This document captures ideas, experiences, and informal recommendations from the Yaskawa Partner Support team. It is meant to augment – not supersede manuals or documentation from motoman.com. Please contact the Partner Support team at partnersupport@motoman.com for updates or clarification.

Offline Job Editing with VS Code

Introduction

Visual Studio Code (aka VS Code) is a free source code editor for Windows. One of the features of the product is that people can write "Extensions" to allow it to support different programming languages. Extensions have been written Yaskawa Motoman ".jbi" robot jobs. This means you can download robot jobs to a PC and use an editor that provides a lot of helpful features to understand the code and make modifications.

This is an alternative to the popular Motoman Notepad++ custom extension that was developed some time ago but is no longer maintained.

This document will provide information on how to install VS Code, add the extension to support .jbi files and describe some of the benefits of this approach.

Additional Background on VS Code

From the Wikipedia Article: "Visual Studio Code, also commonly referred to as VS Code, is a source-code editor developed by Microsoft for Windows, Linux, macOS and web browsers. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded version control with Git. Users can change the theme, keyboard shortcuts, preferences, and install extensions that add functionality.

In the Stack Overflow 2023 Developer Survey, Visual Studio Code was ranked the most popular developer environment tool among 86,544 respondents, with 73.71% reporting that they use it.
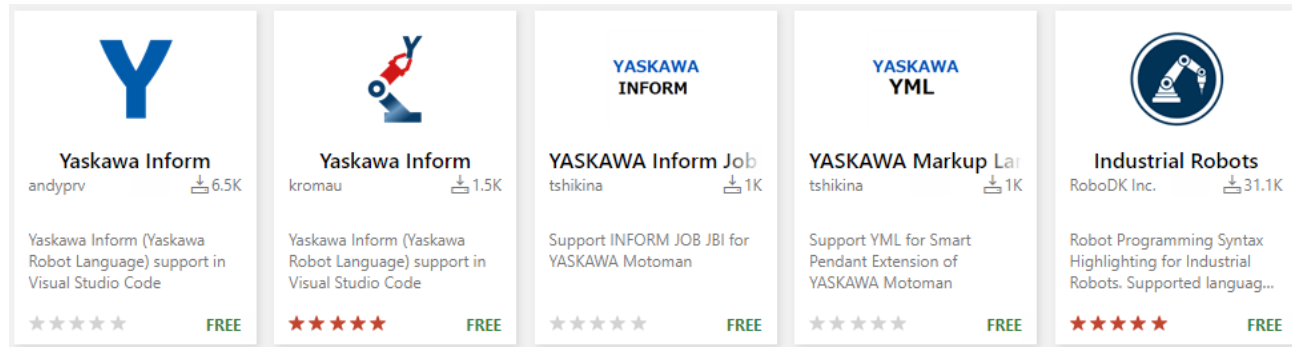
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Downloading and Installing VS Code

The website that has the download files and instructions is: https://code.visualstudio.com/

The Extensions for VS Code are at: https://marketplace.visualstudio.com/VSCode

On this Extensions page, I did a search using the word "Yaskawa", which returned these results:

You can see there are a couple of options for editing INFORM jobs and there are extensions available for YML. I am including these details for searching for extensions so you can find new ones as they are developed and try alternatives to the one we will use below. This is not an endorsement or criticism of any other approach.

I am going to install the middle option "Yaskawa Inform" by tshikina. It supports syntax highlighting, code folding and can be used with other inform related files like VAR.DAT, ALL.PRM, and etc. Click on "Install". (Assuming you have already installed VS CODE) that will prompt you to open VS Code and install the extension. Click Install again.
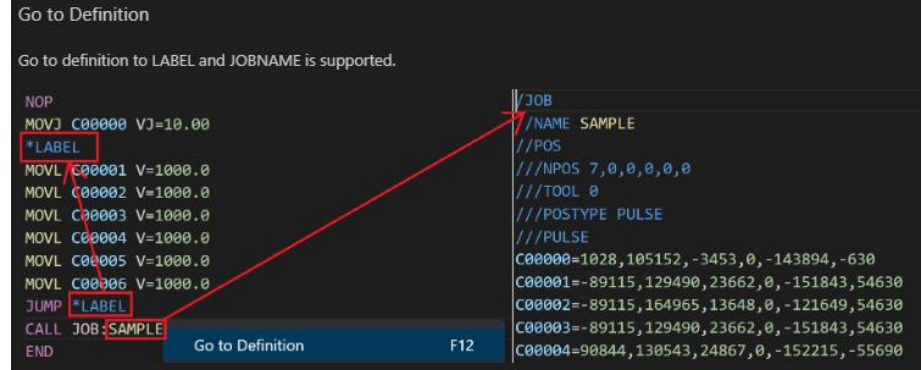
You will see examples of the syntax highlighting (color coding of keywords) and Code Completion features on the web page. Code Completion allows you to enter commands or entire sections of code just by typing the first letter of a command.

These are repeated below.

This extension support syntax highlight for YASKAWA Motoman Inform language as following image.

```
1   /JOB
2   //NAME TEST1
3  > //POS ⋯
13 > //ARGINFO ⋯
24   //INST
25   ///DATE 2020/11/19 13:27
26   ///ATTR SC,RW
27   ///GROUP1 RB1
28   ///LVARS 0,0,0,0,0,5,0,0
29   NOP
30   'COMMENT
31   SET LP000 P100
32   IMOV LP000 V=201.0
33   IFTHENEXP B003=0
34       'No Wait
35   ELSEIFEXP B003=1
36       'Wait for Signal
37       WAIT IN#(B004)=ON
38   ELSE
39       'Wait for Timer
40       TIMER T=LI005
41   ENDIF
42   FOR LI000 START= 1 TO 10 STEP=1
43       'for loop
44   NEXT LI000
45   SWITCH LI000
46   CASE 0
```

Go to Definition

Go to definition to LABEL and JOBNAME is supported.

```
NOP                         /JOB
MOVJ C00000 VJ=10.00        //NAME SAMPLE
*LABEL                      //POS
MOVL C00001 V=1000.0        ///NPOS 7,0,0,0,0,0
MOVL C00002 V=1000.0        ///TOOL 0
MOVL C00003 V=1000.0        ///POSTYPE PULSE
MOVL C00004 V=1000.0        ///PULSE
MOVL C00005 V=1000.0        C00000=1028,105152,-3453,0,-143894,-630
MOVL C00006 V=1000.0        C00001=-89115,129490,23662,0,-151843,54630
JUMP *LABEL                 C00002=-89115,164965,13648,0,-121649,54630
CALL JOB:SAMPLE             C00003=-89115,129490,23662,0,-151843,54630
END          Go to Definition    F12    C00004=90844,130543,24867,0,-152215,-55690
```

Folding Ranges

Folding range for Inform, and other files is supported.

Hover

Hover parameter number in .PRM files.

At this point, you are ready to go! You can start a new .jbi file and enter code from scratch. This can be challenging, as incorrect syntax will not load back into the controller and error messages can be hard to decipher.

The better approach is to use VS Code with the Yaskawa extension to review and make minor updates to jobs downloaded from your controller.