

How to use "yFlowGen"(Automatic flowchart generation tool)

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1 First of all

This document is a usage manual of the flowchart automatic generation tool "yFlowGen".

2 The function of this tool

Flow chart (gml file format) is automatically generated by inputting C language (C, C++) source file to yFlowGen.exe.

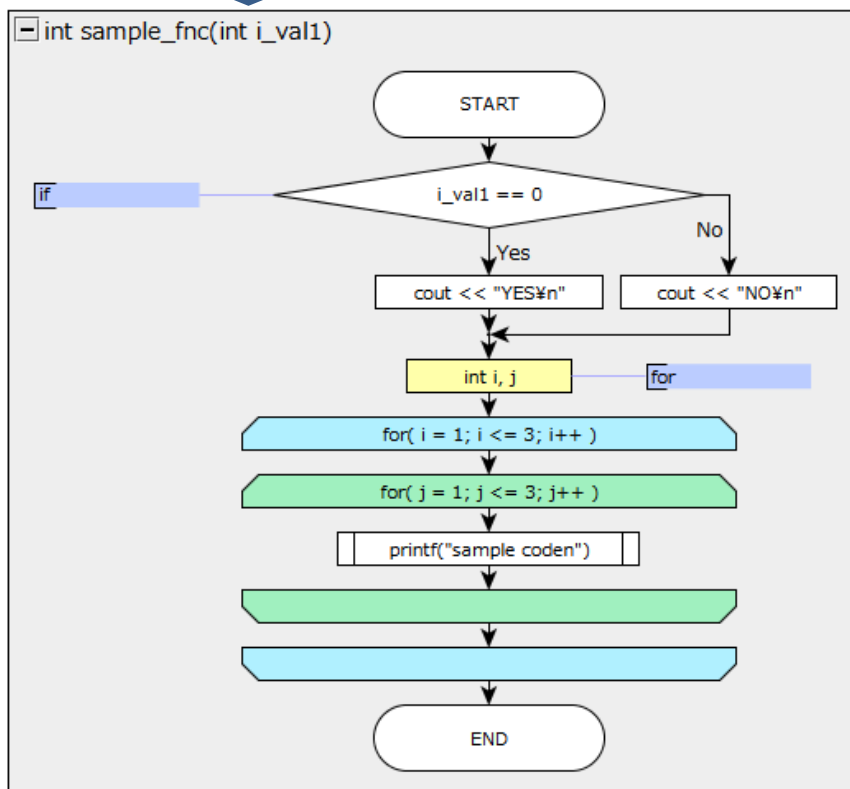
[Example of execution]

Execute the following command at the windows command prompt. In the example, specify sample.c as the source file.

```
yFlowGen.exe -f sample.c
```

sample.c

```
int sample_fnc(int i_val1) {  
    /* if */  
    if (i_val1 == 0) cout << "YES\n";  
    else  
        cout << "NO\n";  
    // for  
    int i, j;  
    for (i = 1; i <= 3; i++){  
        for (j = 1; j <= 3; j++){  
            printf("sample coden");  
        }  
    }  
}
```



3 How to use yFlowGen.exe

3.1 How to run yFlowGen.exe

- 1) Please open a Windows command prompt.
- 2) Please execute yFlowGen.exe by specifying the source code after "-f" option.
- 3) Results are outputted in the flow_file below the result_yFlowGen folder.
- 4) The log is output to log_yFlowGen.txt.

The following arguments can be specified when executing.

```
yFlowGen.exe -f <filePath> -no_compact -no_comment -out1file -color -debug -out_group_comment
or
yFlowGen.exe -d <dirPath> -no_compact -no_comment -out1file -color -debug -out_group_comment

-f <filePath> : Path of file to analyze. (It can be omitted if -d is described)
-d <dirPath> : Path of folder containing source files. (It can be omitted if -f is described)
-out1file      : Output 1 GML file per 1 source file. (Optional)
-no_compact    : Turn off the setting to make the processing block size as small as possible. (Optional)
-no_comment    : Do not display comments on flowchart. (Optional)
-no_color      : Do not color the block. (Optional)
-no_dec        : Do not display blocks with declarations only. (Optional)
-out_group_comment : Place comments outside the group. (Optional)
-no_disp_struct : Do not display struct and union. (Optional)
-no_reset      : Do not delete result folder when script start. (Optional)
-true_false    : Describe the judgment of if/else_if with True/False (described as Yes/No when not set)
-no_connection_point : No additional connection points (add connection points if not set)
```

Exsample:

```
yFlowGen.exe -f sample.c -out1file
```

If you specify a file name after -f, create a folder of "result_yFlowGen¥<source file name>" in the place where yFlowGen.exe is executed. Flowchart files are output for each function.

If you specify a folder name after -d, yFlowGen searches for source files (.c, .cpp) written in C language under the specified folder.

Then yFlowGen creates the same folder as the hierarchical structure of the found folder and stores the result.

In addition to the execution method at the command prompt, a method to execute it with the GUI is also available separately.

[\(→yFlowGenGUI\)](#)

3.2 Restrictions

- It may not work if 2 byte characters (such as Japanese) are included in the path specified by "-f" or "-d". Therefore, please do not write 2 Byte characters in the path. If 2 Byte characters are included other than "place surrounded by" such as "printf, cout" and "comment", it may not work properly due to character code problem. If you want to use 2 Byte characters for variables etc, enclose Japanese with "". (Eg: for ("count" = 0; "count" <100; "count" ++) etc)
- Descriptions of enum, struct, typedef, and class are not output as flowcharts.
- In try-catch exception handling, the final block of catch and the next block are connected so that the figure can be easily seen.

3.3 How to open the generated file (.gml)

3.3.1 Open using yEd Graph Editor

The generated file is in gml file format. Therefore, please use Ed Graph Editor to open.

yEd Graph Editor can be downloaded for free from the following.

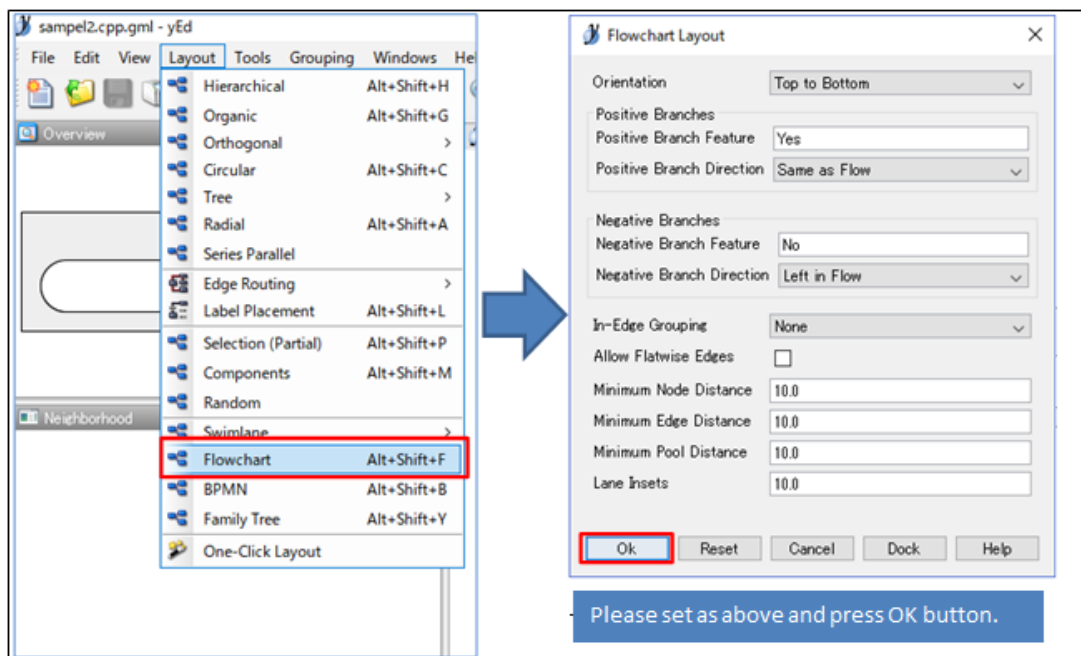
Since yEd Graph Editor is a wonderful graph editor, please use by all means when writing flow chart by hand.

[[yWorks] yEd Graph Editor - Downloads]

<https://www.yworks.com/downloads#yEd>

3.3.2 Use yEd Graph Editor to auto-arrange the flow chart

Open the gml file. Then, using the automatic sorting function of yEd Graph Editor, arrange the figures automatically. Please click "Layout → Flowchart" on the tool bar. Then set as follows and execute auto alignment.



4 About yFlowGenGUI

yFlowGenGUI is an auxiliary tool that can run yFlowGen.exe with GUI. For details, please see the "Useage" sheet of "yFlowGenGUI.xlsm" located at the same level as this file.

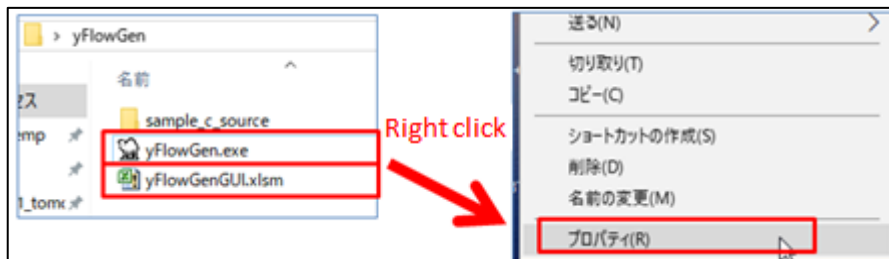
4.1 Unblock

Files downloaded from the Internet by Windows cannot be executed unblocked.

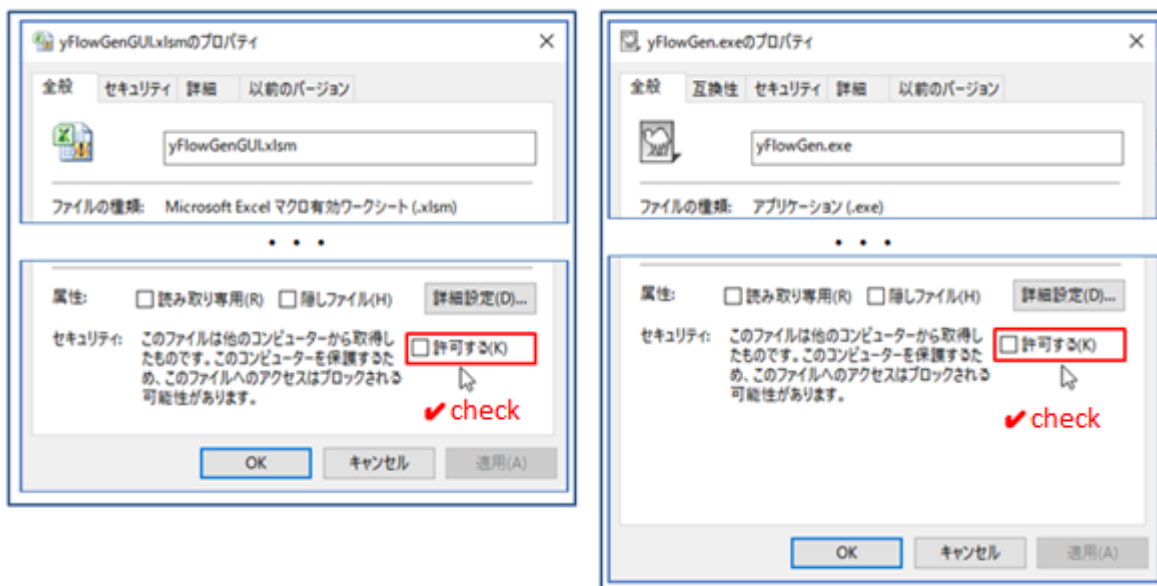
For this reason, please unblock in the following way.

(It seems that it can be executed without unblocking from the command prompt)

[Step 1] Right-click the file and press Properties.



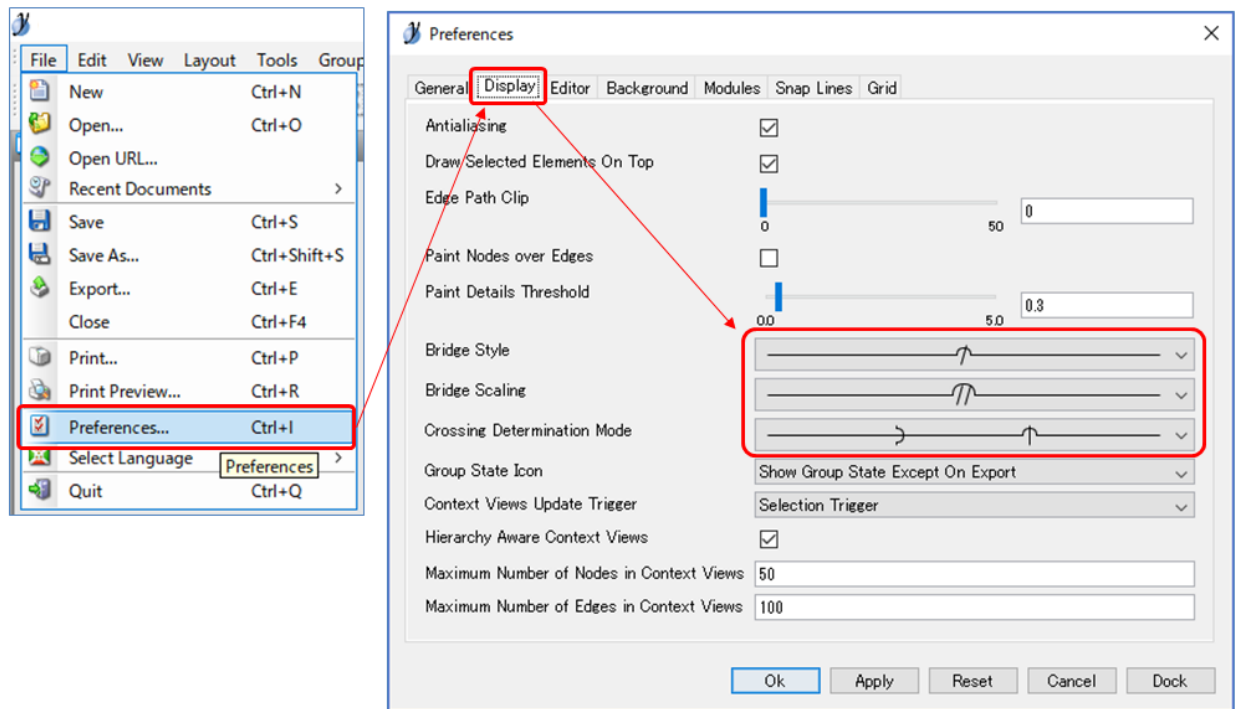
[Step 2] Please check the box of "Allow" in the security item.



5 Setting up to make it easier to see

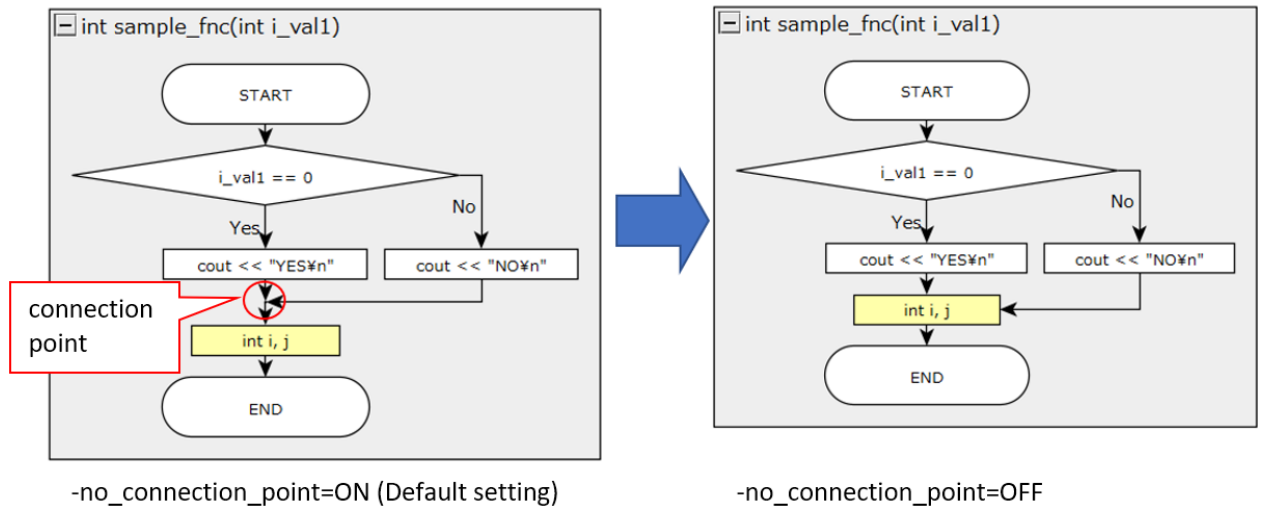
5.1 Bridge Style setting

You can choose the expression when the lines crossed. Please set "Bridge Style" in "Preferences" → "Display" tab of "yEd Graph Editor". The first setting is not a bridge expression, I think that it is easy to understand with this setting.



5.2 "No additional connection points" setting

If you want to display without adding connection points, turn on the "No additional connection point" setting (-no_connection_point).



6 About nkf32.exe

nkf32.exe is obtained from the following URL and redistributed. Various character codes of input files were supported using nkf32.exe. Please put it in the same hierarchy as yFlowGen.exe.

[nkf.exe : Vector] <https://www.vector.co.jp/soft/dl/win95/util/se295331.html>

(Author URL : <http://hp.vector.co.jp/authors/VA007219/>)

7 Operating environment

•OS: Windows 7 or higher is recommended

8 Terms of service

This program is freeware. toowaki has copyright. Please reprint freely.

Also, please do not change or change this software and attached Excel sheet.

9 Disclaimer

Regardless of damage caused by using this program, the author is not involved at all.

Please use this program at your own risk.

10 Contact information

If you have any requests, please email toowaki.fc2@gmail.com.

11 History

Date	Contents	Ver.	Editor
2018/1/5	Newly created.	1.0	toowaki
2018/5/2	When "printf("text");}" was executed, yFlowGen could not output correct result. So, this bug was collected.	1.1	
2018/11/8	Fixed about the following 3points. - "}" For indentation is continuous on the same line. - "}" Comes after ";". - When describing an else statement with one line and describing without using "{".	1.2	
2018/11/23	· When "(" or ")" exists in printf, cout, it was not working properly and it was fixed.	1.3	
2018/12/09	Some bugs were fixed.	1.5	
2018/12/30	Corresponded to class and struct.	2.0	
2019/01/03	Various character codes of input files were supported using nkf32.exe.	2.1	
2020/06/14	Fixed the connection with the break statement.	2.2	
2020/08/29	Fixed the connection with the default section of the switch.	2.3	
2020/08/30	Fixed the connection with the break statement.	2.4	
2021/06/26	Fixed the connection with the break statement of case.	2.5	
2021/07/17	In case of if-else description, it had been changed so that the process works properly even if it is not described in else.	2.7	
2021/07/17	Fixed connection when using if.	2.8	
2022/03/21	Added the option " -no_connection_point "	2.9	