CSE2010 LAB-11

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Create a cpp code and build an executable on visual studio

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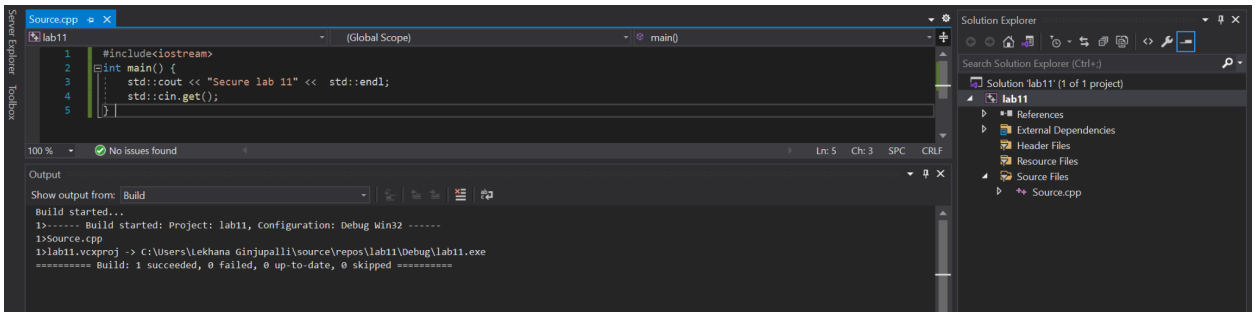
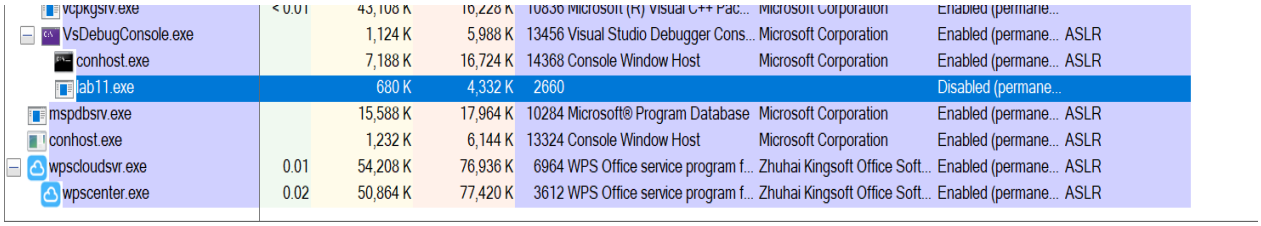
Cpp code:

```
#include<iostream>
int main() {
    std::cout << "Secure lab 11" <<  std::endl;
    std::cin.get();
}
```



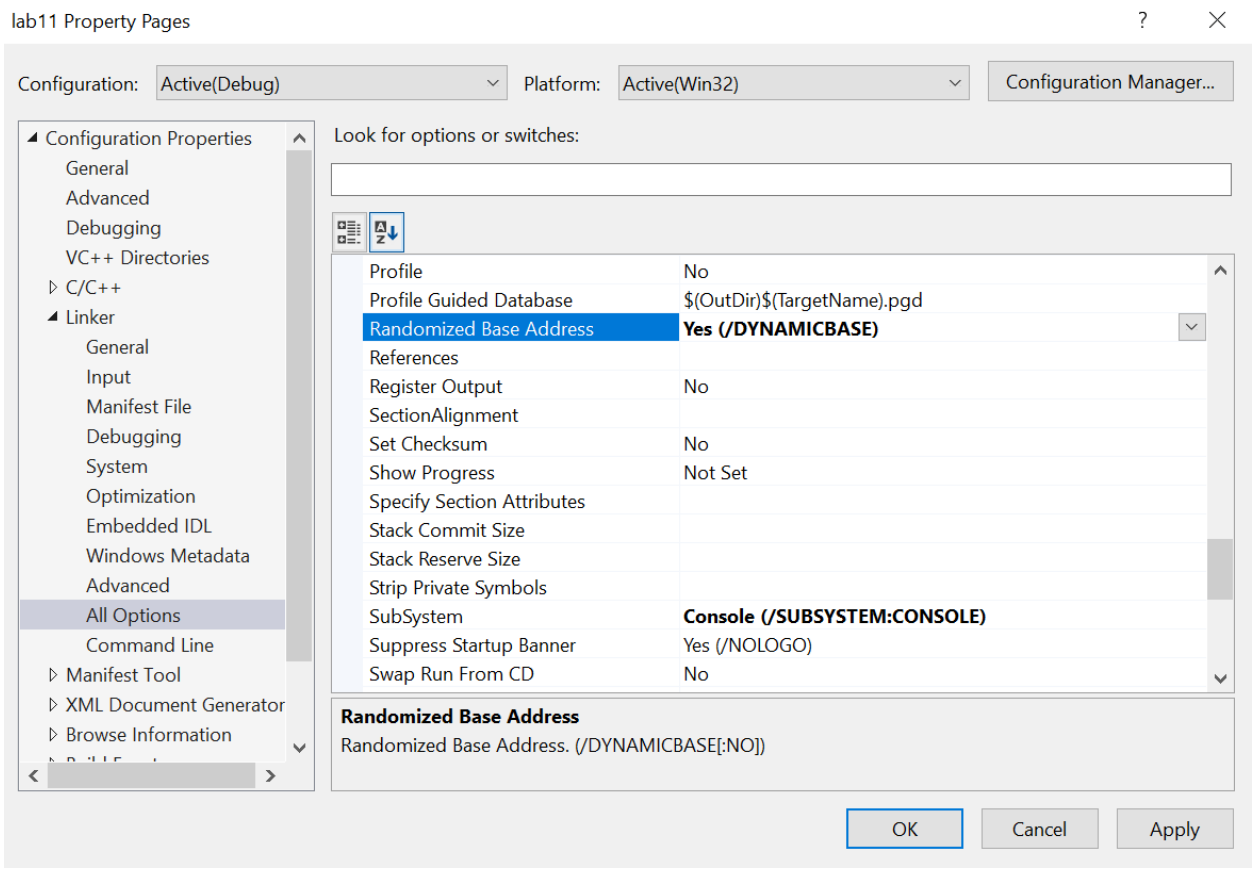
DEP and ASLR status in process explorer:-

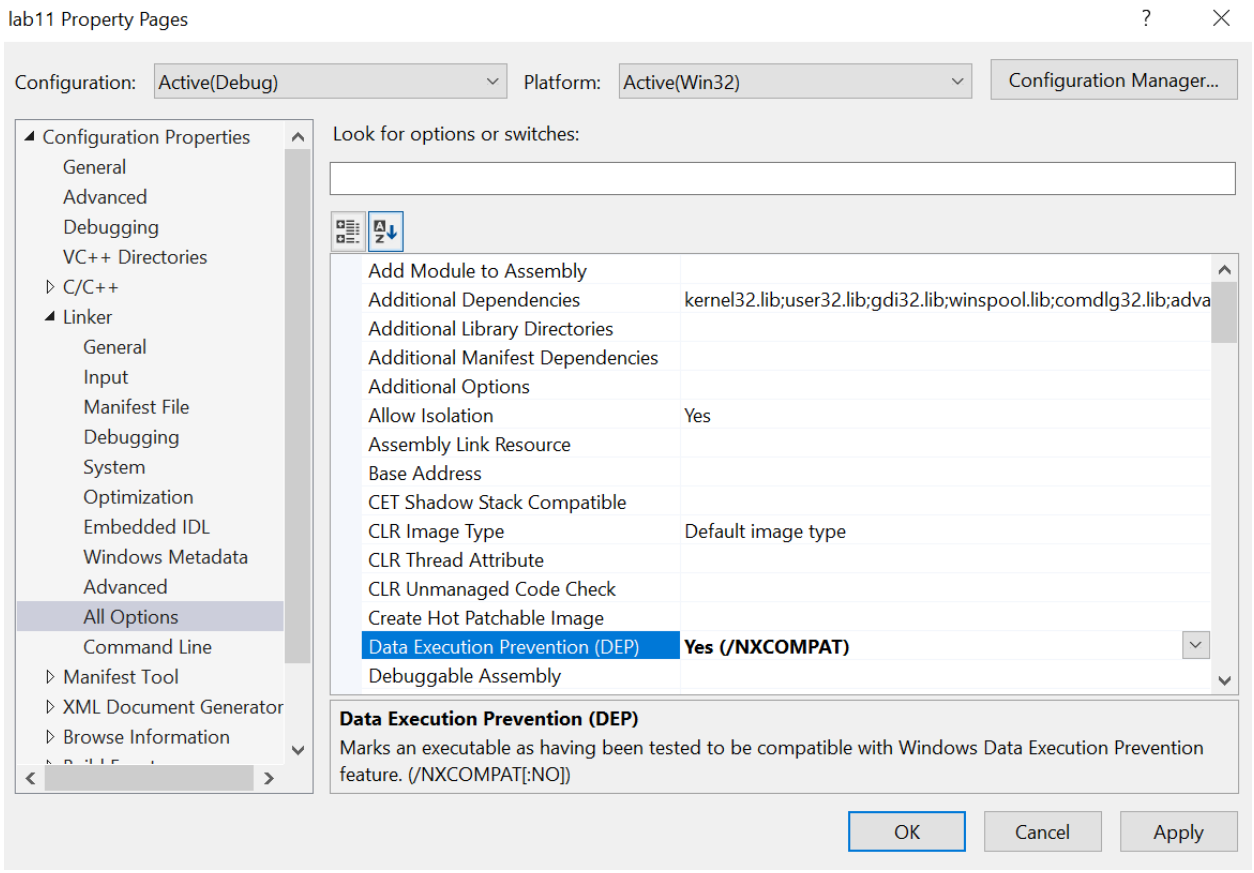


vcpkgsrv.exe	< 0.01	43,108 K	16,228 K	10836 Microsoft (R) Visual C++ Pac...	Microsoft Corporation	Enabled (permane...
VsDebugConsole.exe		1,124 K	5,988 K	13456 Visual Studio Debugger Cons...	Microsoft Corporation	Enabled (permane... ASLR
conhost.exe		7,188 K	16,724 K	14368 Console Window Host	Microsoft Corporation	Enabled (permane... ASLR
lab11.exe		680 K	4,332 K	2660		Disabled (permane...
mspdbsrv.exe		15,588 K	17,964 K	10284 Microsoft® Program Database	Microsoft Corporation	Enabled (permane... ASLR
conhost.exe		1,232 K	6,144 K	13324 Console Window Host	Microsoft Corporation	Enabled (permane... ASLR
wpscloudsvr.exe	0.01	54,208 K	76,936 K	6964 WPS Office service program f...	Zhuhai Kingsoft Office Soft...	Enabled (permane... ASLR
wpscenter.exe	0.02	50,864 K	77,420 K	3612 WPS Office service program f...	Zhuhai Kingsoft Office Soft...	Enabled (permane... ASLR

Here DEP is disabled.

Enabling dEP,ASLR AND SEH in project properties:-


lab11 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
Look for options or switches:
Profile
No
Profile Guided Database
$(OutDir)$(TargetName).pgd
Randomized Base Address
Yes (/DYNAMICBASE)
References
Register Output
No
SectionAlignment
Set Checksum
No
Show Progress
Not Set
Specify Section Attributes
Stack Commit Size
Stack Reserve Size
Strip Private Symbols
SubSystem
Console (/SUBSYSTEM:CONSOLE)
Suppress Startup Banner
Yes (/NOLOGO)
Swap Run From CD
No
Randomized Base Address
Randomized Base Address. (/DYNAMICBASE[:NO])
OK
Cancel
Apply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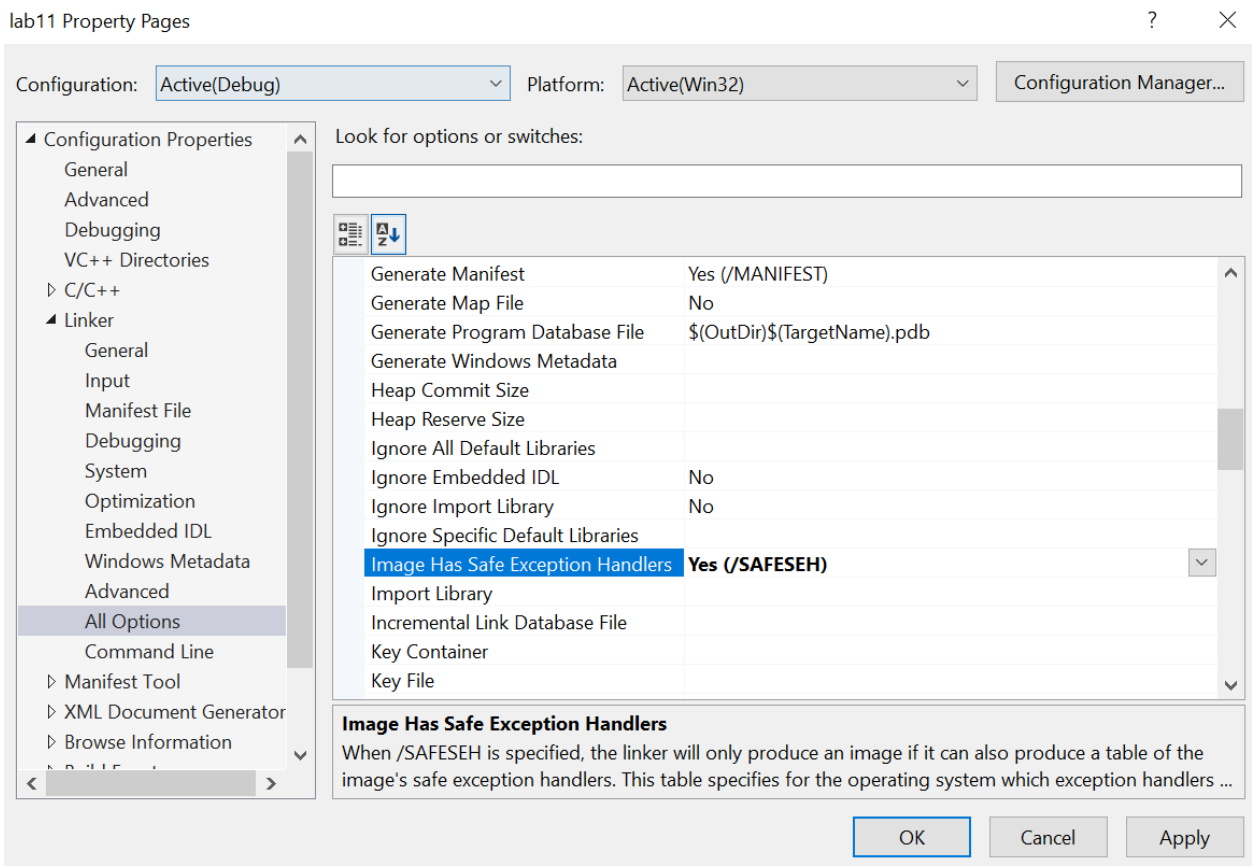
Input
Manifest File
Debugging
System
Optimization
Embedded IDL
Windows Metadata
Advanced
All Options
Command Line
Manifest Tool
XML Document Generator
Browse Information
Look for options or switches:
Add Module to Assembly
Additional Dependencies
kernel32.lib;user32.lib;gdi32.lib;winspool.lib;comdlg32.lib;adva
Additional Library Directories
Additional Manifest Dependencies
Additional Options
Allow Isolation
Yes
Assembly Link Resource
Base Address
CET Shadow Stack Compatible
CLR Image Type
Default image type
CLR Thread Attribute
CLR Unmanaged Code Check
Create Hot Patchable Image
Data Execution Prevention (DEP)
Yes (/NXCOMPAT)
Debuggable Assembly
Data Execution Prevention (DEP)
Marks an executable as having been tested to be compatible with Windows Data Execution Prevention feature. (/NXCOMPAT[:NO])
OK
Cancel
Apply



Now rebuild and run the project.Verify the status in process explorer:-