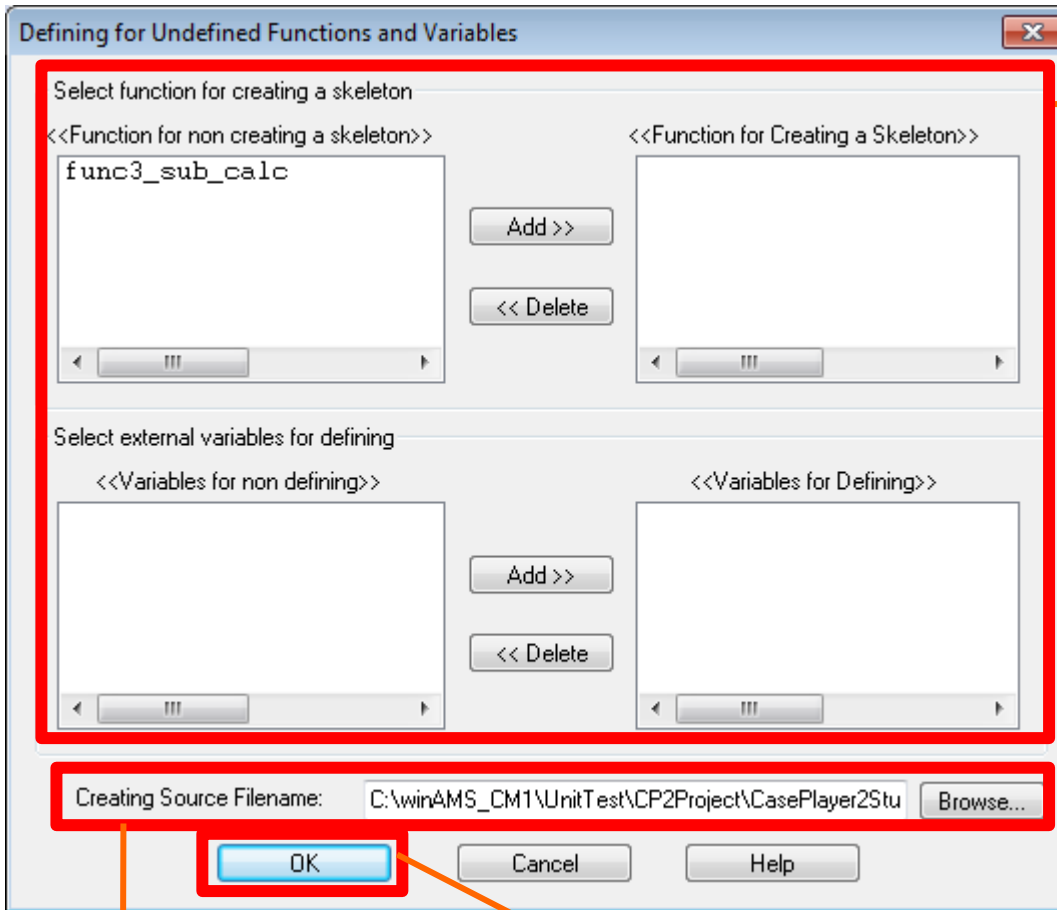
- Open the Skeleton Generation Setup window

1. Select Project -> Create Undefined Function Skeleton

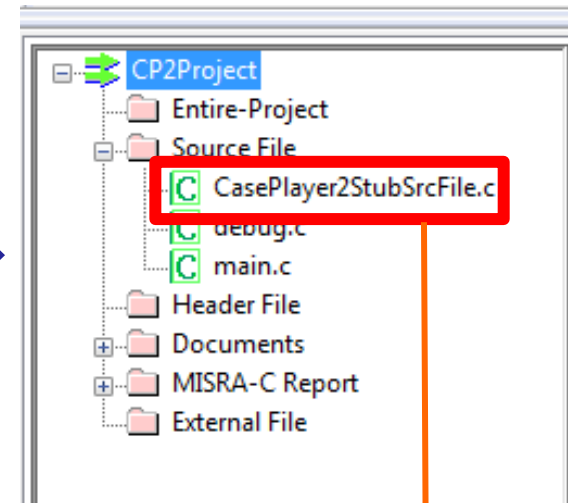


Generate skeletons for undefined func/var 2

■ Generate Skeletons:



1. Select the functions needing a skeleton, then click [Add]. Repeat for variables as needed.



4. Confirm that the Skeleton source file was added

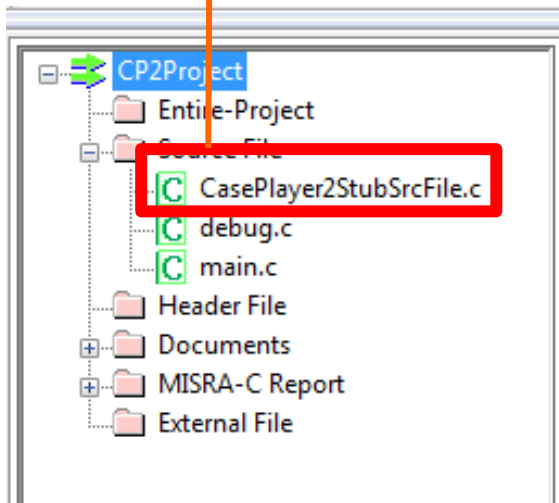
2. Enter a name for the generated source file

3. Click [OK]

Create a "main" function

- The object for General requires a main function. If none is present, create an empty one in the Skeleton file created previously.

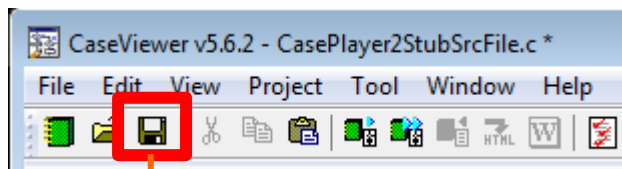
1. Double-click the skeleton source file



2. Create an empty main function

```
CasePlayer2StubSrcFile.c *
1  /*
2     Copyright(c) GAIO TECHNOLOGY CO., LTD
3  */
4
5  main()
6  {
7  }
8
9
10
11 /*CPW_STUB_FUNC[func3_sub_calc]*/
12 int func3_sub_calc(int input)
13 {
14     static int volatile CP2_AWOUT_input;
15     static int volatile CP2_AWIN_return;
16     CP2_AWOUT_input=input;
17     return CP2_AWIN_return;
18 }
```

3. Save the file



Second Compilation

- Create the complete Object for General

1. Select project -> Create Document

2. Confirm that the object for General (*.xlo) was created successfully

```
C:\winAMS_CM1_MyPJ-General\General_CM1_COMP\target\main.c  
Complete-Documentation-Generation.  
Creating General code object...  
C:\winAMS_CM1_MyPJ-General\General_CM1_COMP\CP2Project\CP2Project.xlo is created.
```

If the Object including skeletons and a main function was created successfully, the setup for General is over and tests can be run using CoverageMaster.



END

**For more information visit
<https://www.en.gaio.co.jp/>**

GAIO TECHNOLOGY CO.,LTD.

**Tennouzu First Tower 25F
2-2-4 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 Japan**

**TEL: (03) 4455-4767
Email: info@gaio.co.jp**

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