

**Pre-Lab Discussions:**

- Windows applications

**Tasks:**

1. Create a Visual Studio<sup>1</sup> 2017 **Win32** project called **lab4\_soln**. Keep all options in the wizard as default. Run it to make sure it works.
2. Do a little re-organization of the project folder
  - a. VS doesn't organize project folders very well.
  - b. Make sure VS is closed before doing this.
  - c. All folder names are relative to your top-level folder (for me z:\etgg3801\labs\lab4\_soln)
    - i. When I ask you to make a .\build folder, what I really mean is z:\etgg3801\labs\lab4\_soln\build
  - d. Create these folders (note the description of what we'll put here)
    - i. .\build\vs2017 *All visual-studio-specific build files. VS will create a Release and Debug folder*
      1. Move these existing files to this folder
        - a. Lab4\_soln.sln
        - b. Lab4\_soln.vcxproj
        - c. Lab4\_soln.vcxproj.filters
        - d. Lab4\_soln.sln
        - e. Lab4\_soln.ico
        - f. Lab4\_soln.rc
        - g. Small.ico
        - h. Resource.h *Normally, .h files will go in /include, but these are...*
        - i. TargetVer.h *...vs2017-specific, so we'll leave them here.*
        - j. Lab4\_soln.h *...*
        - k. Stdafx.h *...*
      - ii. .\src *Put All .cpp files*
      - iii. .\include *Put All .h files (that we create)*
      - iv. .\tmp\vs2017 *All temporary files (.obj, ...) created during build (Release and Debug here too)*
      - v. .\bin *The shippable product (.exe, .dll, media files, etc.)*
      - vi. .\doc *Auto-generated doxygen documentation [later]*
  - e. Delete all other files / folders not mentioned here.
  - f. Re-open VS by double-clicking on the .sln file
    - i. It will complain about one or more projects being missing – ignore this.
    - ii. Remove the lab4\_soln project from the Solution Explorer (right-click => remove)
    - iii. Re-add the existing project, Lab4\_soln.vcxproj (right-click on solution => Add => Existing Project...)
    - iv. Remove and re-add all files in the project (we broke the link) in the Header Files, Resource Files, and Source Files solution folders. Right-click on an item, select Remove, pick "Remove" from the little dialog. Then Right-click on the project, select Add => Existing Item... and pick the same object (which is now in a new location)
  - g. Change a few build settings to output to different folders.
    - i. Right-click on the Project in the solution explorer
    - ii. **Important:** Make sure to change Configuration to "All Configurations", otherwise you'll have to do this for Debug and Release properties.
    - iii. In configuration Properties => General, change these:

<sup>1</sup> Historically, about 15% of you will have a (imo) irrational hatred of Visual Studio 2017. While I sympathize with you, you *wil* have to use Visual Studio 2017 (free, community edition)....unless...you're willing to re-make all dependencies (and there will be several) in your IDE of choice (and if you're completely insane and want to do command-line building...I won't say it's impossible, but you're needlessly creating work for yourself).

1. Output Directory to **\$(SolutionDir)..\bin\\$(Configuration)\** (Note: relative to .vcxproj file)
2. Intermediate Director to **\$(SolutionDir)..\tmp\vs2017\\$(Configuration)\**
- iv. Go to Configuration Properties => C/C++ => General
  1. Click Edit on Additional Include Directories to and add these
    - a. **..\include**
    - b. **\$(SolutionDir)**
- h. Right-click on stdafx.cpp in the solution explorer and pick Properties
  - i. Got to Configuration Properties => C/C++ => Precompiled Headers and change the Precompiled Header option from Use to Create.
- i. Run the program and make sure it builds in both Release and Debug mode
- j. Double-check that there are do Debug folders or Release folders being created in build/vs2017.
- k. Also make sure there are files being created in bin and tmp folders.
- l. Rather than turning this in on blackboard, I'll come around to your station and make sure it's working.