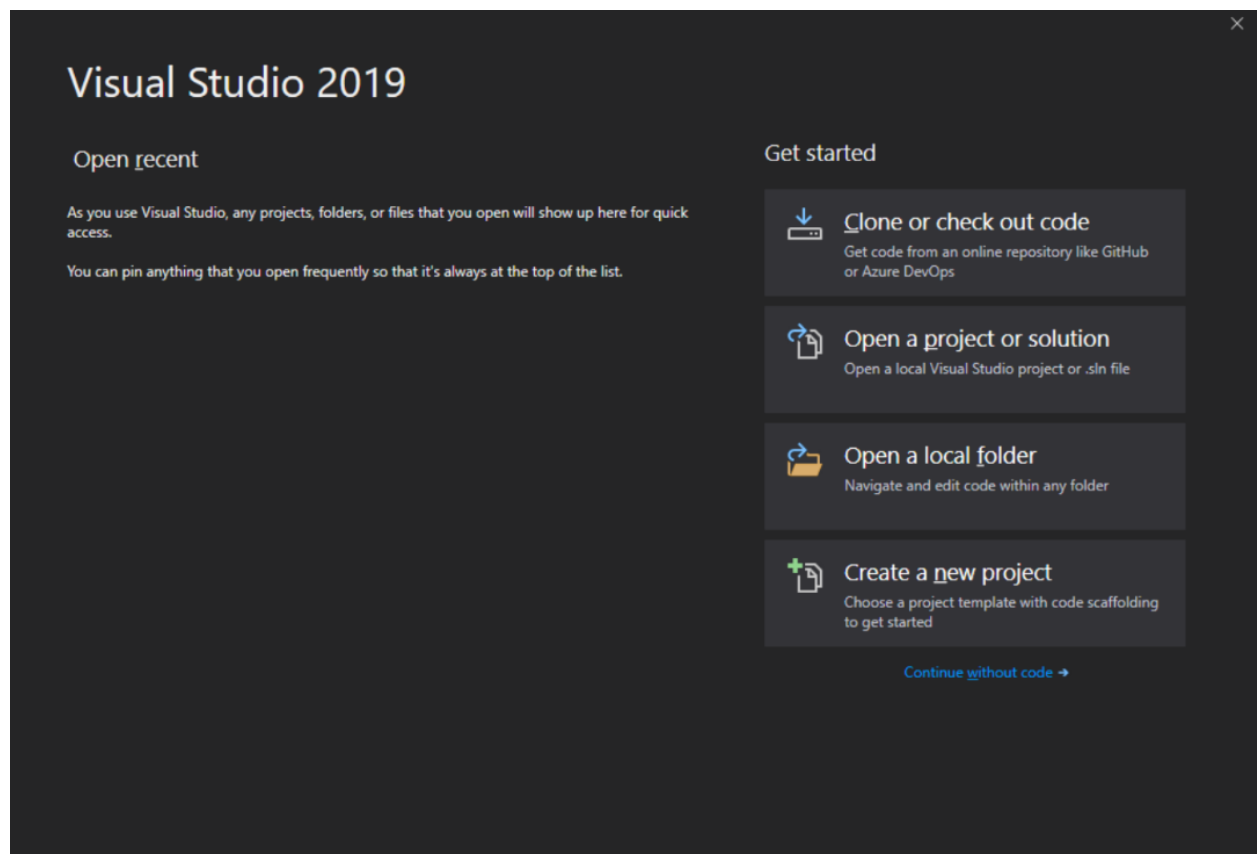


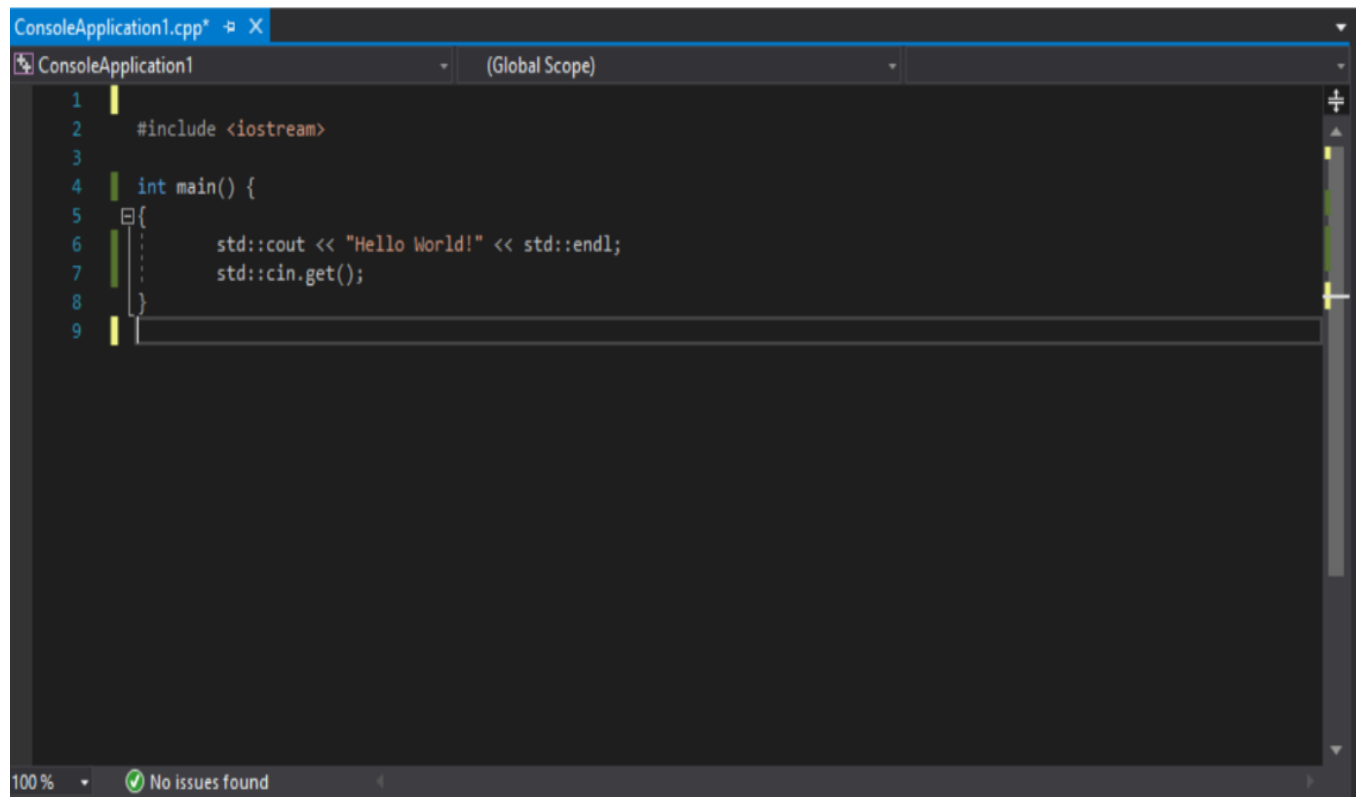
Secure Coding Lab Assignment-11

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Download and Install Visual Studio:



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



The image shows a screenshot of a C++ development environment. The top bar displays the file name 'ConsoleApplication1.cpp' and the current scope '(Global Scope)'. The main editor area contains the following C++ code:

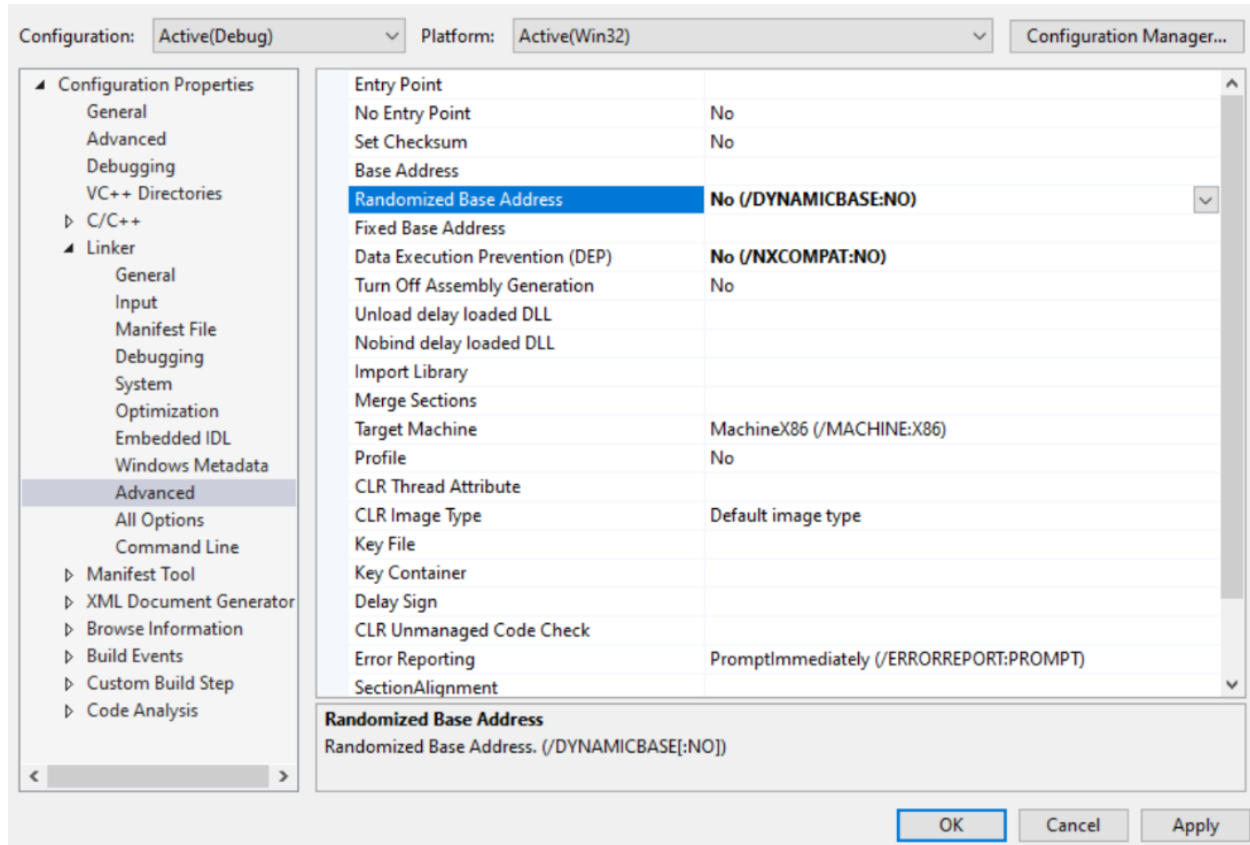
```
1
2  #include <iostream>
3
4  int main() {
5  {
6      std::cout << "Hello World!" << std::endl;
7      std::cin.get();
8  }
9  }
```

The bottom status bar indicates '100 %' zoom and 'No issues found'.

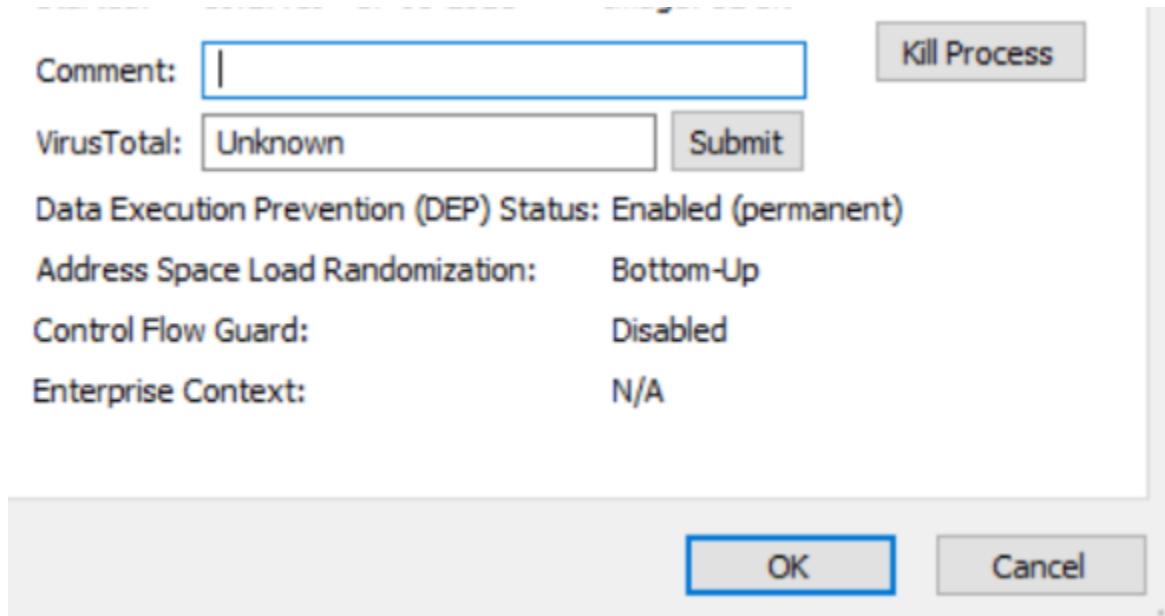
Download process explorer and verify DEP & ASLR Status :

File Options View Process Find Users Help						
Process	d 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						

Disable software DEP,ASLR in Visual Studio and re-establish the same executable:



Again Verify the DEP and ASLR in the process explorer:



The image shows a screenshot of a Windows process properties dialog box, specifically the 'Memory' tab. The dialog box has a light gray background and a standard Windows window border. At the top, there is a 'Comment:' label followed by a text input field containing a single vertical bar character. To the right of this is a 'Kill Process' button. Below the comment field is a 'VirusTotal:' label followed by a text input field containing the word 'Unknown' and a 'Submit' button. The main section of the dialog lists several security features: 'Data Execution Prevention (DEP) Status: Enabled (permanent)', 'Address Space Load Randomization: Bottom-Up', 'Control Flow Guard: Disabled', and 'Enterprise Context: N/A'. At the bottom right, there are 'OK' and 'Cancel' buttons. The 'OK' button is highlighted with a blue border.

Comment: | Kill Process

VirusTotal: Unknown Submit

Data Execution Prevention (DEP) Status: Enabled (permanent)

Address Space Load Randomization: Bottom-Up

Control Flow Guard: Disabled

Enterprise Context: N/A

OK Cancel