

# SECURE CODING LAB 11

MEGHANA CILAGANI

19BCN7157

## Lab experiment – Creating secure and safe executable

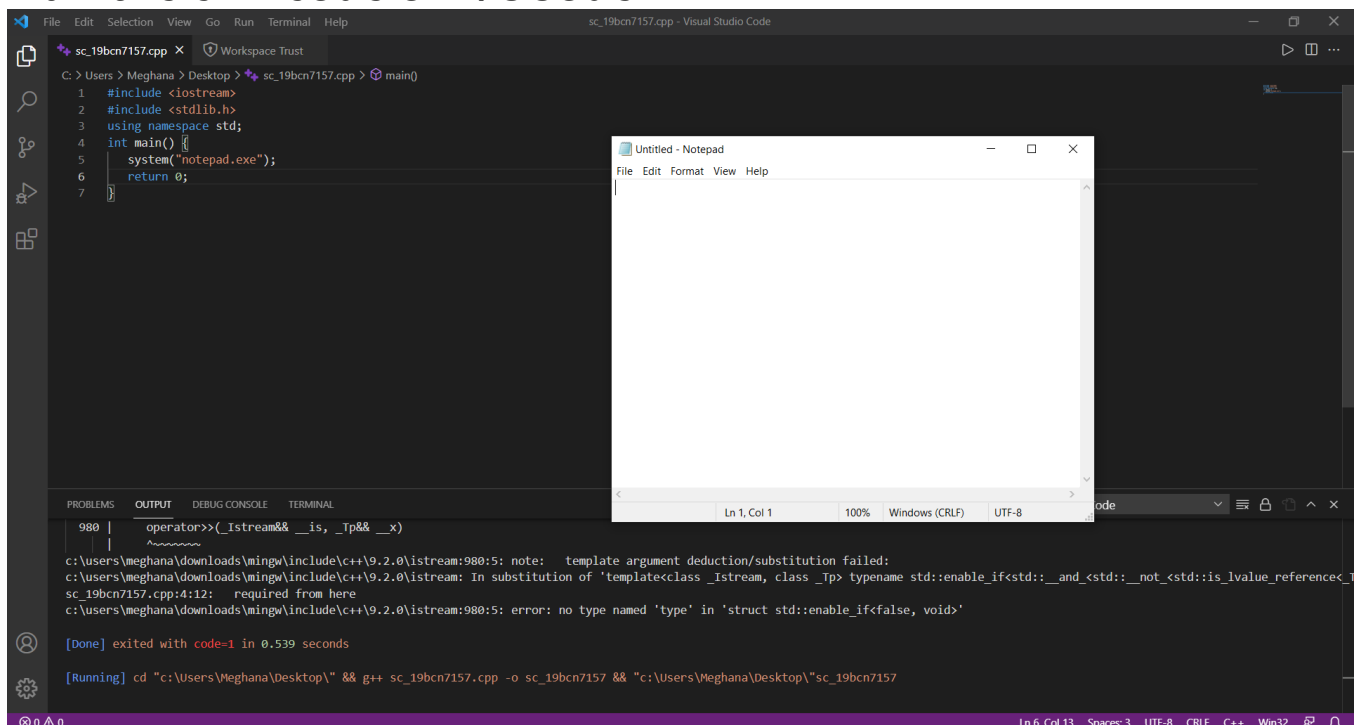
**Download and install visual studio (recent edition)**

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

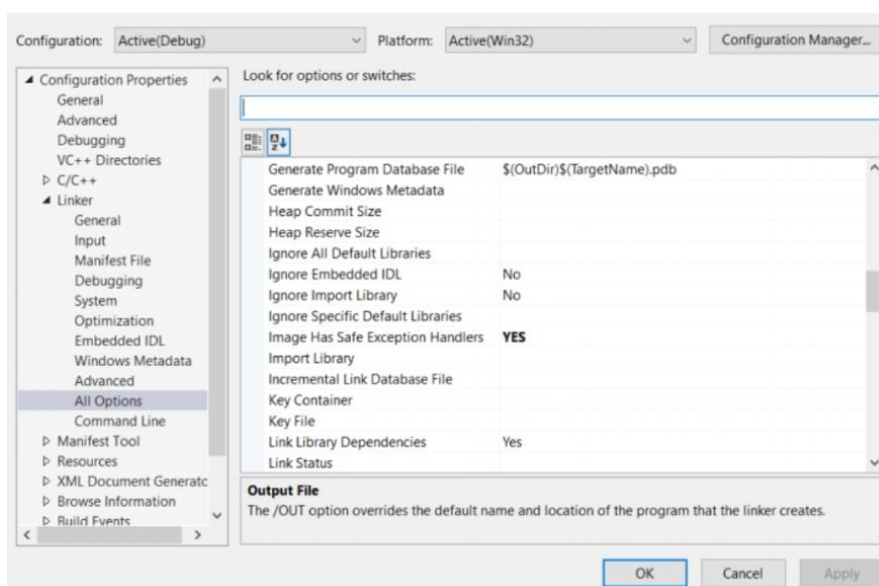
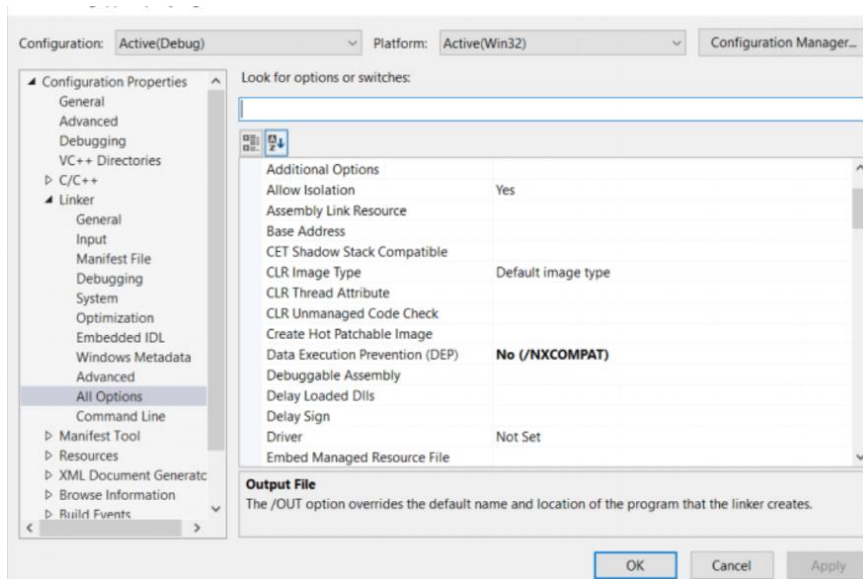
**Download process explorer and verify the DEP & ASLR status  
Enable software DEP, ASLR and SEH in the visual studio and  
rebuild the same executable**

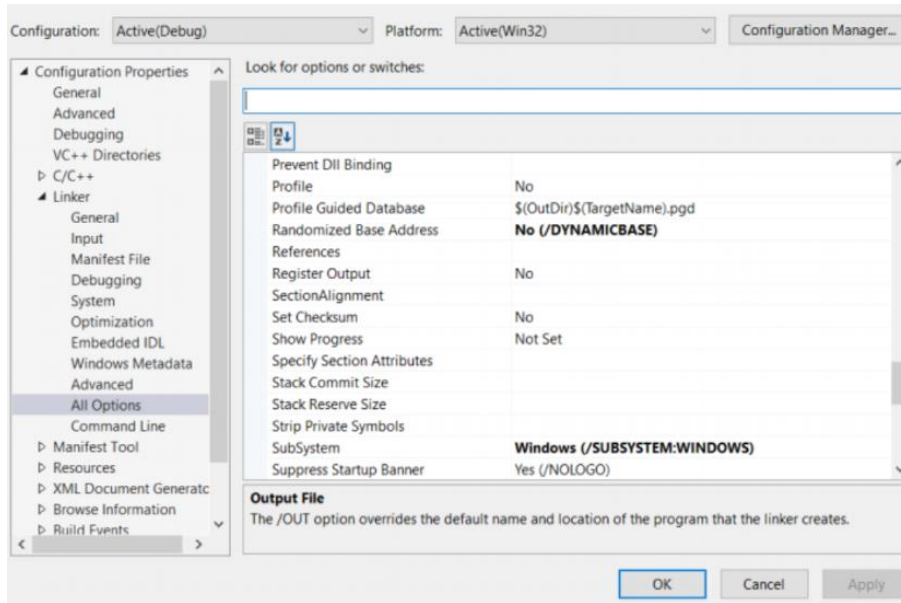
**Again, verify the DEP & ASLR status in the process explorer  
Report the same with separate screenshot - before and after  
enabling DEP & ASLR.**

## Run the c++ code on VSCode

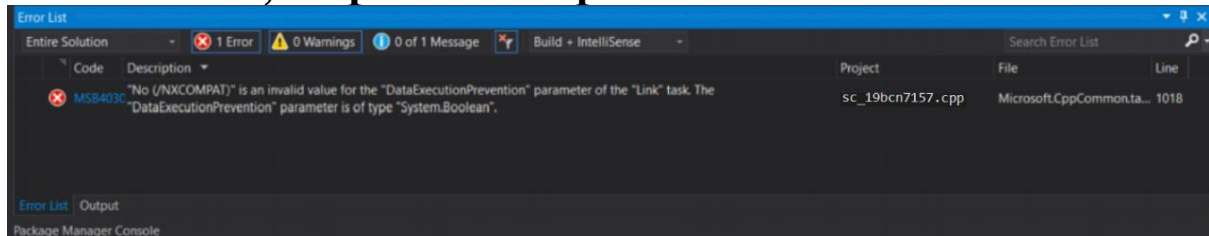


# Disable The DEP and ASLR

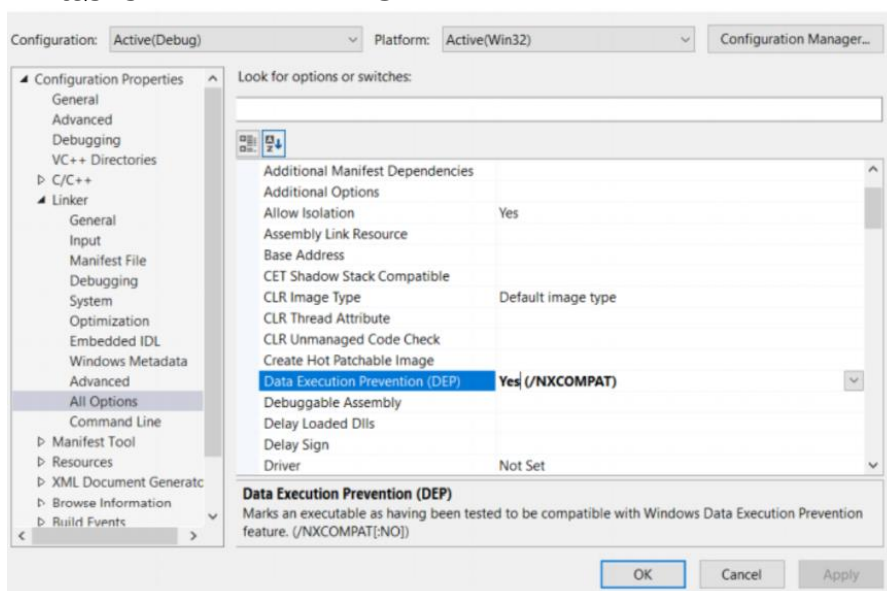


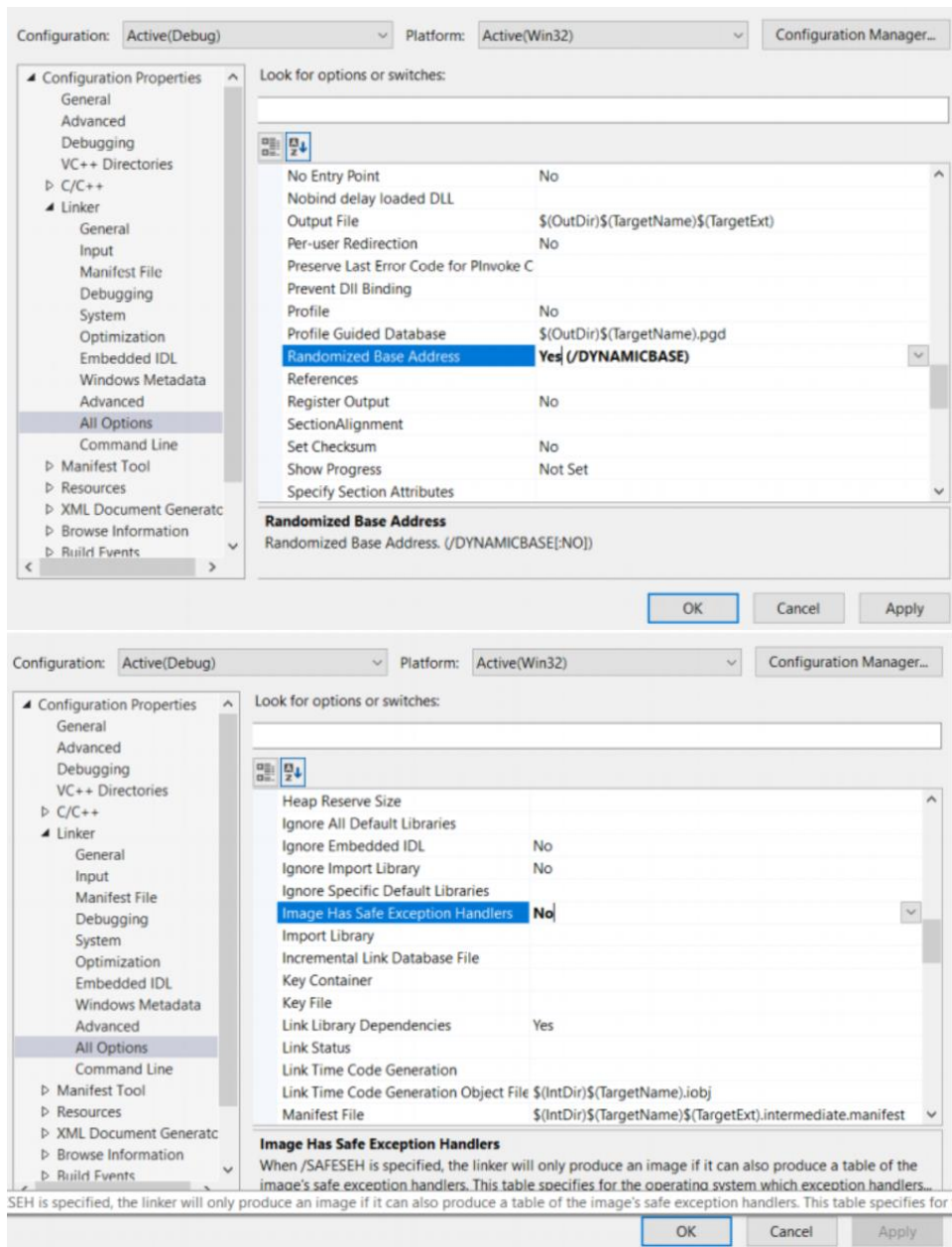


## Built is failed, notepad didn't open

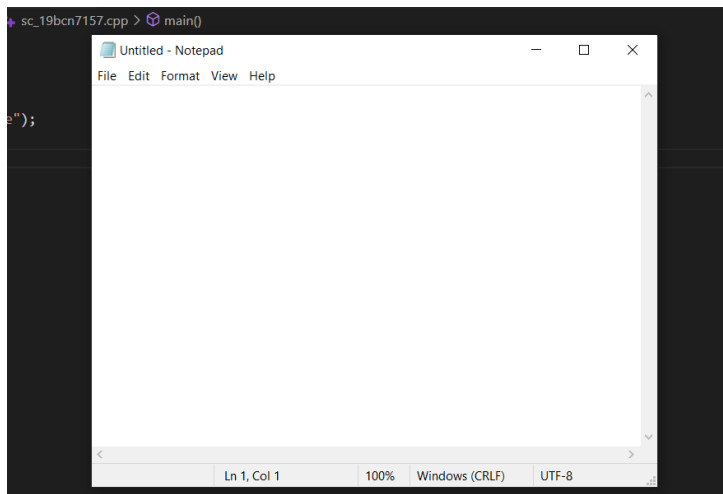


## Enable DEP AND ASLR





**It successfully works**



# In Process Explorer

Process Explorer - Sysinternals: www.sysinternals.com [LAPTOP-VG83TGDN\Meghana]

File Options View Process Find Users Help

Process	CPU	Private Bytes	Working Set	PID	Description	Company Name	Virus Total
explorer.exe	< 0.01	2,62,956 K	2,42,928 K	22208	Windows Explorer	Microsoft Corporation	
SecurityHealthSystray.exe		2,012 K	9,660 K	2192	Windows Security notification ...	Microsoft Corporation	
vgtray.exe	< 0.01	1,396 K	7,020 K	2588	Vanguard tray notification.	Riot Games, Inc.	
OneDrive.exe		18,312 K	50,968 K	1756	Microsoft OneDrive	Microsoft Corporation	
figma_agent.exe		11,424 K	15,844 K	17936	Figma Agent		
POWERPNT.EXE		72,296 K	1,04,812 K	26724	Microsoft PowerPoint	Microsoft Corporation	
POWERPNT.EXE		1,84,784 K	1,07,716 K	18980	Microsoft PowerPoint	Microsoft Corporation	
Code.exe		30,412 K	77,560 K	26392	Visual Studio Code	Microsoft Corporation	
Code.exe		9,364 K	24,220 K	24840	Visual Studio Code	Microsoft Corporation	
Code.exe		1,93,820 K	2,14,692 K	25232	Visual Studio Code	Microsoft Corporation	
Code.exe		11,980 K	39,656 K	12900	Visual Studio Code	Microsoft Corporation	
Code.exe	< 0.01	1,31,604 K	1,67,920 K	16684	Visual Studio Code	Microsoft Corporation	
Code.exe	< 0.01	82,024 K	1,28,588 K	908	Visual Studio Code	Microsoft Corporation	
cpptools.exe	< 0.01	31,664 K	38,152 K	23228	C/C++ Extension for Visual St...	Microsoft Corporation	
conhost.exe		6,336 K	10,724 K	12516	Console Window Host	Microsoft Corporation	
cpptools-srv.exe	< 0.01	45,072 K	50,364 K	24008	C/C++ IntelliSense Server for ...	Microsoft Corporation	
cmd.exe		2,452 K	4,388 K	6120	Windows Command Process...	Microsoft Corporation	
conhost.exe		6,344 K	10,832 K	13560	Console Window Host	Microsoft Corporation	
sc_19bcn7157.exe		660 K	3,180 K	22824			Unknown
cmd.exe		2,248 K	4,336 K	9276	Windows Command Process...	Microsoft Corporation	
notepad.exe		2,540 K	14,440 K	29216	Notepad	Microsoft Corporation	
Code.exe		34,188 K	81,040 K	21984	Visual Studio Code	Microsoft Corporation	
Code.exe		17,388 K	63,880 K	21136	Visual Studio Code	Microsoft Corporation	
WINWORD.EXE		1,59,396 K	2,58,500 K	18424	Microsoft Word	Microsoft Corporation	
NVIDIA Web Helper.exe	< 0.01	30,812 K	11,636 K	4388	NVIDIA Web Helper Service	Node.js	
conhost.exe		6,336 K	1,084 K	13132	Console Window Host	Microsoft Corporation	
jusched.exe		1,316 K	7,396 K	23240	Java Update Scheduler	Oracle Corporation	
Teams.exe	< 0.01	1,76,004 K	1,46,032 K	19088	Microsoft Teams	Microsoft Corporation	
Teams.exe	0.28	1,98,756 K	1,91,204 K	14128	Microsoft Teams	Microsoft Corporation	
Teams.exe	< 0.01	21,820 K	47,664 K	4396	Microsoft Teams	Microsoft Corporation	
Teams.exe		36,812 K	55,168 K	18500	Microsoft Teams	Microsoft Corporation	
Teams.exe	< 0.01	4,15,868 K	3,85,964 K	20836	Microsoft Teams	Microsoft Corporation	
Teams.exe		11,912 K	60,852 K	26692	Microsoft Teams	Microsoft Corporation	
Teams.exe		78,080 K	83,220 K	27140	Microsoft Teams	Microsoft Corporation	
Teams.exe	< 0.01	1,05,344 K	1,22,032 K	10008	Microsoft Teams	Microsoft Corporation	
Teams.exe	0.74	2,29,556 K	2,77,612 K	13152	Microsoft Teams	Microsoft Corporation	
Teams.exe		23,668 K	76,288 K	17512	Microsoft Teams	Microsoft Corporation	
AsusOSD.exe		2,700 K	14,124 K	9380			
Discord.exe	< 0.01	40,736 K	68,772 K	28928	Discord	Discord Inc.	
Discord.exe		11,132 K	22,600 K	14572	Discord	Discord Inc.	
Discord.exe		1,55,736 K	1,51,700 K	21260	Discord	Discord Inc.	
Discord.exe		16,876 K	37,516 K	24360	Discord	Discord Inc.	
Discord.exe	0.19	2,67,416 K	1,95,204 K	10412	Discord	Discord Inc.	
Discord.exe		12,564 K	57,308 K	16180	Discord	Discord Inc.	
chrome.exe	< 0.01	1,62,384 K	2,19,016 K	18088	Google Chrome	Google LLC	

CPU Usage: 2.68% Commit Charge: 77.91% Processes: 303 Physical Usage: 54.57%