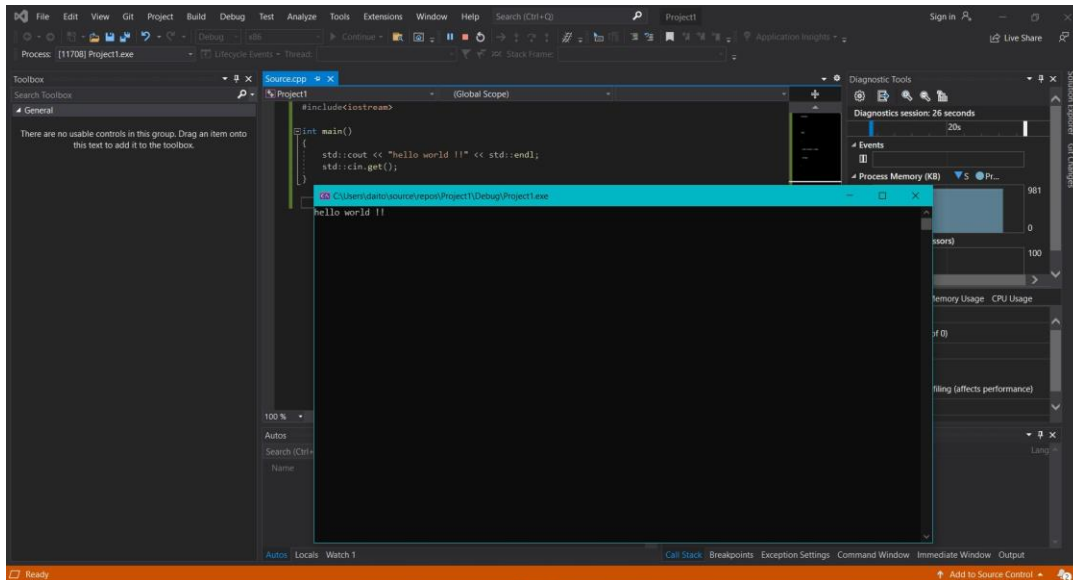


Lab -11

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Download and install visual studio (recent edition) Write a C++ code of your own to build an executable and run the same.



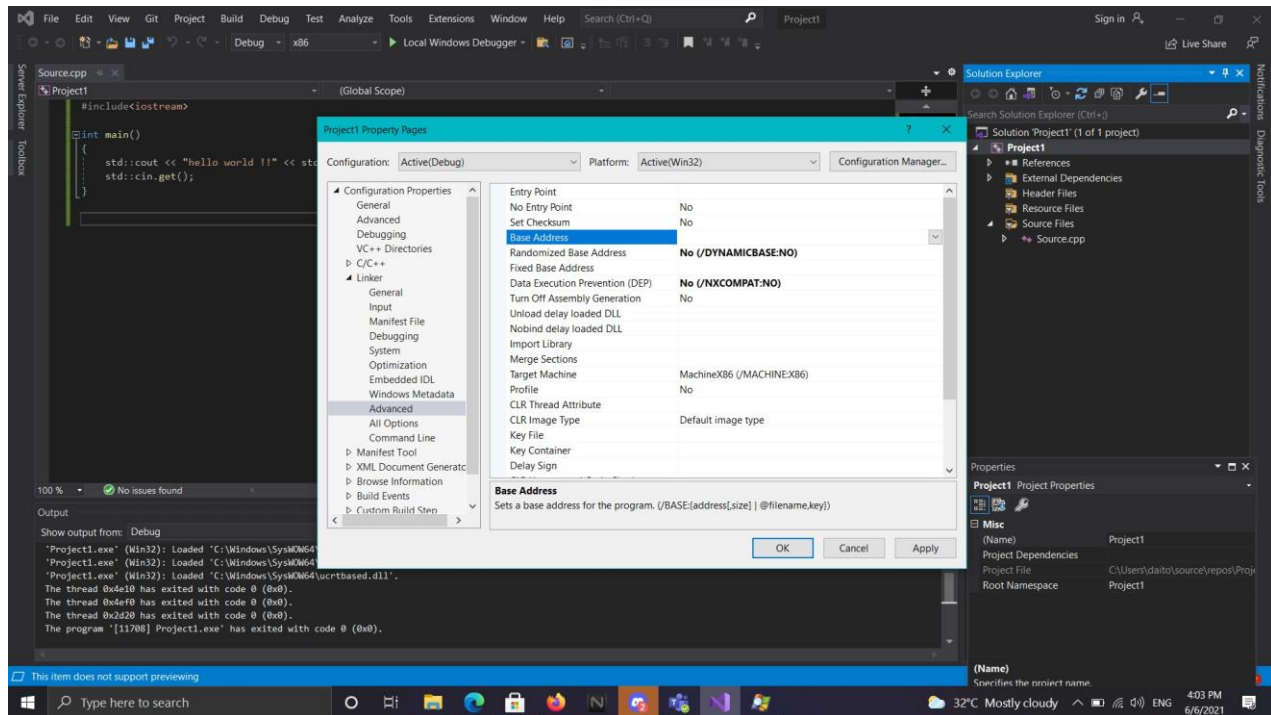
Download process explorer and verify the DEP & ASLR status

The screenshot shows the Process Explorer window from Sysinternals. The table below lists the processes and their DEP & ASLR status.

Process	CPU	Private Bytes	Working Set	PID	Description	Company Name	DEP	ASLR
Microsoft.ServiceHub Contr...		38,512 K	36,868 K	13844	Microsoft.ServiceHub.Control...	Microsoft	Enabled (permanent)	ASLR
ServiceHub.IdentityHost...	< 0.01	40,972 K	41,228 K	3848	ServiceHub.IdentityHost.exe	Microsoft	Enabled (permanent)	ASLR
ServiceHub.VSDetouredHos...		69,736 K	48,308 K	13204	ServiceHub.VSDetouredHos...	Microsoft	Enabled (permanent)	ASLR
ServiceHub.SettingsHos...		66,596 K	47,316 K	11120	ServiceHub.SettingsHost.exe	Microsoft	Enabled (permanent)	ASLR
ServiceHub.Host.CLR.x8...		46,956 K	36,740 K	8556	ServiceHub.Host.CLR.x86	Microsoft	Enabled (permanent)	ASLR
ServiceHub.ThreadedW...	< 0.01	73,968 K	51,088 K	8696	ServiceHub.ThreadedWaitDi...	Microsoft	Enabled (permanent)	ASLR
ServiceHub.Host.CLR.x6...		568,716 K	530,588 K	11676	ServiceHub.Host.CLR.x64	Microsoft	Enabled (permanent)	ASLR
ServiceHub.DataWareh...	0.51	83,112 K	87,320 K	12912	ServiceHub.DataWarehouse...	Microsoft	Enabled (permanent)	ASLR
ServiceHub.Host.CLR.x8...		106,792 K	79,700 K	20288	ServiceHub.Host.CLR.x86	Microsoft	Enabled (permanent)	ASLR
ServiceHub.TestWindo...		59,644 K	73,768 K	16048	ServiceHub.TestWindowStor...	Microsoft	Enabled (permanent)	ASLR
MSBuild.exe		23,200 K	37,124 K	13816	MSBuild.exe	Microsoft Corporation	Enabled (permanent)	ASLR
conhost.exe		6,340 K	5,244 K	256	Console Window Host	Microsoft Corporation	Enabled (permanent)	ASLR
vcpgkgsrv.exe	< 0.01	14,344 K	18,296 K	14324	Microsoft (R) Visual C++ Pack...	Microsoft Corporation	Enabled (permanent)	ASLR
vcpgkgsrv.exe	< 0.01	49,468 K	21,232 K	19540	Microsoft (R) Visual C++ Pack...	Microsoft Corporation	Enabled (permanent)	ASLR
VsDebugConsole.exe		1,140 K	6,152 K	18704	Visual Studio Debugger Con...	Microsoft Corporation	Enabled (permanent)	ASLR
conhost.exe		7,008 K	15,864 K	4876	Console Window Host	Microsoft Corporation	Enabled (permanent)	ASLR
Project1.exe		752 K	4,060 K	11708			Enabled (permanent)	ASLR
msvsmmon.exe		5,208 K	14,748 K	20396	Visual Studio 2019 Remote D...	Microsoft Corporation	Enabled (permanent)	ASLR
ScriptedSandbox64.exe	2.53	107,616 K	138,392 K	14888	ScriptedSandbox64.exe	Microsoft Corporation	Enabled (permanent)	ASLR
SnippingTool.exe	1.35	17,732 K	64,724 K	14344	Snipping Tool	Microsoft Corporation	Enabled (permanent)	ASLR
procexp.exe		4,980 K	11,524 K	20592	Sysinternals Process Explorer	Sysinternals - www.sysinter...	Enabled (permanent)	ASLR
procexp64.exe	1.85	40,696 K	65,504 K	20652	Sysinternals Process Explorer	Sysinternals - www.sysinter...	Enabled (permanent)	ASLR
NVIDIA Web Helper.exe	< 0.01	37,140 K	15,220 K	16680	NVIDIA Web Helper Service	Node.js	Enabled (permanent)	ASLR
conhost.exe		6,340 K	888 K	17128	Console Window Host	Microsoft Corporation	Enabled (permanent)	ASLR
PSAgent.exe		1,696 K	1,656 K	16804			Enabled (permanent)	n/a
firefox.exe	< 0.01	232,432 K	178,032 K	9648	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		246,852 K	61,848 K	4424	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		54,524 K	29,620 K	19372	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe	< 0.01	38,640 K	30,296 K	14752	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR

At the bottom, the status bar shows: CPU Usage: 19.05% | Commit Charge: 65.32% | Processes: 251 | Physical Usage: 92.91%

Disable software DEP, ASLR and SEH in the visual studio and rebuild the sameexecutableProject > properties > configuration properties > linker



By Default, in project properties, DEP and ASLR properties are enabled and even upon disabling them we can see the changes to DEP and ASLR.

Process Explorer - Sysinternals: www.sysinternals.com [LAPTOP-9GPA2HP1\daito]

Process	CPU	Private Bytes	Working Set	PID	Description	Company Name	DEP	ASLR
ServiceHub.Host.CLR.x86		107,432 K	79,700 K	20288	ServiceHub.Host.CLR.x86	Microsoft	Enabled (permanent)	ASLR
ServiceHub.TestWindowStor...		59,776 K	73,624 K	16048	ServiceHub.TestWindowStor...	Microsoft	Enabled (permanent)	ASLR
MSBuild.exe	0.17	25,356 K	38,936 K	13816	MSBuild.exe	Microsoft Corporation	Enabled (permanent)	ASLR
conhost.exe		6,340 K	5,048 K	256	Console Window Host	Microsoft Corporation	Enabled (permanent)	ASLR
vcpkgshr.exe	< 0.01	14,344 K	17,972 K	14324	Microsoft(R) Visual C++ Pack...	Microsoft Corporation	Enabled (permanent)	ASLR
vcpkgshr.exe	< 0.01	43,108 K	18,004 K	20476	Microsoft(R) Visual C++ Pack...	Microsoft Corporation	Enabled (permanent)	ASLR
VsDebugConsole.exe		1,332 K	5,032 K	18804	Visual Studio Debugger Con...	Microsoft Corporation	Enabled (permanent)	ASLR
conhost.exe		7,092 K	16,092 K	21296	Console Window Host	Microsoft Corporation	Enabled (permanent)	ASLR
Project1.exe		824 K	3,984 K	12752			Disabled (permanent)	
msvsmmon.exe		5,332 K	15,148 K	17840	Visual Studio 2019 Remote D...	Microsoft Corporation	Enabled (permanent)	ASLR
ScriptedSandbox64.exe	0.50	88,596 K	119,288 K	21400	ScriptedSandbox64.exe	Microsoft Corporation	Enabled (permanent)	ASLR
ShippingTool.exe	1.00	18,660 K	53,848 K	14344	Snipping Tool	Microsoft Corporation	Enabled (permanent)	ASLR
procepx.exe		4,980 K	11,012 K	20592	Sysinternals Process Explorer	Sysinternals - www.sysinter...	Enabled (permanent)	ASLR
procepx64.exe	2.17	40,592 K	65,312 K	20652	Sysinternals Process Explorer	Sysinternals - www.sysinter...	Enabled (permanent)	ASLR
NVIDIA Web Helper.exe	< 0.01	37,072 K	2,320 K	16680	NVIDIA Web Helper Service	Node.js	Enabled (permanent)	ASLR
conhost.exe		6,340 K	604 K	17128	Console Window Host	Microsoft Corporation	Enabled (permanent)	ASLR
PSAgent.exe		1,696 K	1,656 K	16804			Enabled (permanent)	n/a
firefox.exe	< 0.01	234,152 K	172,660 K	9648	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		346,268 K	55,900 K	4424	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		57,384 K	31,356 K	19372	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe	< 0.01	38,708 K	24,496 K	14752	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		50,476 K	38,116 K	11540	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe	< 0.01	250,716 K	144,600 K	17028	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		33,812 K	12,048 K	6492	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe	< 0.01	256,840 K	146,776 K	1308	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe	< 0.01	207,632 K	134,320 K	15396	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		61,340 K	33,292 K	1824	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		151,748 K	104,920 K	11376	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR
firefox.exe		47,492 K	44,060 K	5996	Firefox	Mozilla Corporation	Enabled (permanent)	ASLR

CPU Usage: 15.70% Commit Charge: 67.82% Processes: 251 Physical Usage: 94.53%