

TP3 SETUP





*Windows && Visual Studio 15+
Without Makefile*

I. (full setup)


- I. Download libgraph at <https://github.com/memo-p/libGraph>
- II. Unzip the archive and create a new empty visual studio project.

Option I.I Generating the libGraph library (for those who don't have it)



- III. Right click on your project and go to Open Folder in File Explorer or go to your project root folder.
- IV. We are going to create a *Dependencies* folder that will contain our includes and library files required for the project to work.
- V. Create an include folder into the *Dependencies* one, create a *GL* and *libGraph* folder in it and copy paste the header files from the *libGraph* folder into its location:

	Dependencies	06/10/2017 21:53	Dossier de fichiers	
	TP3_Setup	06/10/2017 21:40	Dossier de fichiers	
	TP3_Setup	06/10/2017 21:37	Microsoft Visual S...	2 Ko
	TP3_Setup.VC	06/10/2017 21:37	Data Base File	3 328 Ko









In Dependencies

	include	06/10/2017 21:53	Dossier de fichiers	
---	---------	------------------	---------------------	--

In include

	GL	06/10/2017 22:11	Dossier de fichiers	
	libGraph	06/10/2017 21:53	Dossier de fichiers	

In libGraph

	ControlEngineBase	24/06/2017 07:20	C/C++ Header	2 Ko
	Engine	24/06/2017 07:20	C/C++ Header	2 Ko
	GameEngineBase	24/06/2017 07:20	C/C++ Header	1 Ko
	GraphicEngineBase	24/06/2017 07:20	C/C++ Header	1 Ko
	GraphicPrimitives	24/06/2017 07:20	C/C++ Header	3 Ko
	libGraphicInclude	24/06/2017 07:20	C/C++ Header	1 Ko
	Stopwatch	24/06/2017 07:20	C/C++ Header	3 Ko
	TextureManager	24/06/2017 07:20	C/C++ Header	2 Ko

In GL

 glut	24/06/2017 07:20	C/C++ Header	28 Ko
--	------------------	--------------	-------

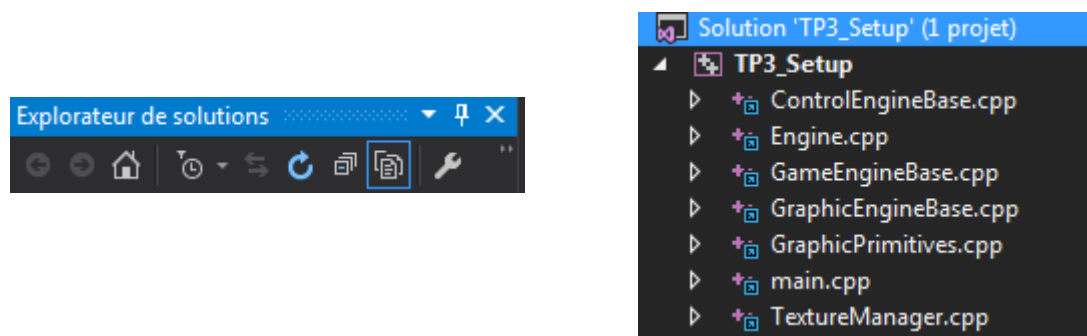
VI. In Dependencies create a lib file and include in it the *glut32.lib* library that you find here [glut32.lib](#) (or on the web..).

In Dependencies

 include	06/10/2017 22:11	Dossier de fichiers
 lib	06/10/2017 22:22	Dossier de fichiers

In lib

 glut32	06/10/2017 23:18	Object File Library	29 Ko
--	------------------	---------------------	-------



VII. Click on the icon as below to change the solution arborescence. Add the libGraph cpp files to your project (click and drag and then right click on them and do include into project, for instance).

VIII. **Now we have to tell VS how to access our headers, libraries and how to link them up.**

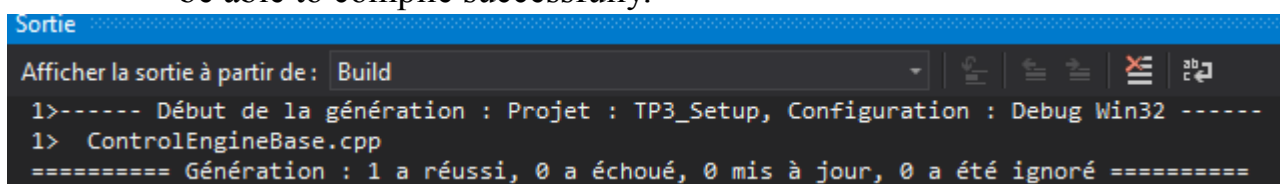
1. Right click on your project, go to properties -> C/C++ -> General -> Additional Include Directories (autres répertoires Include) and add our *include* folder which is in $$(SolutionDir)Dependencies\Include$:

Autres répertoires Include	$$(SolutionDir)Dependencies\Include$
Répertoires #using supplémentaires	

SolutionDir is a macro that refers to your project root folder.

You can click on the little arrow on the right, edit and check that the file path is the right one.

Now, in VS -> properties -> Configuration, click on All configurations, close the properties window and then press CTRL + F7 and you should be able to compile successfully.



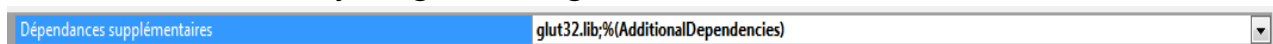
2. Go to properties -> linker (éditeur de liens) -> General -> Additional Library Directories (Répertoires de bibliothèques supplémentaires).

Here we put the almost same path than above but for the lib folder.
`$(SolutionDir)Dependencies\lib`

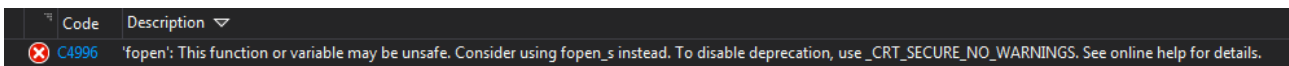


Again, you can click on the little arrow on the right, edit and check that the file path is the right one.

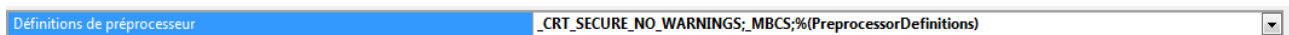
3. Now, go to linker -> input -> Additional Dependencies. Delete everything and add glut32.lib.



IX. Now, build your project (right click on it and build or F5..) to compile and link. You could have this deprecation:



If you do have it, go to Properties -> General -> Preprocessor and on preprocessor definition add the flag that is advised:



Care the to the semi-column then apply then ok.

- X. Now re-generate your project (F5) and a **window titled TP should appear !** Congratz, the libGraph library is correctly configured, now we have to generate the .lib file.
- XI. Delete the main.cpp file and Go to Properties -> General -> Configuration Type. Select the static library .lib option, apply then ok. F5 your project and you should have a new error, that's not a problem. Go to your project root folder -> Debug and here is your **projectName.lib** file ! Save it somewhere :)

Option I.II Use my .lib file !

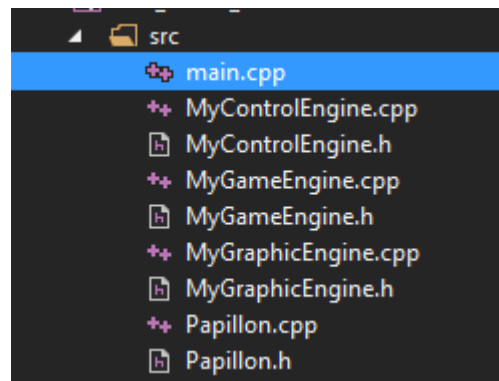
II. Creating your TP3 project

Here you need the files from the archive provided. Create a new VS empty project.

Copy and paste the *Dependencies* folder with *include* and *libs* in it at the project root folder. *#ref I.III -> I.VII*

We also could add the *My__.h* files to the include folder but as we will modify it I prefer to put everything on a single *src* folder.


Navigate in file explorer, add a *src* folder and add the files into it.



Root project folder (\$(SolutionDir))

	Dependencies	07/10/2017 00:15	Dossier de fichiers	
	TP3_TUTO_END	07/10/2017 00:14	Dossier de fichiers	
	TP3_TUTO_END	06/10/2017 23:46	Microsoft Visual S...	2 Ko
	TP3_TUTO_END.VC	06/10/2017 23:46	Data Base File	3 328 Ko



In Dependencies

	include	07/10/2017 00:15	Dossier de fichiers	
	lib	07/10/2017 00:15	Dossier de fichiers	

In include

	GL	07/10/2017 00:15	Dossier de fichiers	
	libGraph	07/10/2017 00:15	Dossier de fichiers	

In lib

	glut32	06/10/2017 23:18	Object File Library	29 Ko
	libGraph	06/10/2017 23:29	Object File Library	316 Ko

In the TP3_TUTO_END, we find the src folder

	Debug	07/10/2017 00:38	Dossier de fichiers	
	src	07/10/2017 00:38	Dossier de fichiers	

Add the [glut32.dll](#) file (included in the archive) and put it in the Debug project root folder: (if you don't have the folder, compile one time in debug config')

In \$(SolutionDir)

 glut32	06/10/2017 22:21	Fichier DLL
 TP3_TUTO_END	07/10/2017 13:50	Application
 TP3_TUTO_END	07/10/2017 13:50	Incremental Linke...
 TP3_TUTO_END	07/10/2017 13:50	Program Debug D...



In Debug. You may see this icon for the .dll file.

Now, include and link your project as shown at [#ref I.VIII](#)

Autres répertoires Include	\$(SolutionDir)Dependencies\Include\libGraph;\$(SolutionDir)Dependencies\Include
Répertoires de bibliothèques supplémentaires	\$(SolutionDir)Dependencies\lib
Dépendances supplémentaires	glut32.lib;libGraph.lib;%(AdditionalDependencies)

And, if you have not, refactor lines that contain *(Graphic/Game/Control) Engine*

```
GraphicEngineBase* ge = new MyGraphicEngine(&paps);  
GameEngineBase* gme = new MyGameEngine(&paps);  
ControlEngineBase* ce = new MyControlEngine(&paps);
```

into *(Graphic/Game/Controle) EngineBase*.

Launch the application and you now should see this:



If the game speed is too high, you can change it like that:

```
MyGraphicEngine(std::vector<Papillon*>* paps_):  
    paps(paps_),  
    str(new char[13]{ 'C', 'l', 'i', 'c', ' ', '&', ' ', 'E', 'n', 'j', 'o', 'y', '\0' } ),  
    x1(0.5f),  
    x2(-0.5f),  
    dx1(0.001f),  
    dx2(-0.002f){}
```

```
public:  
    Papillon(float fx = 0.0f, float fy = 0.0f)  
        :x(fx), y(fy),  
        width(0.1f), height(0.1f),  
        dx(0.001f), dy(0.002f),  
        dw(0.001f), dh(-0.002f){  
    }
```

Congratz ! :)