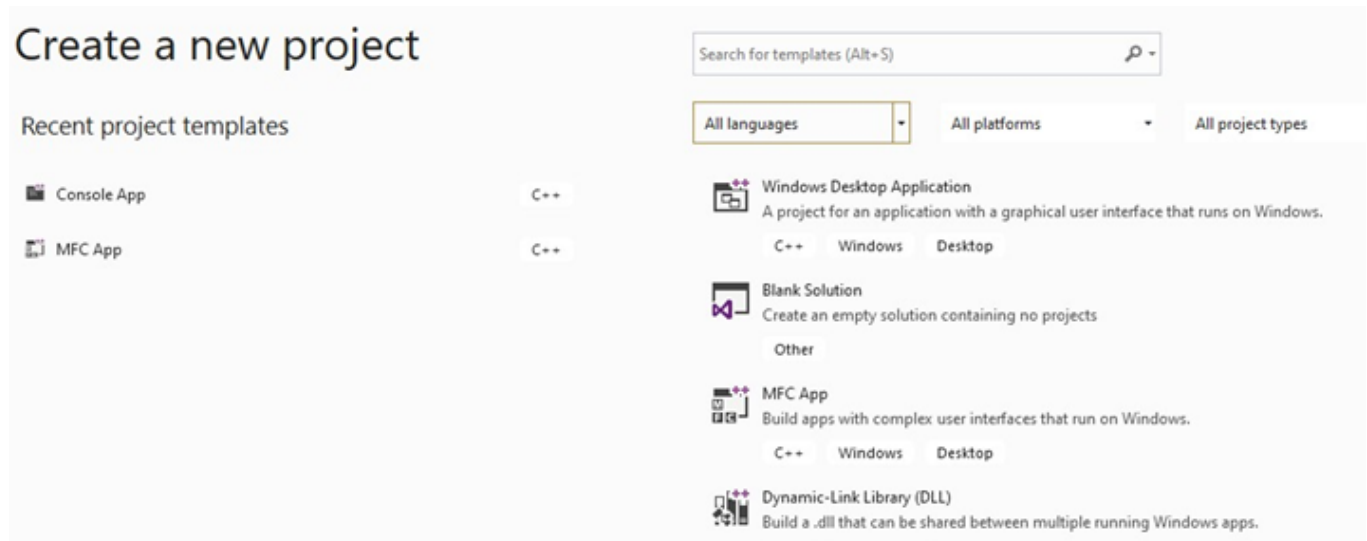


Name:Anumolu Anila

Reg.no:18BCE7300

LAB-11:Secure Coding

Step-1:Download and install visual studio



```
3
4  #include <iostream>
5  using namespace std;
6
7  int main()
8  {
9      int number;
10
11      cout << "Enter an integer: ";
12      cin >> number;
13
14      cout << "You entered " << number;
15      return 0;
16  }
```

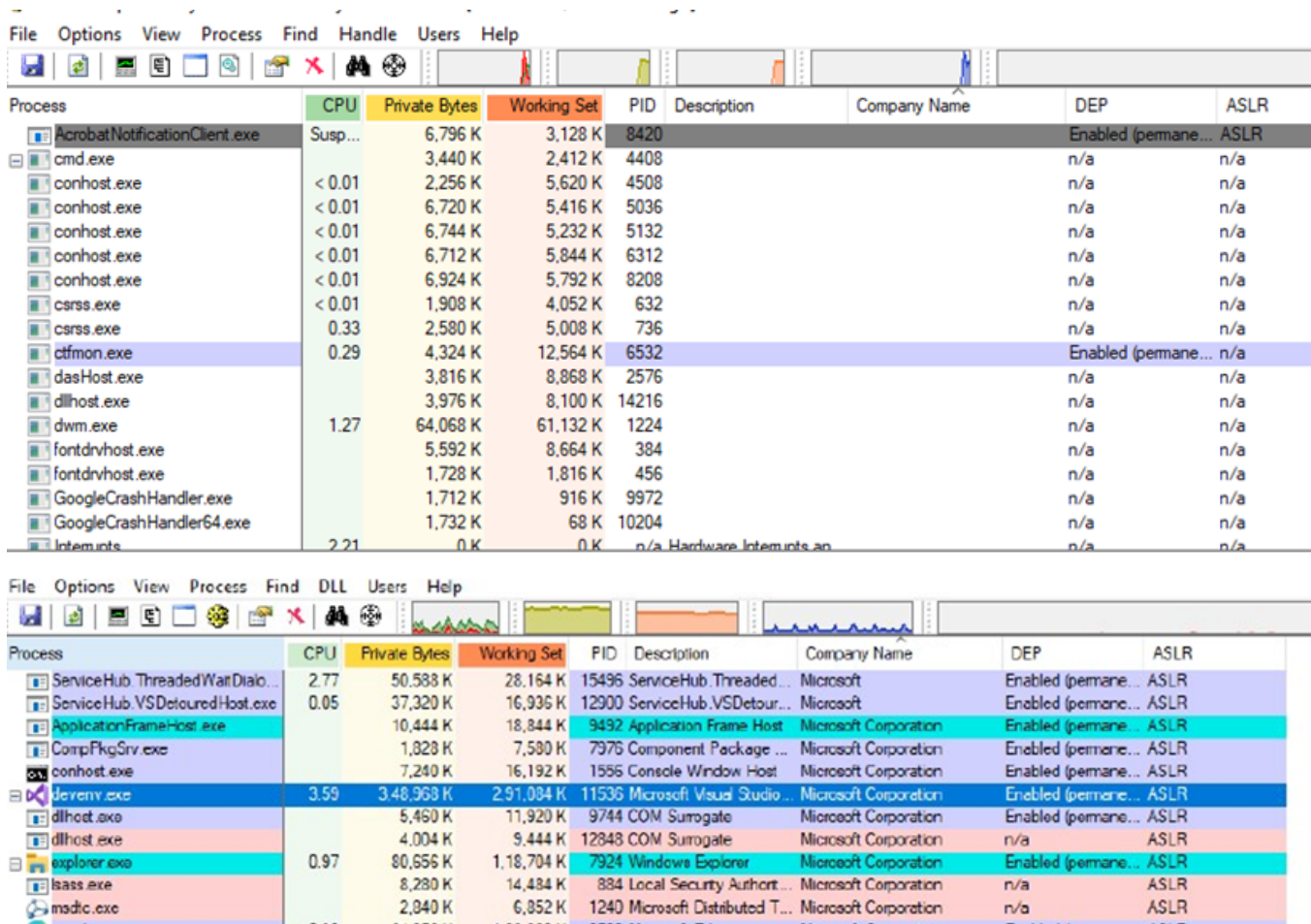
Output

Microsoft Visual Studio Debug Console

```
Enter an integer: 3
You entered 3
```

```
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).
```

Step-2:Download process explorer to verify the DEP and ASLR status

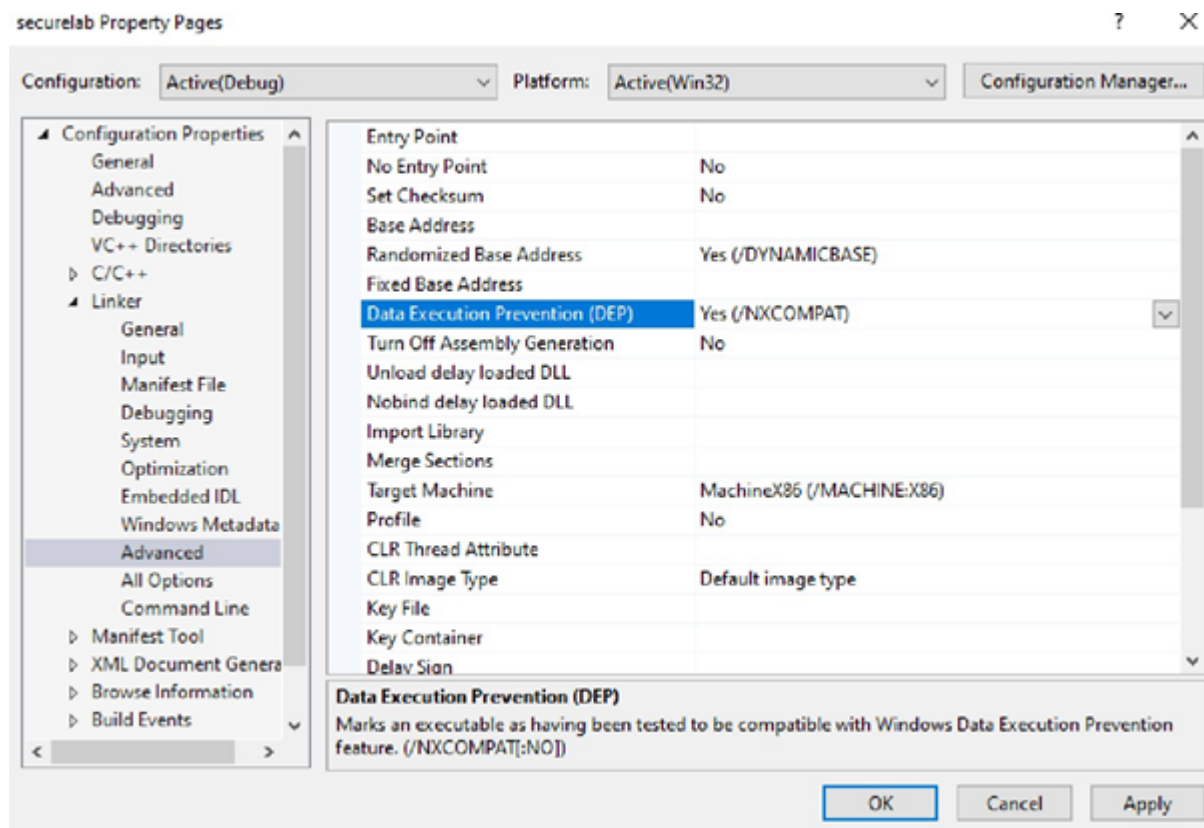


The image shows two screenshots of Windows Task Manager. The top screenshot shows a list of processes including AcrobatNotificationClient.exe, cmd.exe, conhost.exe, csrss.exe, ctfmon.exe, dasHost.exe, dllhost.exe, dwm.exe, fontdrvhost.exe, GoogleCrashHandler.exe, GoogleCrashHandler64.exe, and Internet Explorer. The bottom screenshot shows a list of processes including ServiceHub.ThreadedWaitDialog.exe, ServiceHub.VSDetouredHost.exe, ApplicationFrameHost.exe, CompFkgSrv.exe, conhost.exe, devenv.exe, dllhost.exe, explorer.exe, lsass.exe, and msdc.exe. Both screenshots show the CPU, Private Bytes, Working Set, PID, Description, Company Name, DEP, and ASLR status for each process.

Process	CPU	Private Bytes	Working Set	PID	Description	Company Name	DEP	ASLR
AcrobatNotificationClient.exe	Susp...	6,796 K	3,128 K	8420			Enabled (permane...	ASLR
cmd.exe		3,440 K	2,412 K	4408			n/a	n/a
conhost.exe	< 0.01	2,256 K	5,620 K	4508			n/a	n/a
conhost.exe	< 0.01	6,720 K	5,416 K	5036			n/a	n/a
conhost.exe	< 0.01	6,744 K	5,232 K	5132			n/a	n/a
conhost.exe	< 0.01	6,712 K	5,844 K	6312			n/a	n/a
conhost.exe	< 0.01	6,924 K	5,792 K	8208			n/a	n/a
csrss.exe	< 0.01	1,908 K	4,052 K	632			n/a	n/a
csrss.exe	0.33	2,580 K	5,008 K	736			n/a	n/a
ctfmon.exe	0.29	4,324 K	12,564 K	6532			Enabled (permane...	n/a
dasHost.exe		3,816 K	8,868 K	2576			n/a	n/a
dllhost.exe		3,976 K	8,100 K	14216			n/a	n/a
dwm.exe	1.27	64,068 K	61,132 K	1224			n/a	n/a
fontdrvhost.exe		5,592 K	8,664 K	384			n/a	n/a
fontdrvhost.exe		1,728 K	1,816 K	456			n/a	n/a
GoogleCrashHandler.exe		1,712 K	916 K	9972			n/a	n/a
GoogleCrashHandler64.exe		1,732 K	68 K	10204			n/a	n/a
Internet Explorer	2.21	0 K	0 K	n/a	Hardware Internet Explorer		n/a	n/a

Process	CPU	Private Bytes	Working Set	PID	Description	Company Name	DEP	ASLR
ServiceHub.ThreadedWaitDialog.exe	2.77	50,538 K	28,164 K	15496	ServiceHub.Threaded...	Microsoft	Enabled (permane...	ASLR
ServiceHub.VSDetouredHost.exe	0.05	37,320 K	16,936 K	12900	ServiceHub.VSDetour...	Microsoft	Enabled (permane...	ASLR
ApplicationFrameHost.exe		10,444 K	18,844 K	9492	Application Frame Host	Microsoft Corporation	Enabled (permane...	ASLR
CompFkgSrv.exe		1,028 K	7,590 K	7976	Component Package ...	Microsoft Corporation	Enabled (permane...	ASLR
conhost.exe		7,240 K	16,192 K	1555	Console Window Host	Microsoft Corporation	Enabled (permane...	ASLR
devenv.exe	3.59	3,48,968 K	2,91,084 K	11536	Microsoft Visual Studio...	Microsoft Corporation	Enabled (permane...	ASLR
dllhost.exe		5,460 K	11,920 K	9744	COM Surrogate	Microsoft Corporation	Enabled (permane...	ASLR
dllhost.exe		4,004 K	9,444 K	12848	COM Surrogate	Microsoft Corporation	n/a	ASLR
explorer.exe	0.97	80,656 K	1,18,704 K	7924	Windows Explorer	Microsoft Corporation	Enabled (permane...	ASLR
lsass.exe		8,280 K	14,484 K	884	Local Security Authorit...	Microsoft Corporation	n/a	ASLR
msdc.exe		2,840 K	6,852 K	1240	Microsoft Distributed T...	Microsoft Corporation	n/a	ASLR

Step-3:Disable software DEP,ASLR and SEH in the visual studio.



Step-4:After modifying again run the executable see the status of the DEP and ASLR properties

Process	CPU	Private Bytes	Working Set	PID	Description	Company Name	DEP	ASLR
bovany.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	10,368 K	9744	COM Surrogate	Microsoft Corporation	Enabled (permane...	ASLR
dllhost.exe	< 0.01	3,952 K	8,776 K	12848	COM Surrogate	Microsoft Corporation	n/a	ASLR
explorer.exe	1.77	80,344 K	1,08,320 K	7524	Windows Explorer	Microsoft Corporation	Enabled (permane...	ASLR
lsass.exe	0.03	8,256 K	14,132 K	884	Local Security Authert...	Microsoft Corporation	n/a	ASLR
MSBuild.exe		29,472 K	43,592 K	32	MSBuild.exe	Microsoft Corporation	Enabled (permane...	ASLR
msedc.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	1,58,420 K	4304	Antimalware Service E...	Microsoft Corporation	n/a	ASLR
mspubserv.exe		15,152 K	14,372 K	5896	Microsoft® Program D...	Microsoft Corporation	Enabled (permane...	ASLR
NisSrv.exe	< 0.01	3,872 K	6,790 K	6292	Microsoft Network Fle...	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	28,996 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	13832	Windows host process...	Microsoft Corporation	Enabled (permane...	ASLR