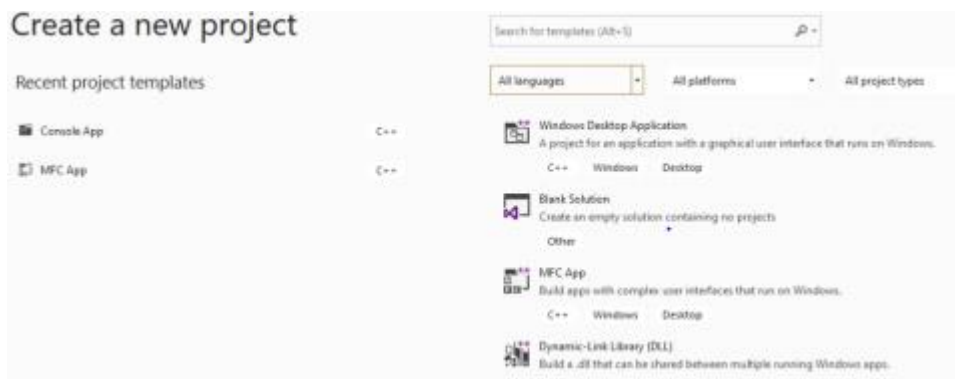# SECURE CODING LAB-11

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1.Download visual studio.

C++ code in an executable file

```cpp
// lab.cpp : This file contains the 'main'
//

#include <iostream>
using namespace std;

int main()
{
    int number;

    cout << "Enter an integer: ";
    cin >> number;

    cout << "You entered " << number;
    return 0;
}
```

```
Enter an integer: 5
You entered 5
```

Build or debug

Output

Show output from: Debug

```
'lab.exe' (Win32): Loaded 'C:\Windows\SysWOW64\cryptbase.dll'.
'lab.exe' (Win32): Loaded 'C:\Windows\SysWOW64\bcryptprimitives.dll'.
'lab.exe' (Win32): Loaded 'C:\Windows\SysWOW64\sechost.dll'.
The thread 0x68 has exited with code 0 (0x0).
The thread 0x347c has exited with code 0 (0x0).
The thread 0x28cc has exited with code 0 (0x0).
The program '[6620] lab.exe' has exited with code 0 (0x0).
```
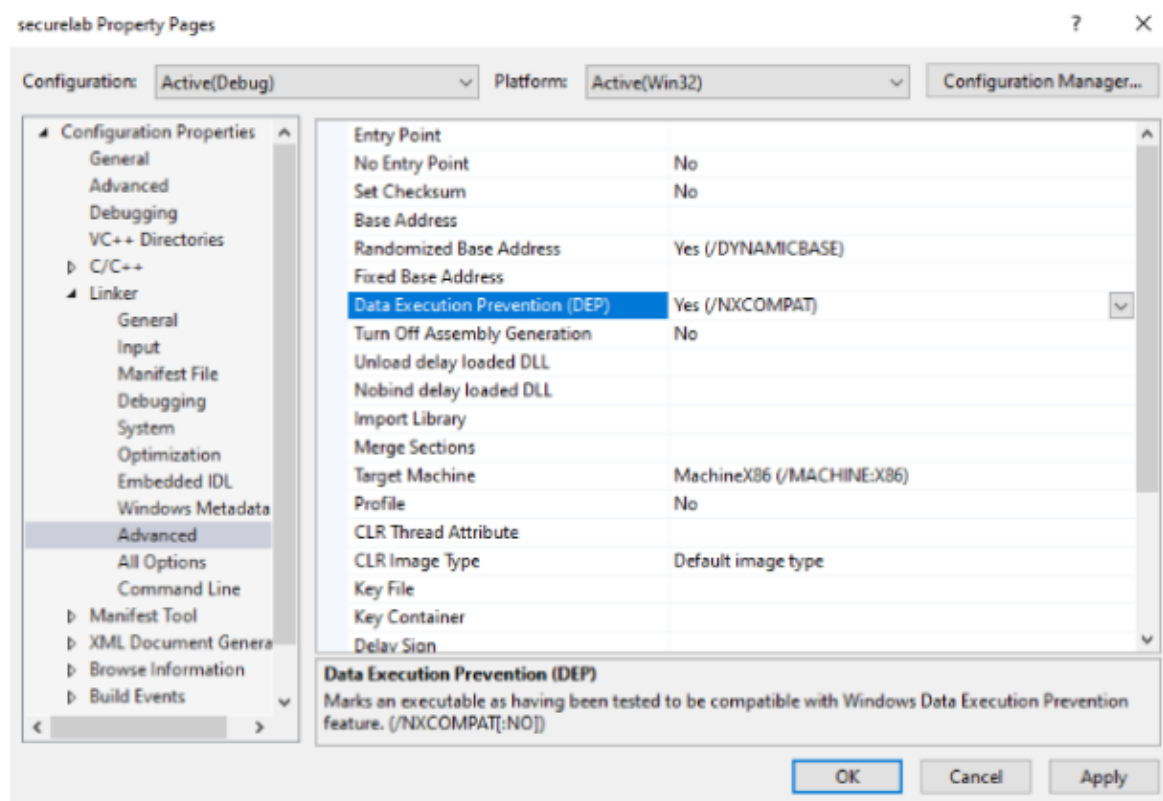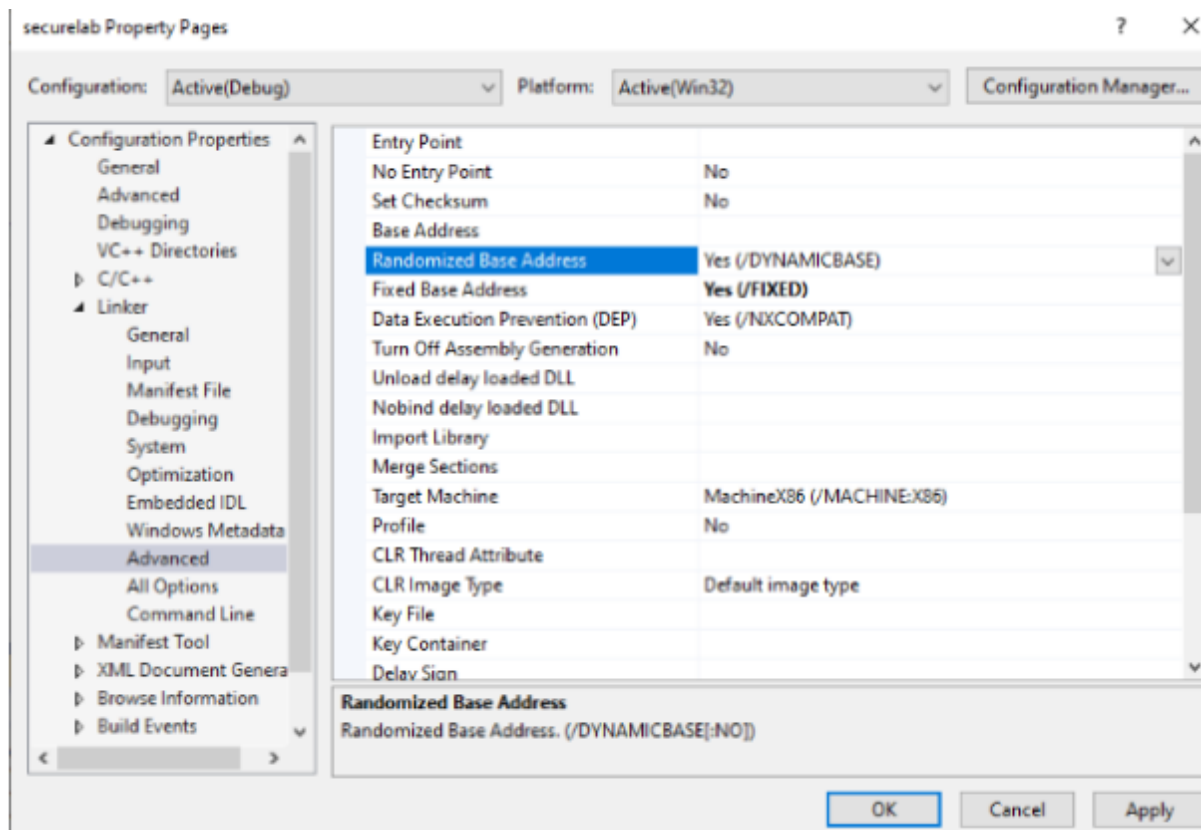
3.Download the process and explorer and verify the DEP and ASLR status.

Now, enable the software DEP , ASLR and SEH in the visual studio and rebuild the same executable.

Now verify the process explorer of DEP and ASLR.

File Options View Process Find Handle Users Help

Process	CPU	Private Bytes	Working Set	PID	Description	Company Name	DEP	ASLR
devenv.exe	3.53	3,63,920 K	3,57,132 K	11536	Microsoft Visual Studio...	Microsoft Corporation	Enabled (permane...	ASLR
dllhost.exe		5,300 K	10,363 K	9744	COM Surrogate	Microsoft Corporation	Enabled (permane...	ASLR
dllhost.exe	< 0.01	3,952 K	8,776 K	12843	COM Surrogate	Microsoft Corporation	n/a	ASLR
explorer.exe	1.77	80,344 K	1,08,320 K	7924	Windows Explorer	Microsoft Corporation	Enabled (permane...	ASLR
lsass.exe	0.03	8,256 K	14,132 K	884	Local Security Authori...	Microsoft Corporation	n/a	ASLR
MSBuild.exe		29,472 K	43,592 K	32	MSBuild.exe	Microsoft Corporation	Enabled (permane...	ASLR
msdtc.exe	< 0.01	2,804 K	6,608 K	1240	Microsoft Distributed T...	Microsoft Corporation	n/a	ASLR
MsMpEng.exe	1.73	2,83,644 K	1,68,420 K	4304	Antimalware Service E...	Microsoft Corporation	n/a	ASLR
mapdberv.exe		15,152 K	14,372 K	5896	Microsoft® Program D...	Microsoft Corporation	Enabled (permane...	ASLR
NisSrv.exe	< 0.01	3,872 K	6,780 K	6292	Microsoft Network Re...	Microsoft Corporation	n/a	ASLR
OneDrive.exe		25,136 K	19,336 K	11100	Microsoft OneDrive	Microsoft Corporation	Enabled (permane...	ASLR
PerfWatson2.exe	0.02	43,852 K	23,996 K	12236	PerfWatson2.exe	Microsoft Corporation	Enabled (permane...	ASLR
PresentationFontCache.exe	< 0.01	25,332 K	7,968 K	7548	PresentationFontCach...	Microsoft Corporation	n/a	ASLR
rundll32.exe		1,632 K	6,540 K	13032	Windows host process ...	Microsoft Corporation	Enabled (permane...	ASLR