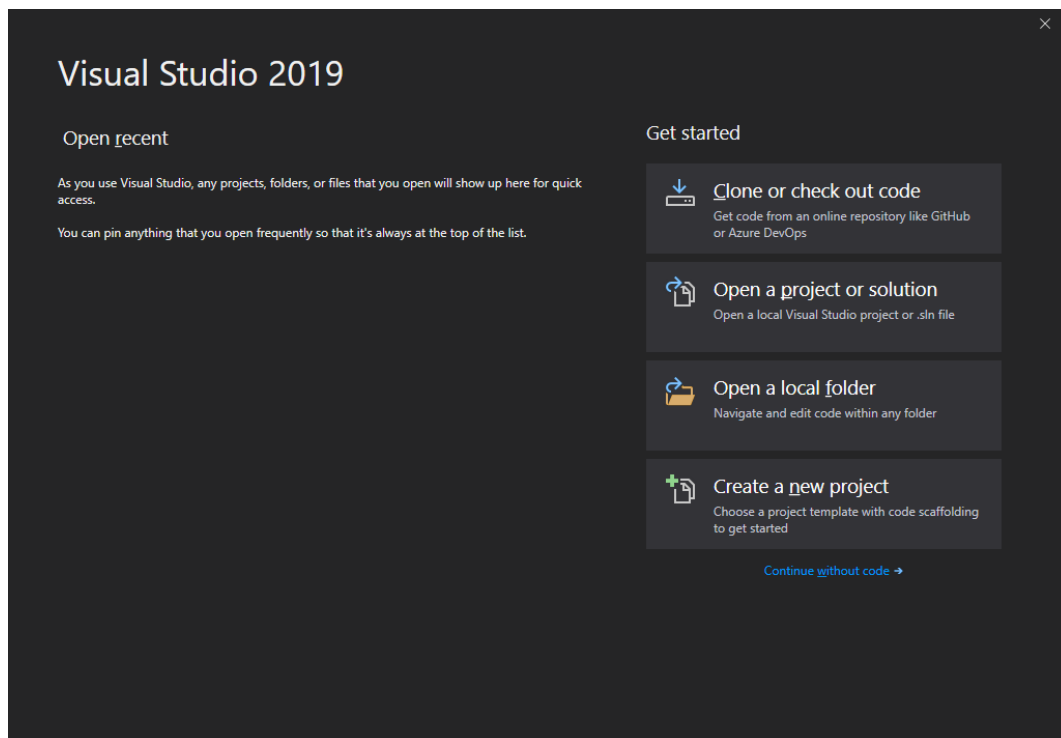


# SECURE CODING LAB ASSIGNMENT 11

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Download and install visual studio:



Write a C++ code of your own to build an executable and run the same:

The image shows a code editor window with a file named 'ConsoleApplication1.cpp'. The code is as follows:

```
1
2  #include <iostream>
3
4  int main() {
5  {
6      std::cout << "Hello World!" << std::endl;
7      std::cin.get();
8  }
9  }
```

The editor has a dark theme. The status bar at the bottom shows '100%' zoom and 'No issues found'.

```
Microsoft Visual Studio Debug Console
Hello World!

C:\Users\Salahuddin\source\repos\ConsoleApplication1\Debug\ConsoleApplication1.exe (process 18596) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

## Download process explorer and verify the DEP & ASLR status :

Process Explorer - Sysinternals: www.sysinternals.com [LAPTOP-BKOE8N3C\Abraar]

Process	Id	Signer	VirusTotal	I/O Read Bytes	I/O Write Bytes	DEP	ASLR
conhost.exe			0/74			Enabled (permane...	ASLR
conhost.exe			0/74	5.6 KB		Enabled (permane...	ASLR
conhost.exe			0/74	5.6 KB		Enabled (permane...	ASLR
conhost.exe			0/74	5.7 KB		Enabled (permane...	ASLR
ConsoleApplication1.exe			Unknown			Enabled (permane...	ASLR
Cortana.exe			0/74	547.3 KB		Enabled (permane...	ASLR
csrss.exe						n/a	n/a
csrss.exe						n/a	n/a
ctfmon.exe				21.0 MB	3.2 KB	Enabled (permane...	n/a
dasHost.exe						n/a	n/a
dasHost.exe						n/a	n/a
DbxSvc.exe			0/75			n/a	ASLR
devenv.exe			0/75	124.1 MB	22.6 MB	Enabled (permane...	ASLR
Discord.exe			0/74	2.3 GB	351.8 MB	Enabled (permane...	ASLR
Discord.exe			0/74	976 B	312 B	Enabled (permane...	ASLR
Discord.exe			0/74	1.6 GB	2.5 GB	Enabled (permane...	ASLR
Discord.exe			0/74	232.6 MB	277.2 MB	Enabled (permane...	ASLR
Discord.exe			0/74	3.0 GB	4.0 GB	Enabled (permane...	ASLR
Discord.exe			0/74	139.5 KB	603.2 KB	Enabled (permane...	ASLR
dllhost.exe			0/74	24.1 MB	5.8 MB	Enabled (permane...	ASLR
dllhost.exe			0/74	3.7 KB		Enabled (permane...	ASLR
Dropbox.exe			0/74	160.3 MB	37.9 MB	Enabled (permane...	ASLR
Dropbox.exe			0/74	112 B	24 B	Enabled (permane...	ASLR
Dropbox.exe			0/74	2.8 KB		Enabled (permane...	ASLR
DropboxUpdate.exe						n/a	n/a
dwm.exe						n/a	n/a
ElevationService.exe			0/73			n/a	ASLR
EpicUpdate.exe			0/74	18.5 KB	472.7 KB	Enabled (permane...	ASLR
esif_uf.exe							

CPU Usage: 29.77% | Commit Charge: 73.80% | Processes: 265

## Disable software DEP, ASLR and SEH in the visual studio and rebuild the same executable :

ConsoleApplication1 Property Pages

Configuration: Active(Debug) Platform: Active(Win32) Configuration Manager...

- Configuration Properties
  - General
  - Advanced
  - Debugging
  - VC++ Directories
  - C/C++
  - Linker
    - General
    - Input
    - Manifest File
    - Debugging
    - System
    - Optimization
    - Embedded IDL
    - Windows Metadata
    - Advanced
    - All Options
    - Command Line
  - Manifest Tool
  - XML Document Generator
  - Browse Information
  - Build Events
  - Custom Build Step
  - Code Analysis

Entry Point	No Entry Point	No
Set Checksum		No
Base Address		
Randomized Base Address	No (/DYNAMICBASE:NO)	
Fixed Base Address		
Data Execution Prevention (DEP)	No (/NXCOMPAT:NO)	
Turn Off Assembly Generation		No
Unload delay loaded DLL		
Nobind delay loaded DLL		
Import Library		
Merge Sections		
Target Machine	MachineX86 (/MACHINE:X86)	
Profile	No	
CLR Thread Attribute		
CLR Image Type	Default image type	
Key File		
Key Container		
Delay Sign		
CLR Unmanaged Code Check		
Error Reporting	PromptImmediately (/ERRORREPORT:PROMPT)	
SectionAlignment		

**Randomized Base Address**  
Randomized Base Address. (/DYNAMICBASE:NO)

OK

Cancel

Apply

**Again, verify the DEP & ASLR status in the process explorer :**

