Visual Studio 2019 Overview for C
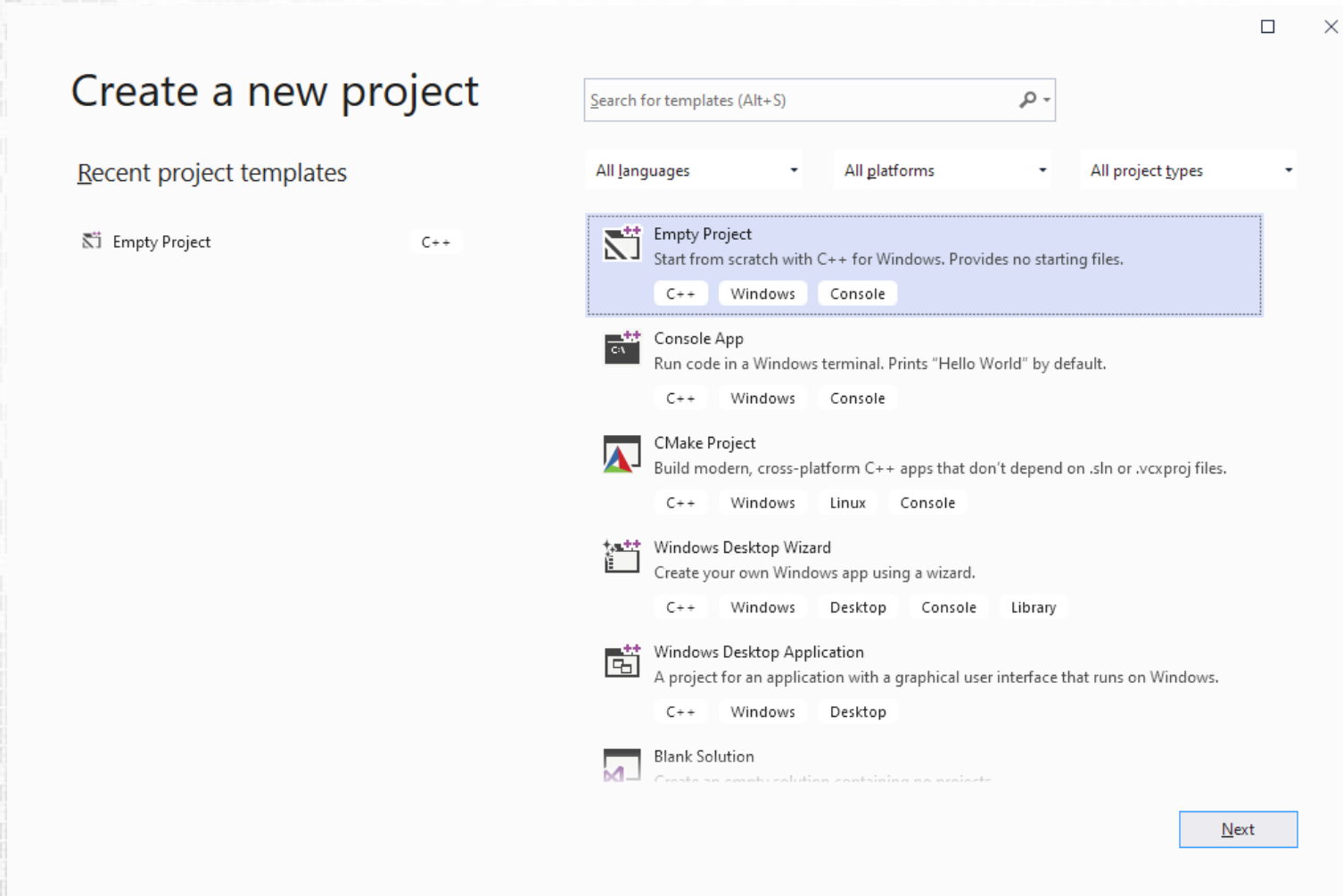
❑Creating a project

❑Creating a source file

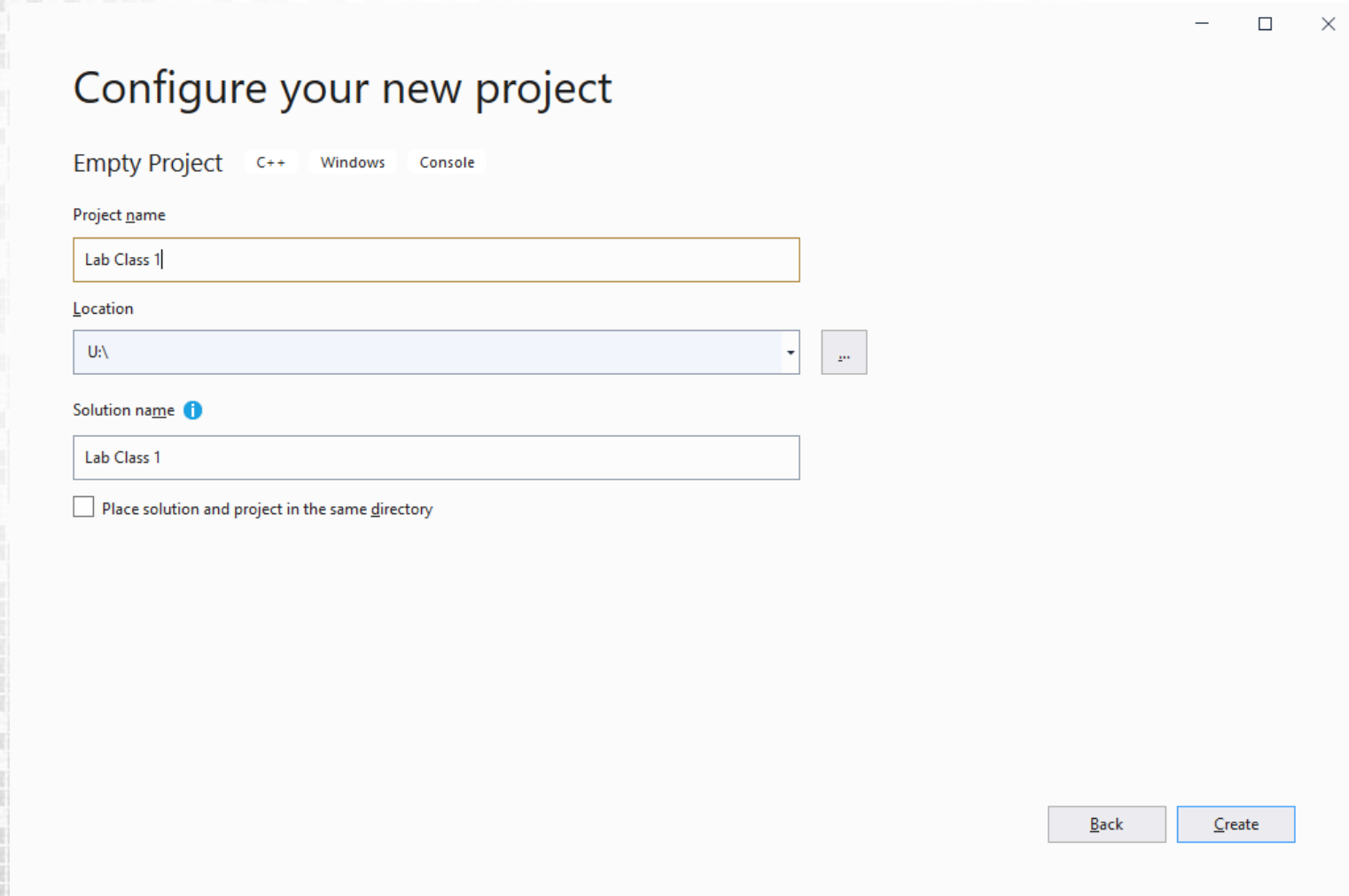❑Compilation and execution

❑Properties and configurations

Create New Project

Select "Empty Project" and click Next.

New Project Wizard

Set the location to "U:\" or a subdirectory on this drive and choose a project name and press Create.

File   Edit   View   Project   Build   Debug   Test   Analyze   Tools   Extensions   Window   Help

Search (Ctrl+Q)

Debug   x86   Local Windows Debugger   Auto

Live Share

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'Lab Class 1' (1 of 1 project)
- Lab Class 1
  - References
  - External Dependencies
  - Header Files
  - Resource Files
  - Source Files

Solution Expl...   Class View   Property Man...   Team Explorer

Creating project 'Lab Class 1'... project creation successful.
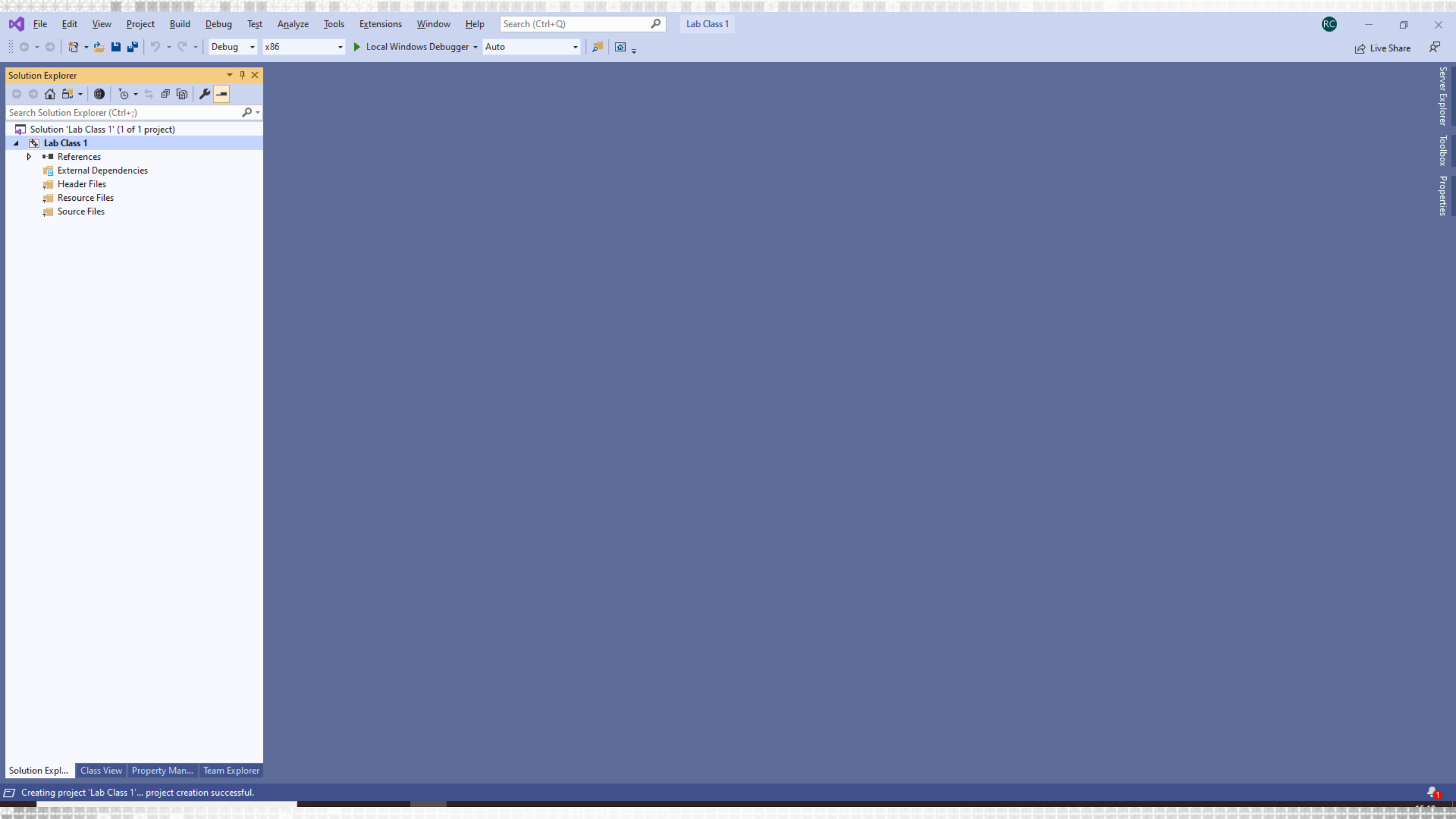
New C file

❑Right click on project (in solution explorer)

    ❑Add ->

    ❑New Item…

Build and execute

❑Build
  ❑Build->Build Solution
  ❑Errors and warning are given in the Output window

❑Execute
  ❑Debug->Start Debugging
    ❑the console program will immediately exit unless a breakpoint is set
  ❑Debug->Start Without Debugging
    ❑the IDE will issue a system("pause") command on completion

_CRT_SECURE_NO_WARNINGS

❑Microsoft have their own safe versions of buffer functions

   ❑These are however not cross platform

   ❑add `_CRT_SECURE_NO_WARNINGS` to Project Properties -> Configuration Properties -> C/C++ -> Preprocessor -> Preprocessor Definitions

      ❑Items are separated by semicolon (;)

```c
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
…
```

```c
#pragma warning (disable : 4996)
#include <stdio.h>
…
```

Project/Source module properties
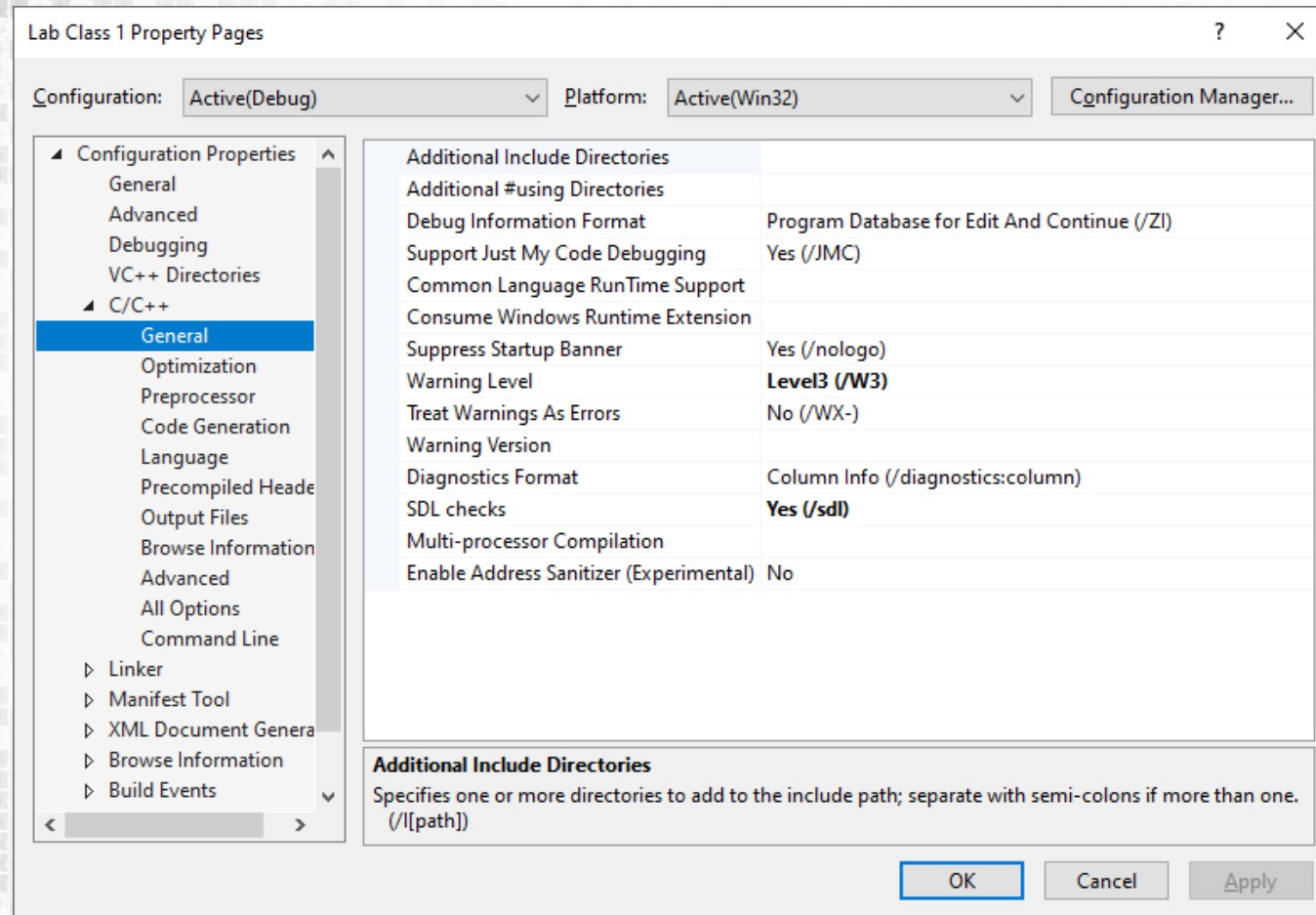
Project/Source module properties
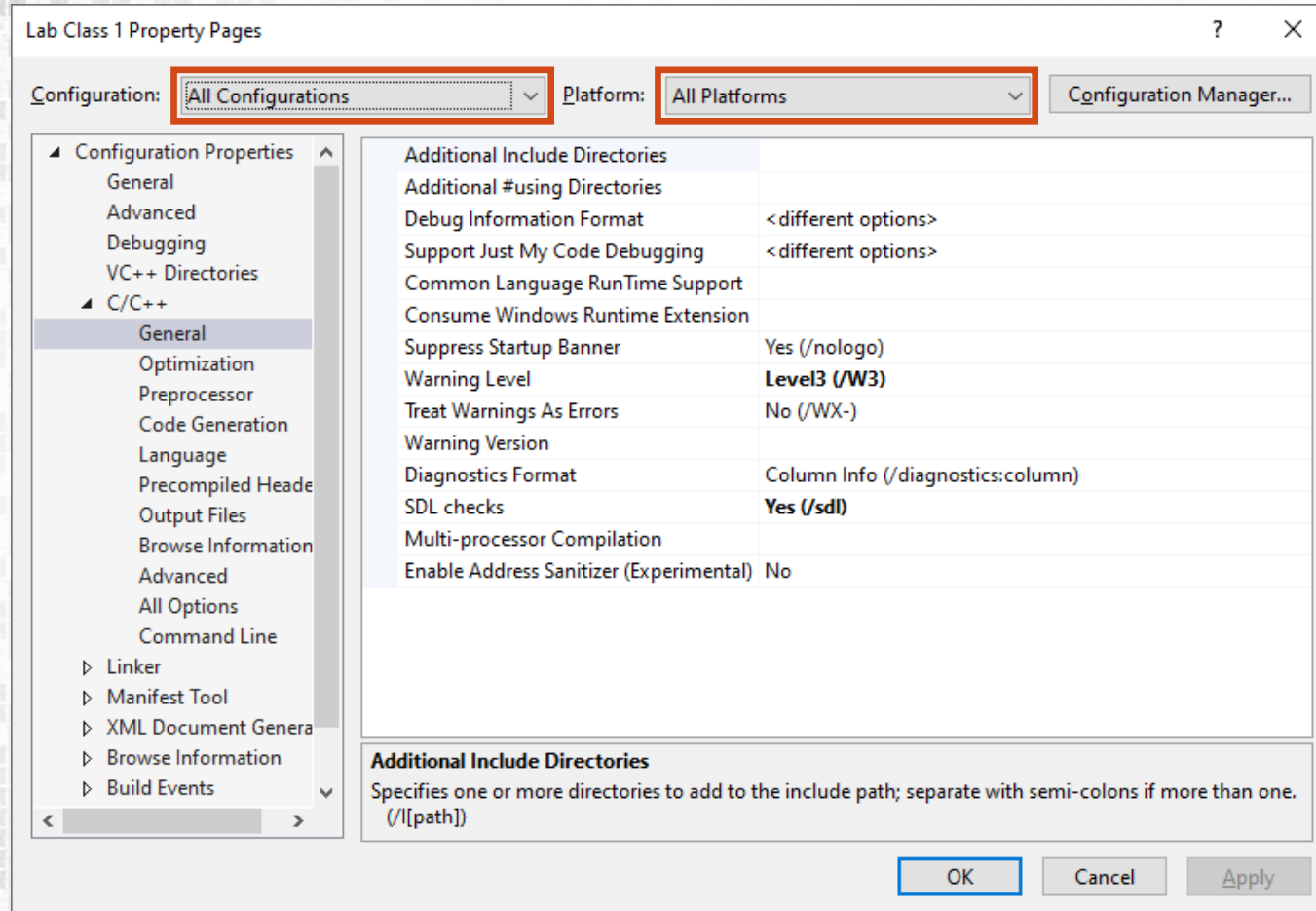
❑Build configurations can have different properties
  ❑As can configuration and platform combinations

❑Debug
  ❑No compiler optimisations
  ❑Debug flag

❑Release
  ❑Compiler optimisations
  ❑No debug flag

Project/Source module properties

main.c Property Pages

Configuration: All Configurations   Platform: All Platforms   Configuration Manager...

- Configuration Properties
  - General
  - C/C++
    - General
    - Optimization
    - Preprocessor
    - Code Generation
    - Language
    - Precompiled Headers
    - Output Files
    - Browse Information
    - Advanced
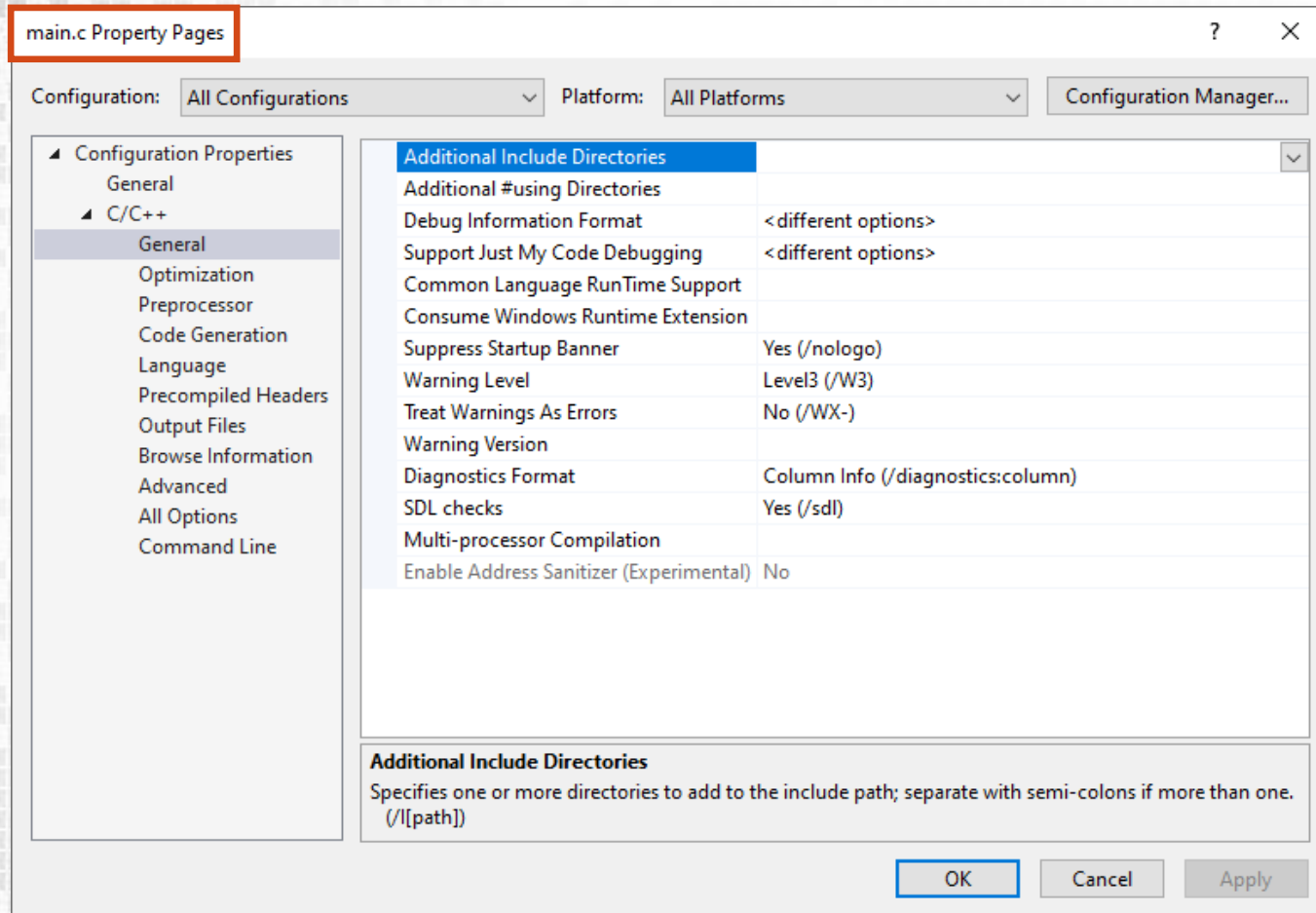   - All Options
    - Command Line

Additional Include Directories	
Additional #using Directories	
Debug Information Format	<different options>
Support Just My Code Debugging	<different options>
Common Language RunTime Support	
Consume Windows Runtime Extension	
Suppress Startup Banner	Yes (/nologo)
Warning Level	Level3 (/W3)
Treat Warnings As Errors	No (/WX-)
Warning Version	
Diagnostics Format	Column Info (/diagnostics:column)
SDL checks	Yes (/sdl)
Multi-processor Compilation	
Enable Address Sanitizer (Experimental)	No

Additional Include Directories
Specifies one or more directories to add to the include path; separate with semi-colons if more than one. (/I[path])

OK   Cancel   Apply

❏ Individual files can also have different properties

❏ You will normally want to change properties at a project level for all configurations (and platforms).

The University Of Sheffield.