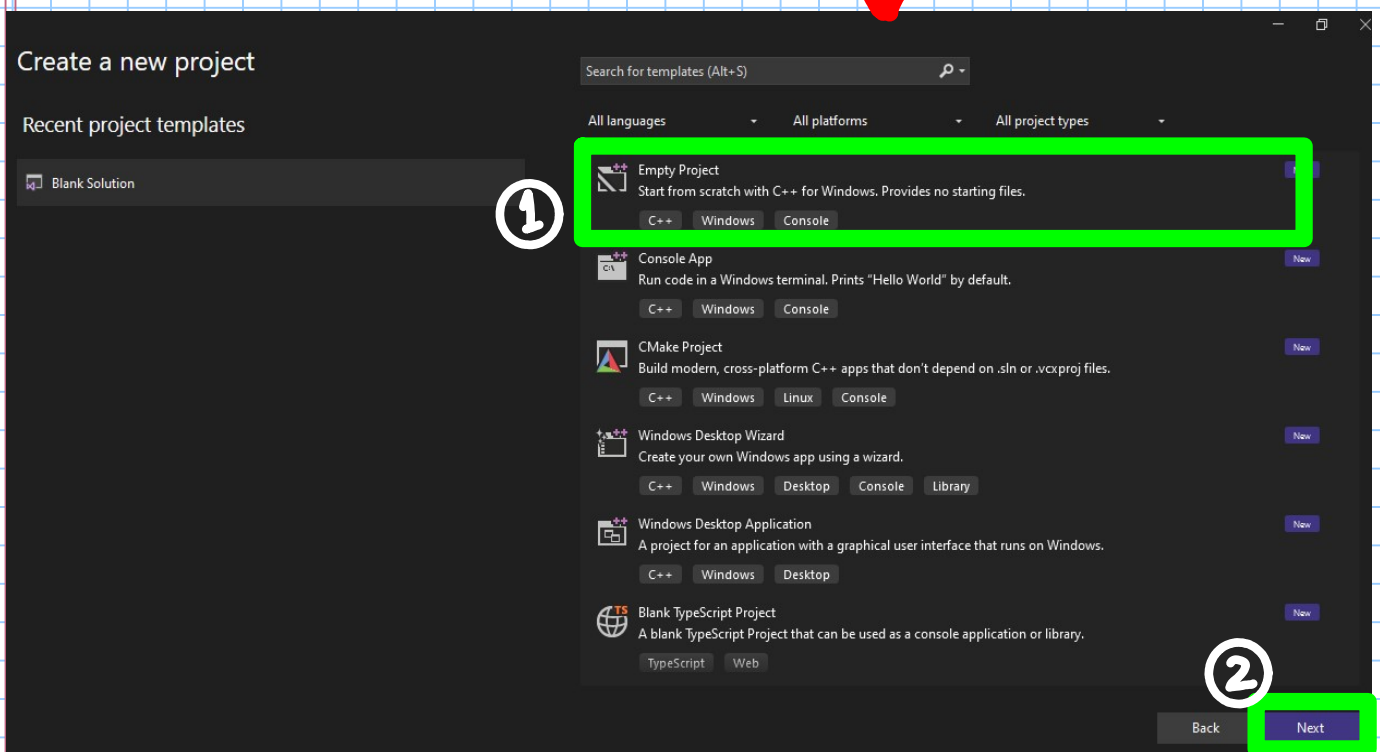
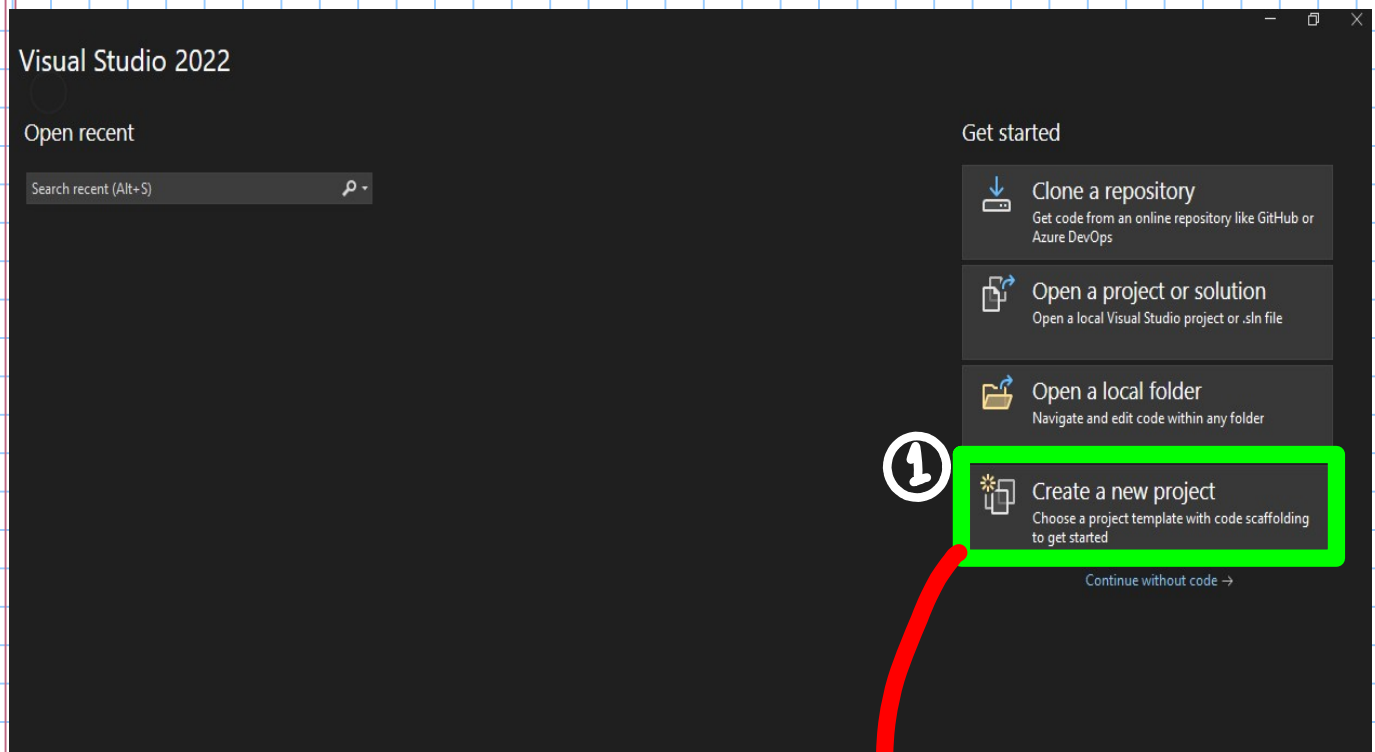
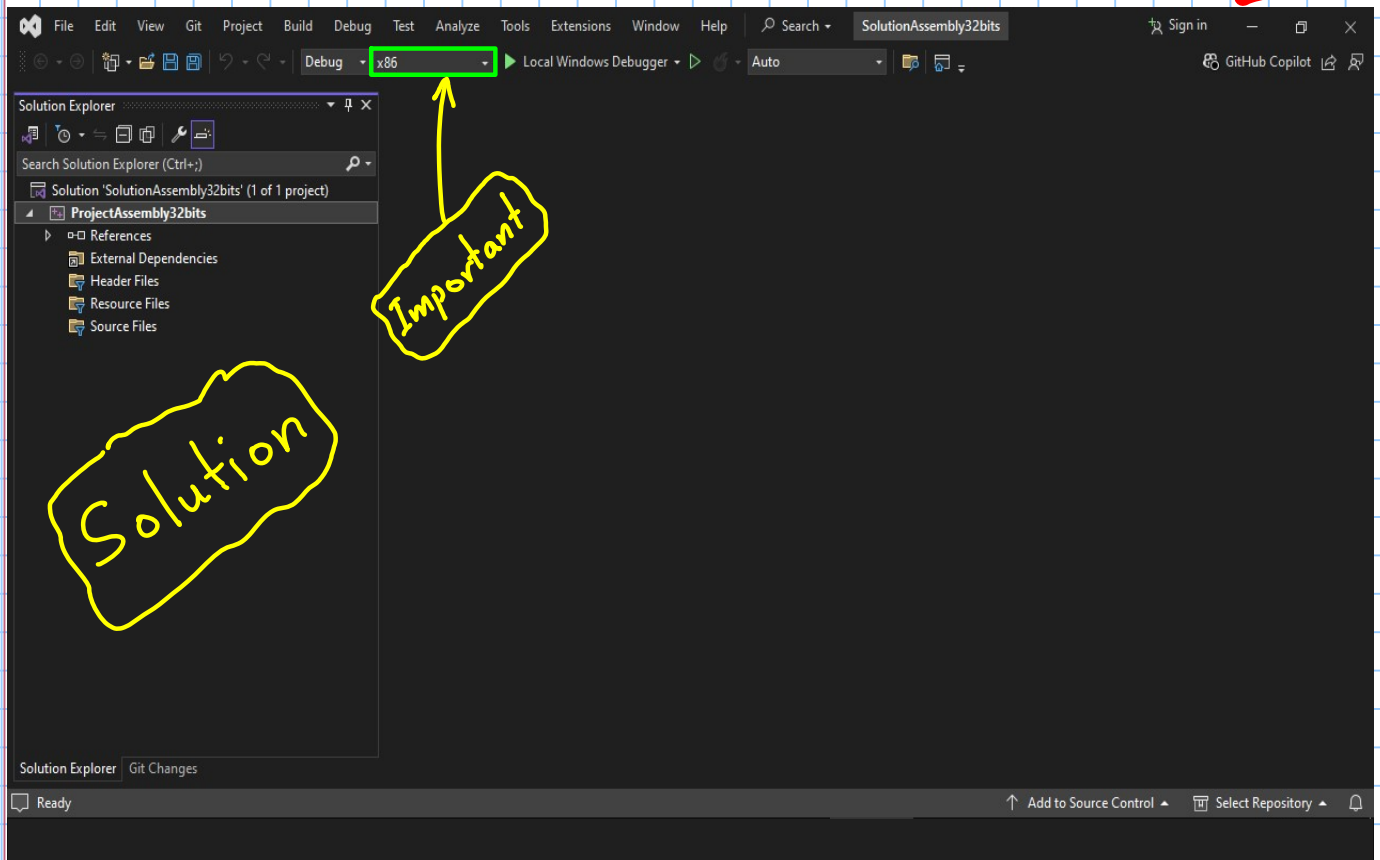
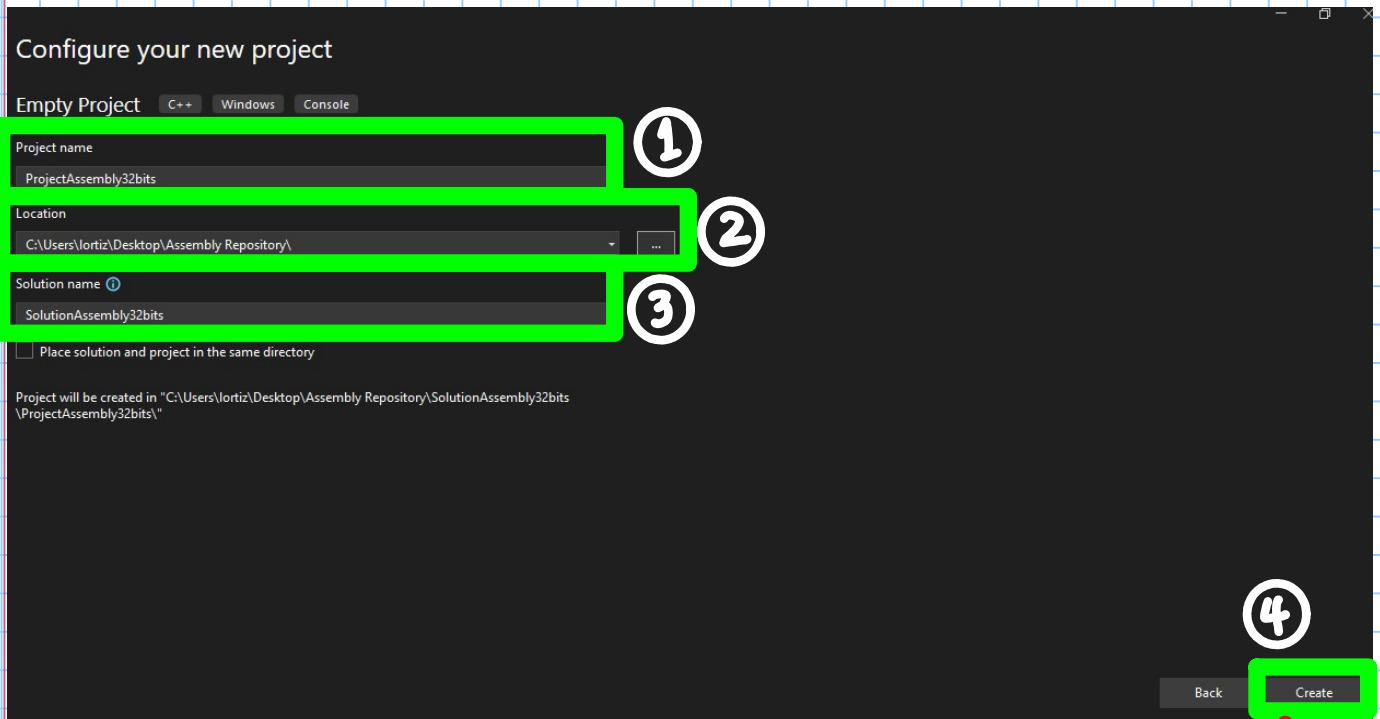


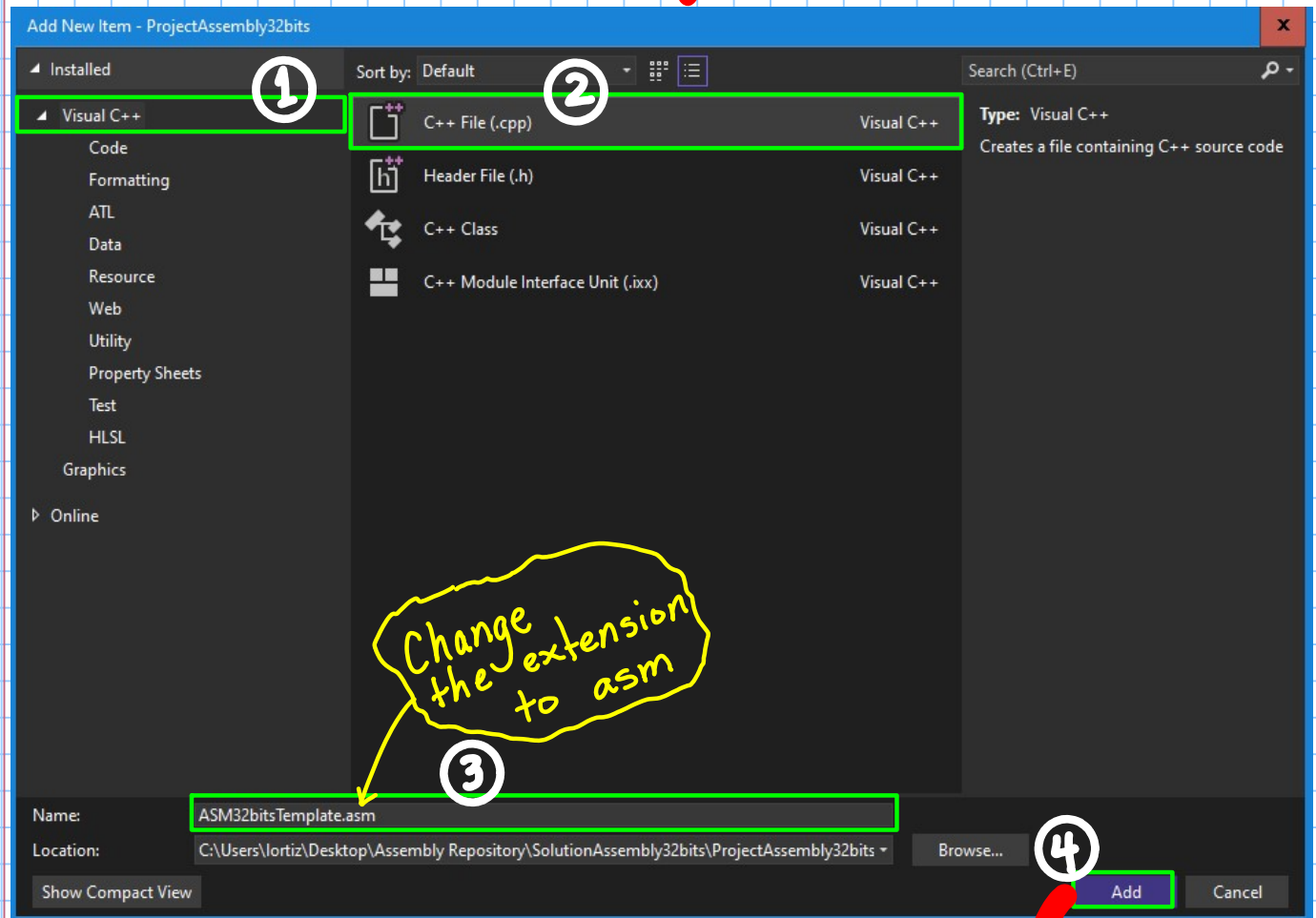
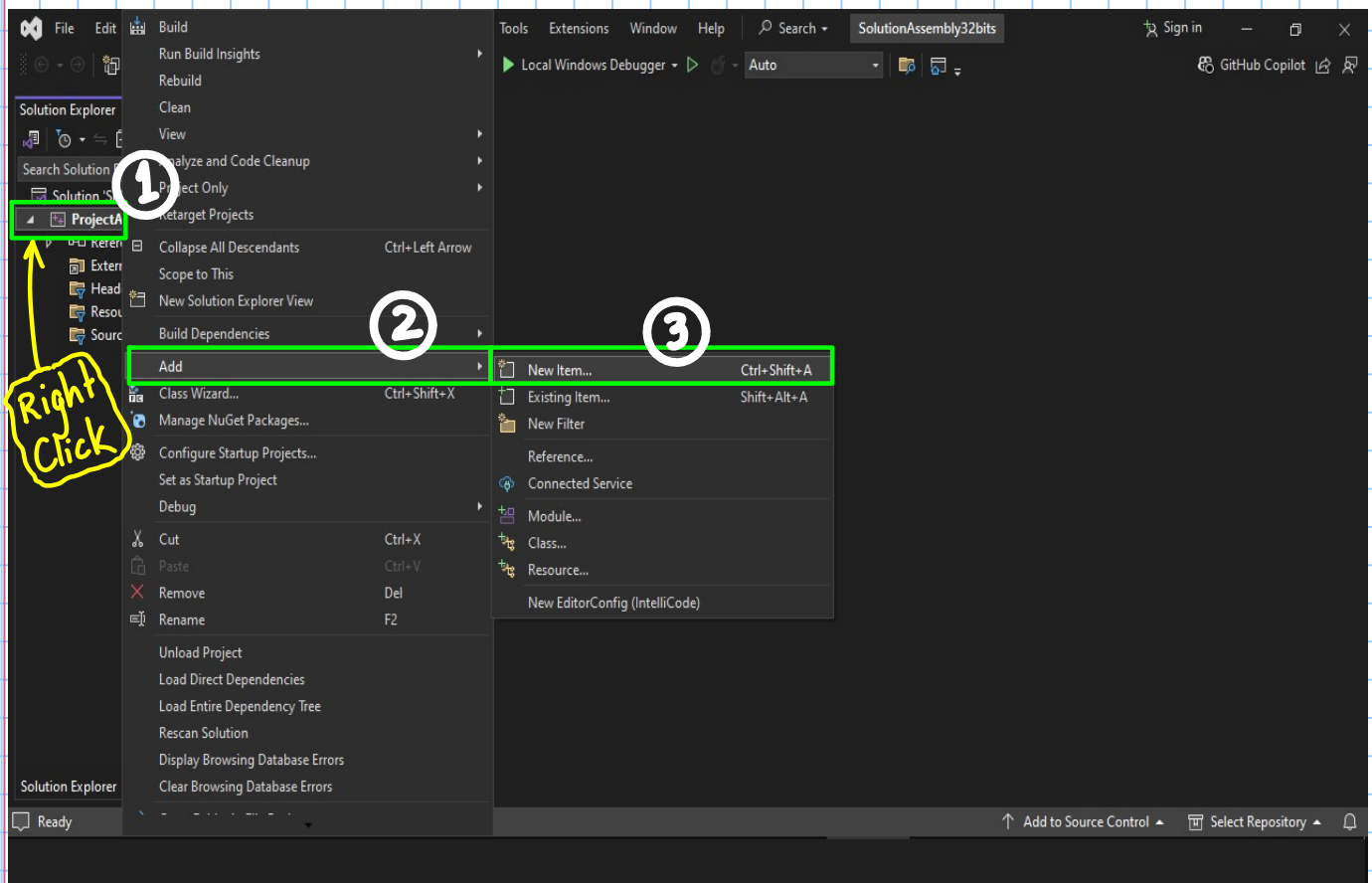
How to construct a 32bits(x86) program

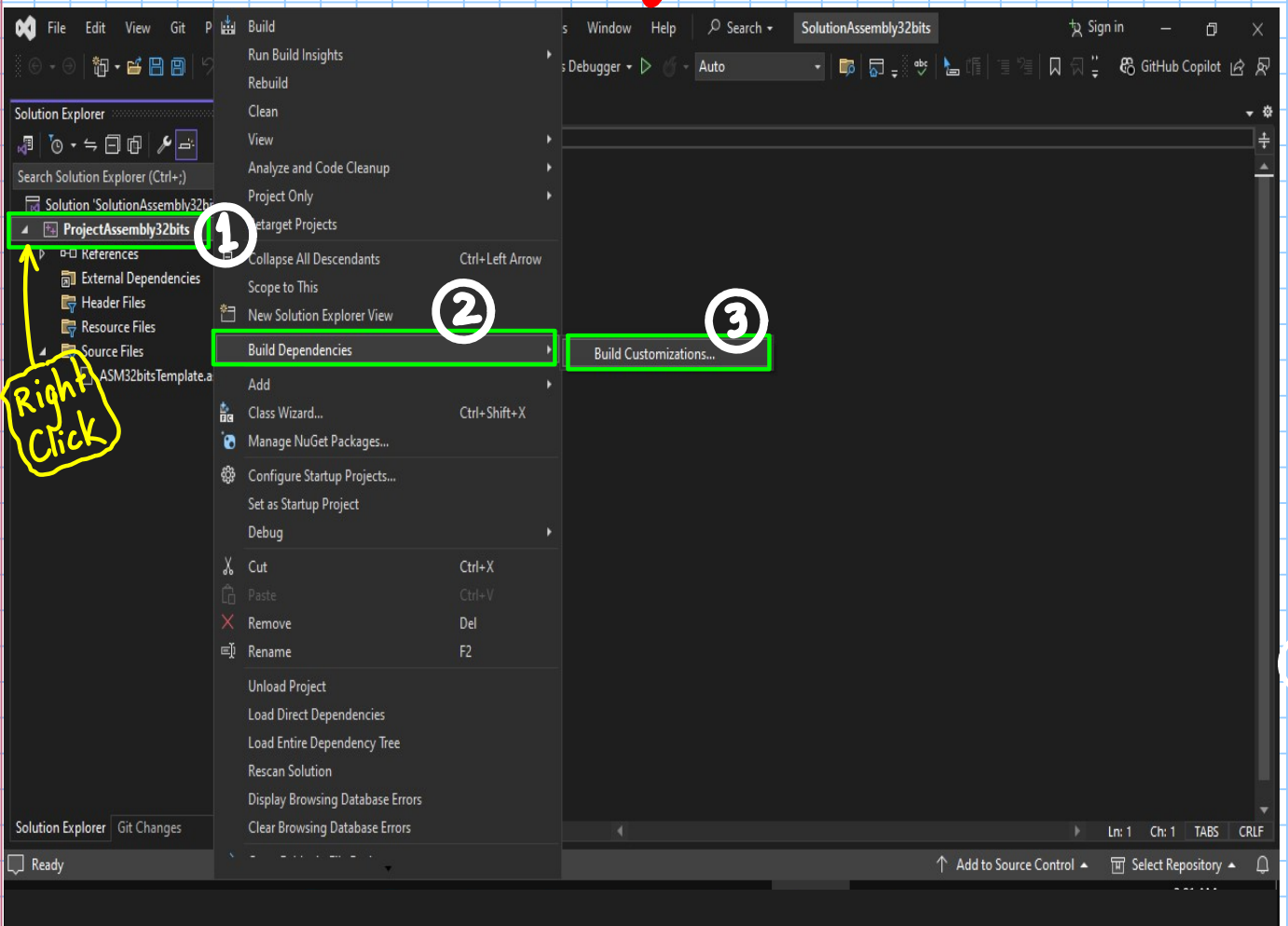
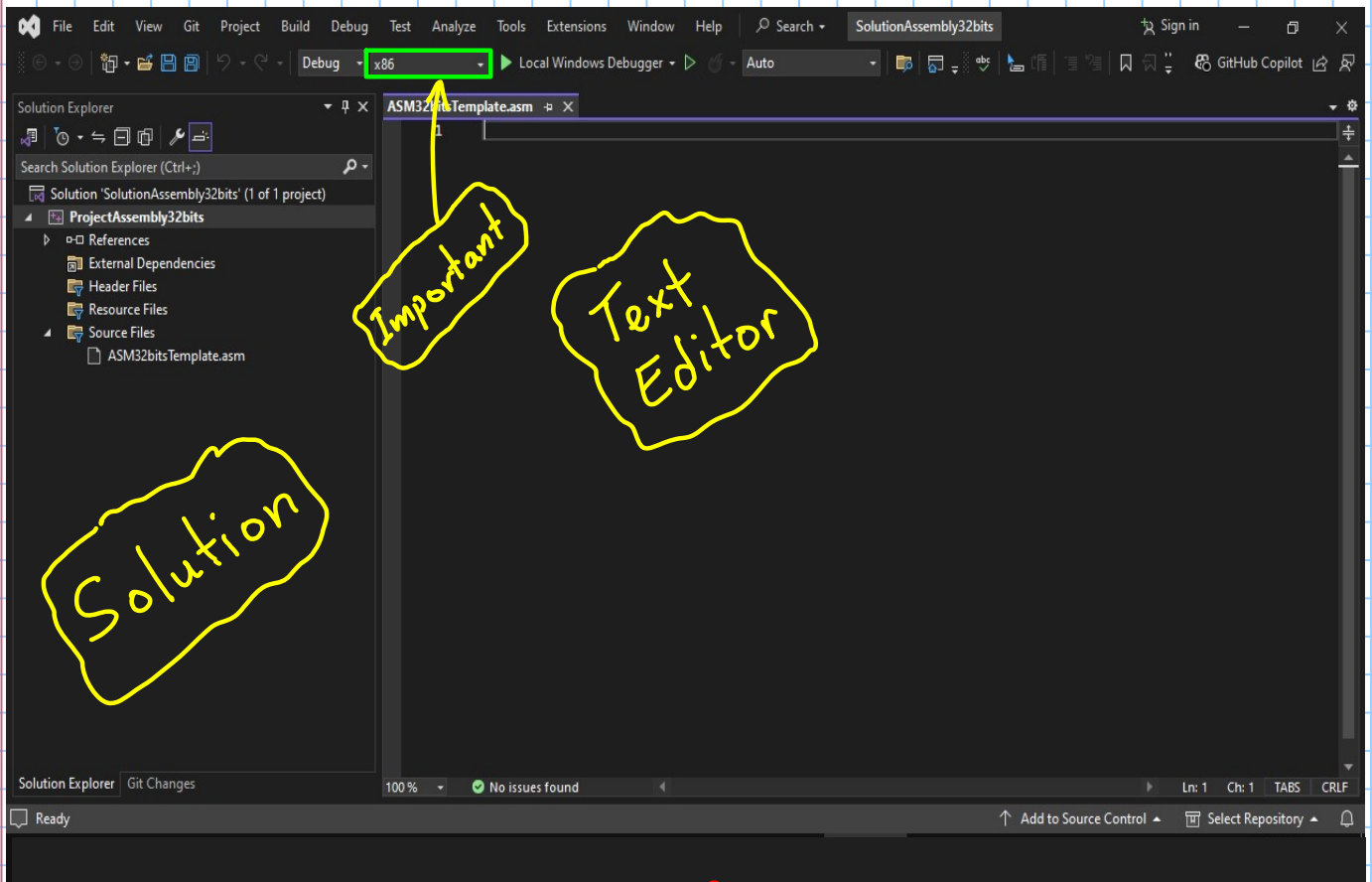
Note Title

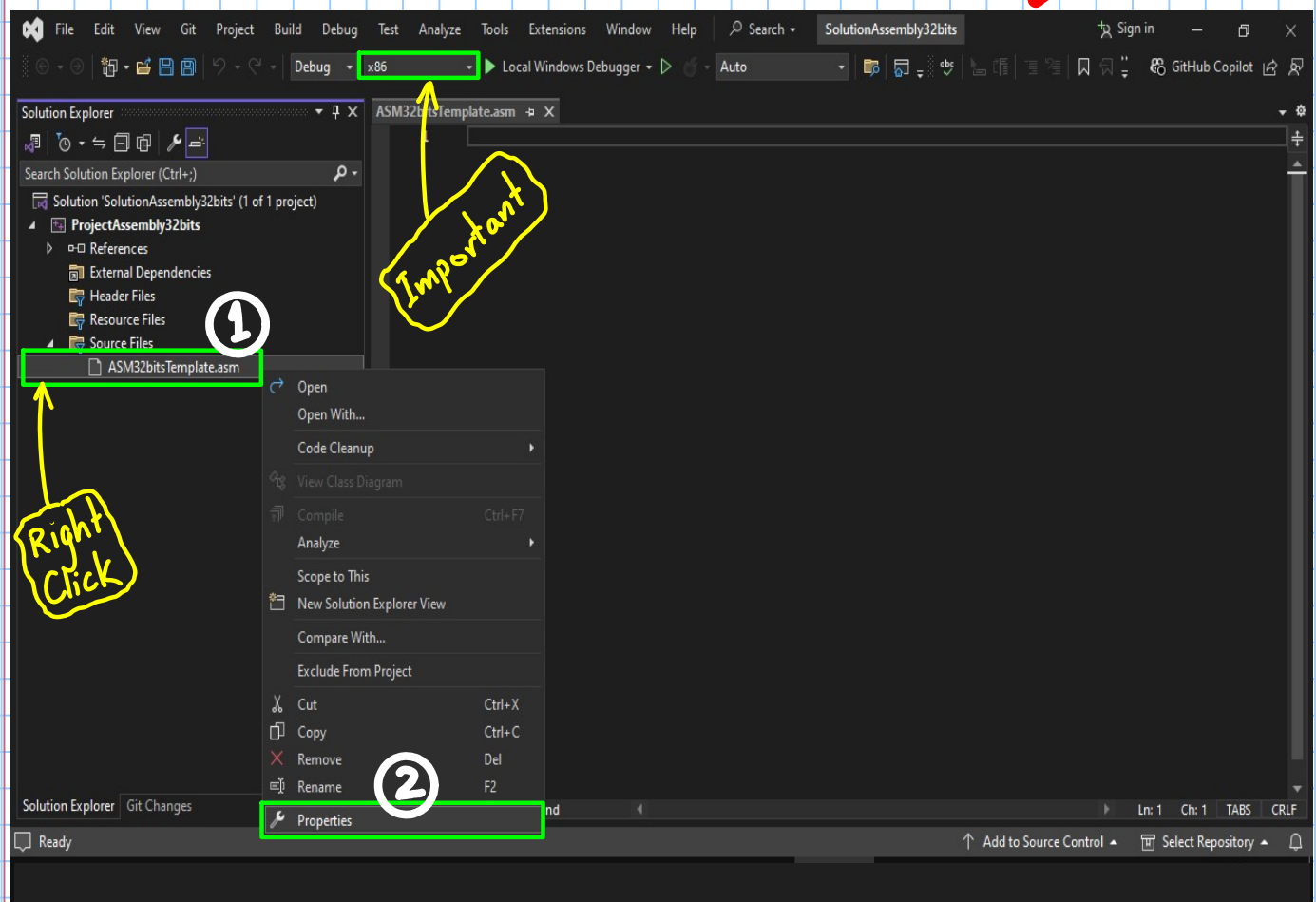
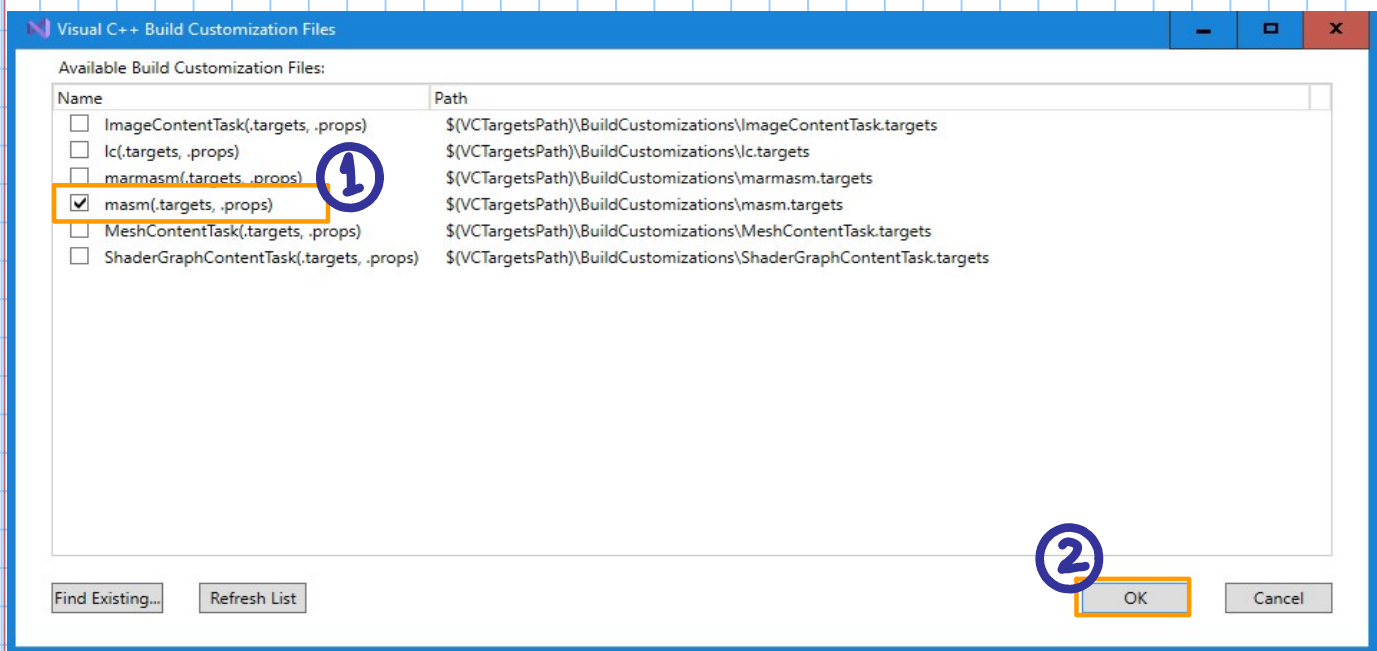
Prof. L.Ortiz

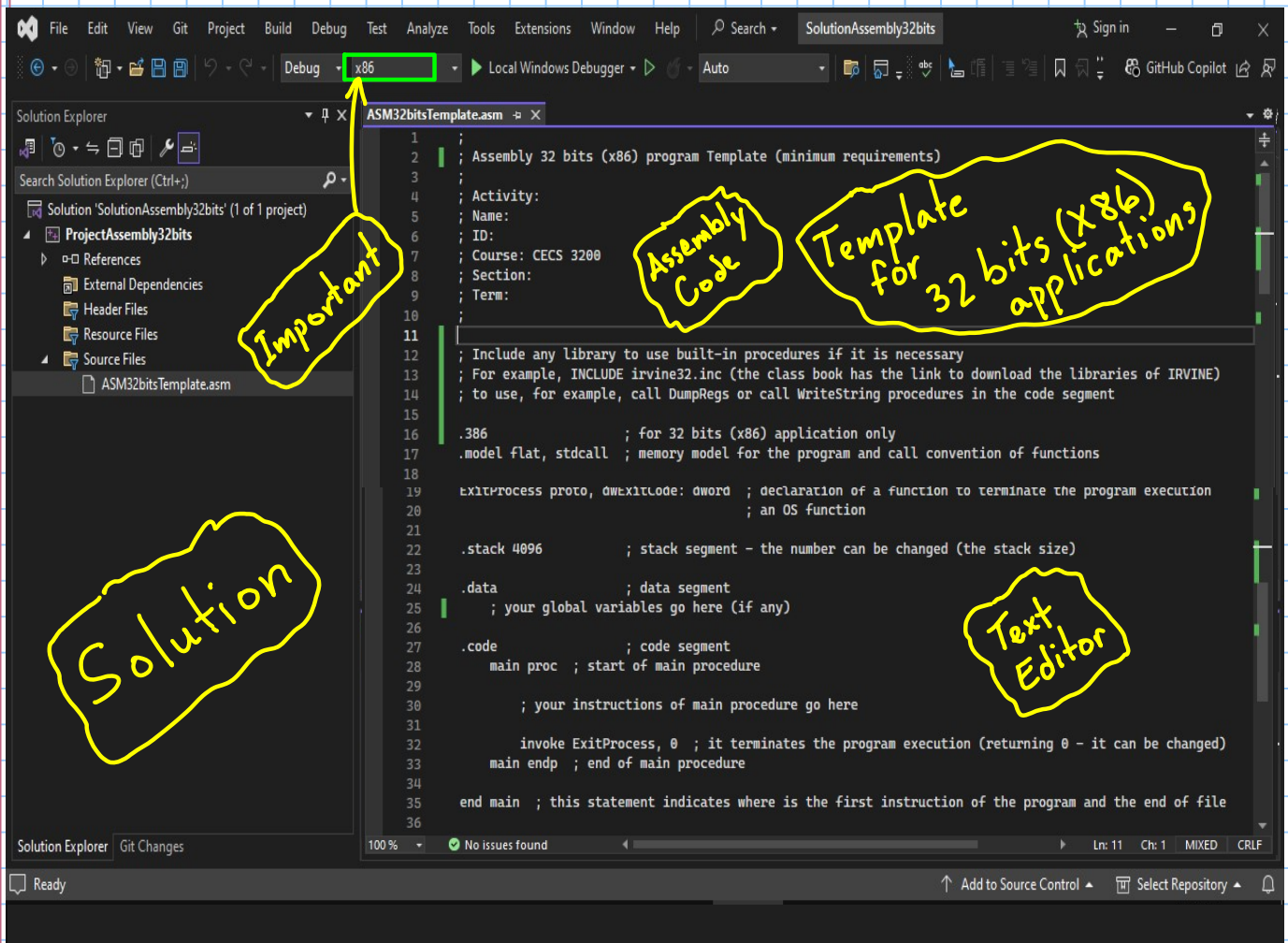
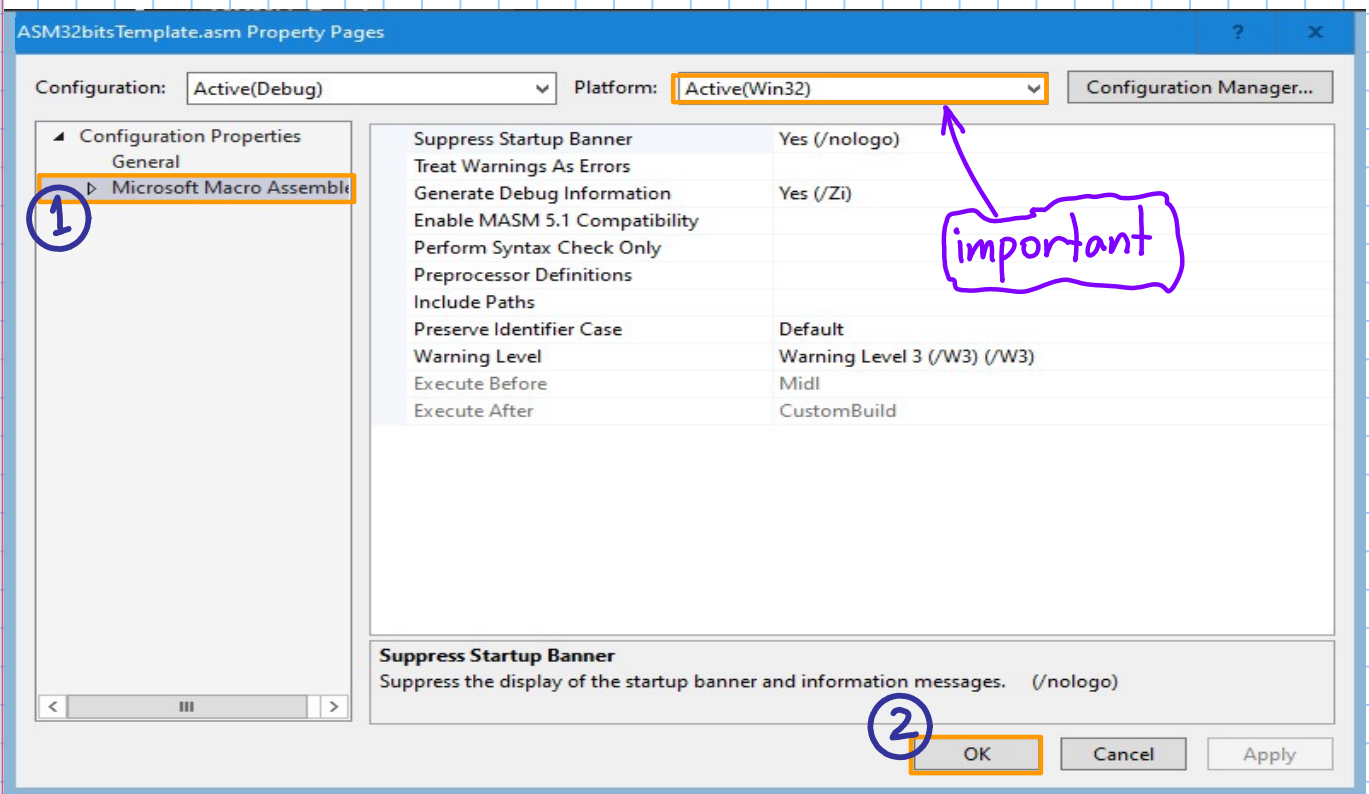












Template Code

```
ASM32bitsTemplate.asm
1  ;
2  ; Assembly 32 bits (x86) program Template (minimum requirements)
3  ;
4  ; Activity:
5  ; Name:
6  ; ID:
7  ; Course: CECS 3200
8  ; Section:
9  ; Term:
10 ;
11 ;
12 ; Include any library to use built-in procedures if it is necessary
13 ; For example, INCLUDE irvine32.inc (the class book has the link to download the libraries of IRVINE)
14 ; to use, for example, call DumpRegs or call WriteString procedures in the code segment
15 ;
16 .386                ; for 32 bits (x86) application only
17 .model flat, stdcall ; memory model for the program and call convention of functions
18
19 ExitProcess proto, dwExitCode: dword ; declaration of a function to terminate the program execution
20                                     ; an OS function
21
22 .stack 4096          ; stack segment - the number can be changed (the stack size)
23
24 .data                ; data segment
25 ; your global variables go here (if any)
26
27 .code               ; code segment
28     main proc ; start of main procedure
29
30         ; your instructions of main procedure go here
31
32         invoke ExitProcess, 0 ; it terminates the program execution (returning 0 - it can be changed)
33     main endp ; end of main procedure
34
35     end main ; this statement indicates where is the first instruction of the program and the end of file
36
```

Template for 32 bits (x86) applications

Finally

The screenshot shows the Visual Studio IDE with the following components:

- File Explorer:** Shows the project structure with 'ProjectAssembly32bits' and 'ASM32bitsTemplate.asm'.
- Solution Explorer:** Shows the 'ASM32bitsTemplate.asm' file selected.
- Code Editor:** Displays the assembly code from the previous block.
- Debug Console:** Shows the output of the build and execution. The output includes: 'Build started at 5:56 PM...', '1>----- Build started: ProjectAssembly32bits', '1>Assembling ASM32bitsTemplate.asm', '1>ProjectAssembly32bits.vcxproj', 'Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped', and 'Build completed at 5:56 PM and took 02.245 seconds'.
- Output Window:** Shows the output of the build and execution.
- Debug Console:** Shows the output of the build and execution, including the message 'C:\Users\lortiz\Desktop\Assembly Repository\SolutionAssembly32bits\Debug\ProjectAssembly32bits.exe (process 17812) exited with code 0.' and 'Press any key to close this window . . .'

Handwritten annotations include:

- 'Important' pointing to the 'ASM32bitsTemplate.asm' file in the Solution Explorer.
- 'Click' pointing to the 'Debug' button in the toolbar.
- '1' pointing to the 'Run' button in the toolbar.
- 'Program execution' pointing to the Debug Console output.
- 'Program status' pointing to the Output Window output.