Secure Coding | Lab 2

by prof. Sibi Chakkaravarthy

Sk Saddam Hossain
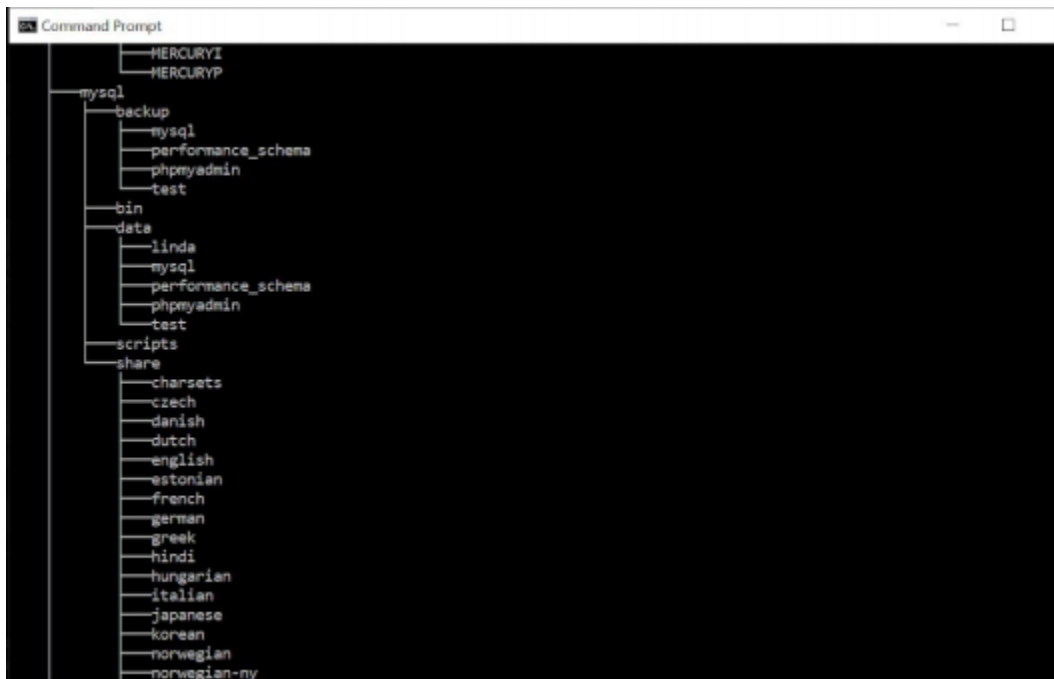
18BCN7143

Who has the highest privilege in OS?

> System has the highest privilege in OS

What is the structure of your file system?

> Hierarchical or tree structure

File types accepted by your OS

```
C:\>assoc
.386=vxdfile
.3ds=Photoshop.3DSFileType.140
.3g2=WMP11.AssocFile.3G2
.3gp=WMP11.AssocFile.3GP
.3gp2=WMP11.AssocFile.3G2
.3gpp=WMP11.AssocFile.3GP
.8ba=Photoshop.PlugIn
.8bc=Photoshop.PlugIn
.8be=Photoshop.PlugIn
```

```
.8bf=Photoshop.PlugIn
.8bi=Photoshop.PlugIn
.8bp=Photoshop.PlugIn
.8bs=Photoshop.PlugIn
.8bx=Photoshop.PlugIn
.8by=Photoshop.PlugIn
.8li=Photoshop.PlugIn
.AAC=WMP11.AssocFile.ADTS
.abr=Photoshop.BrushesFile
.acb=Photoshop.ColorBooks
.accountpicture-ms=accountpicturefile .acf=Photoshop.CustomFilterKernel .acl=ACLFile
.aco=Photoshop.SwatchesFile
.act=Photoshop.ColorTableFile
.acv=Photoshop.CurvesFile
.ado=Photoshop.DuotoneSettingsFile .ADT=WMP11.AssocFile.ADTS
.ADTS=WMP11.AssocFile.ADTS
.ahs=Photoshop.HalftoneScreens
.ahu=Photoshop.HueSatFile
.aif=WMP11.AssocFile.AIFF
.aifc=WMP11.AssocFile.AIFF
.aiff=WMP11.AssocFile.AIFF
.alv=Photoshop.LevelsFile
.amp=Photoshop.ArbitraryMapFile .ams=Photoshop.MonitorSetupFile .ani=anifile
.api=Photoshop.PrintingInksFile .apl=Photoshop.AdobePlugIn
.appcontent-ms=ApplicationContent .application=Application.Manifest
.appref-ms=Application.Reference .asa=aspfile
.ase=Photoshop.ExchangeableSwatchFile.140 .asf=WMP11.AssocFile.ASF
.asl=Photoshop.Styles
.asp=aspfile
.ast=Photoshop.SepTablesFile
.asv=Photoshop.ASVColAdjFile
.asx=WMP11.AssocFile.ASX
.atf=Photoshop.TransferFunctionsFile .atn=Photoshop.ActionsFile
.au=WMP11.AssocFile.AU
.ava=Photoshop.VariationsFile
.avi=WMP11.AssocFile.AVI
.aw=AWFile
.axt=Photoshop.AXTAdjColFile
.bat=batfile
.blg=Diagnostic.Perfmon.Document .blw=Photoshop.BWPresets
.bmp=Paint.Picture
.cab=CABFolder
.camp=campfile
.cat=CATFile
.cda=WMP11.AssocFile.CDA
.cdmp=cdmpfile
.cdx=aspfile
.cdxml=Microsoft.PowerShellCmdletDefinitionXML.1 .cer=CERFile
.cha=Photoshop.CHAFile
.chk=chkfile
.chm=chm.file
.cin=Photoshop.CINFile.140
.cmd=cmdfile
.com=comfile
```

```
.compositefont=Windows.CompositeFont
.cpl=cplfile
.crl=CRLFile
.crt=CERFile
.crtx=CRTXFile
.csh=Photoshop.CustomShapes
.css=CSSfile
.csv=Excel.CSV
.cur=curfile
.dae=Photoshop.DAEFileType.140
.db=dbfile
.dcm=Photoshop.DCMFileType.140
.dcp=Photoshop.DNGCameraProfile.140
.dcpr=Photoshop.DNGCameraProfileRecipe.140 .dctx=IMEDictionaryCompiler
.dctxc=IMEDictionaryCompiler
.dds=ddsfile
.der=CERFile
.desklink=CLSID\{9E56BE61-C50F-11CF-9A2C-00A0C90A90CE}
.deskthemepack=desktopthemepackfile
.diagcab=Diagnostic.Cabinet
.diagcfg=Diagnostic.Config
.diagpkg=Diagnostic.Document
.dib=Paint.Picture
.dll=dllfile
.doc=Word.Document.8
.dochtml=wordhtmlfile
.docm=Word.DocumentMacroEnabled.12
.docmhtml=wordmhtmlfile
.docx=Word.Document.12
.docxml=wordxmlfile
.dot=Word.Template.8
.dothtml=wordhtmltemplate
.dotm=Word.TemplateMacroEnabled.12
.dotx=Word.Template.12
.dqy=dqyfile
.drv=drvfile
.dsn=MSDASQL
.dwfx=Windows.XPSReachViewer .eap=Photoshop.ExposureAdjustment
.easmx=Windows.XPSReachViewer .edrwx=Windows.XPSReachViewer .elm=ELMFile
.emf=emffile
.eml=Microsoft Email Message .eprtx=Windows.XPSReachViewer .evt=evtfile
.evtx=evtxfile
.exe=exefile
.exr=Photoshop.OpenEXRFile.140 .ffo=Photoshop.FileInfo
.fl3=Photoshop.FL3FileType.140 .flac=WMP11.AssocFile.FLAC
.fon=fonfile
.fxg=Photoshop.FXGFileType.140 .gcsx=GCSXFile
.gif=giffile
.glox=GLOXFile
.gmmp=gmmpfile
.gqsx=GQSXFile
.gra=MSGraph.Chart.8
.grd=Photoshop.Gradients
.grp=MSProgramGroup
```

```
.hdr=Photoshop.PortableBitMapFile.140 .hlp=hlpfile
.hta=htafile
.htm=htmlfile
.html=htmlfile
.hxa=MSHelp.hxa.2.5
.hxc=MSHelp.hxc.2.5
.hxd=MSHelp.hxd.2.5
.hxe=MSHelp.hxe.2.5
.hxf=MSHelp.hxf.2.5
.hxh=MSHelp.hxh.2.5
.hxi=MSHelp.hxi.2.5
.hxk=MSHelp.hxk.2.5
.hxq=MSHelp.hxq.2.5
.hxr=MSHelp.hxr.2.5
.hxs=MSHelp.hxs.2.5
.hxt=MSHelp.hxt.2.5
.hxv=MSHelp.hxv.2.5
.hxw=MSHelp.hxa.2.5
.icc=icmfile
.icl=IconLibraryFile
.icm=icmfile
.ico=icofile
.iff=Photoshop.IFFFileType.140
.igp=Intel.GraphicsControlPanel.igp.1
.imesx=imesxfile
.img=Windows.IsoFile
.inf=inffile
.ini=inifile
.iqy=iqyfile
.iros=Photoshop.IRSettings
.irs=Photoshop.IRSettings
.iso=Windows.IsoFile
.jar=jarfile
.jfif=pjpegfile
.Job=JobObject
.jod=Microsoft.Jet.OLEDB.4.0
.jpe=jpegfile
.jpeg=jpegfile
.jpg=jpegfile
.jps=Photoshop.JPSFileType.140
.js=JSFile
.JSE=JSEFile
.jtx=Windows.XPSReachViewer
.jxr=wdpfile
.kmz=Photoshop.KMZFileType.140
.kys=Photoshop.KYSFile.140
.label=Label
.lex=LEXFile
.library-ms=LibraryFolder
.lnk=lnkfile
.log=txtfile
.m1v=WMP11.AssocFile.MPEG
.M2T=WMP11.AssocFile.M2TS
.M2TS=WMP11.AssocFile.M2TS
```

```
.M2V=WMP11.AssocFile.MPEG
.m3u=WMP11.AssocFile.m3u
.m4a=WMP11.AssocFile.M4A
.m4v=WMP11.AssocFile.MP4
.mapimail=CLSID\{9E56BE60-C50F-11CF-9A2C-00A0C90A90CE} .mfe=McAfeeExtn
.mfw=Photoshop.MFWFile.140
.mht=mhtmlfile
.mhtml=mhtmlfile
.mid=WMP11.AssocFile.MIDI
.midi=WMP11.AssocFile.MIDI
.mk3d=WMP11.AssocFile.MK3D
.mka=WMP11.AssocFile.MKA
.mkv=WMP11.AssocFile.MKV
.mlc=LpkSetup.1
.mnu=Photoshop.MenuCustomizationFile.140 .MOD=WMP11.AssocFile.MPEG
.mov=WMP11.AssocFile.MOV
.mp2=WMP11.AssocFile.MP3
.mp2v=WMP11.AssocFile.MPEG
.mp3=WMP11.AssocFile.MP3
.mp4=WMP11.AssocFile.MP4
.mp4v=WMP11.AssocFile.MP4
.mpa=WMP11.AssocFile.MPEG
.mpe=WMP11.AssocFile.MPEG
.mpeg=WMP11.AssocFile.MPEG
.mpg=WMP11.AssocFile.MPEG
.mpv2=WMP11.AssocFile.MPEG
.ms-windows-store-license=WindowsStore.License .msc=MSCFile
.msi=Msi.Package
.msp=Msi.Patch
.msrcincident=RemoteAssistance.1
.msstyles=msstylesfile
.msu=Microsoft.System.Update.1
.mtl=Photoshop.MTLFileType.140
.MTS=WMP11.AssocFile.M2TS
.mydocs=CLSID\{ECF03A32-103D-11d2-854D-006008059367} .nfo=MSInfoFile
.ocx=ocxfile
.odc=odcfile
.odccubefile=odccubefile
.odcdatabasefile=odcdatabasefile
.odcnewfile=odcnewfile
.odctablecollectionfile=odctablecollectionfile .odctablefile=odctablefile
.odp=PowerPoint.OpenDocumentPresentation.12 .ods=Excel.OpenDocumentSpreadsheet.12
.odt=Word.OpenDocumentText.12
.one=OneNote.Section.1
.onepkg=OneNote.Package
.onetoc=OneNote.TableOfContents
.onetoc2=OneNote.TableOfContents.12
.opc=OPCFile
.oqy=oqyfile
.osdx=opensearchdescription
.otf=otffile
.oxps=Windows.XPSReachViewer
.p10=P10File
.p12=PFXFile
```
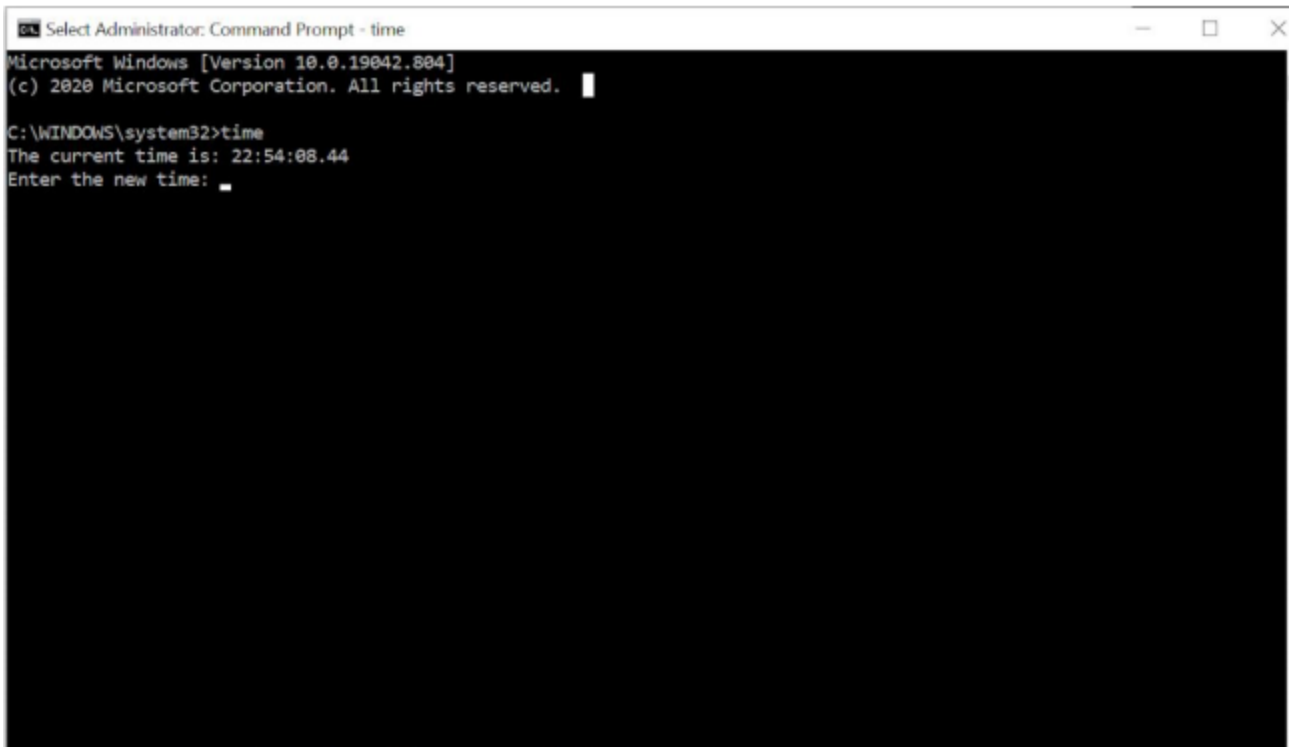
```
.p3l=Photoshop.P3LFileType.140
.p3m=Photoshop.P3MFileType.140
.p3r=Photoshop.P3RFileType.140
.p7b=SPCFile
.p7c=certificate_wab_auto_file
.p7m=P7MFile
.p7r=P7RFile
.p7s=P7SFile
.pano=Panoramic File
.partial=IE.AssocFile.PARTIAL
.pat=Photoshop.Patterns
.pbk=pbkfile
.pbm=Photoshop.RadianceFile.140 .pcb=PCBFile
.pcd=Photoshop.PCDFile.140
.pcx=Photoshop.PCXFile.140
.pdd=Photoshop.PDDFile.140
.pdp=Photoshop.PDPFile.140
.perfmoncfg=Diagnostic.Perfmon.Config .pfm=pfmfile
.pfx=PFXFile
.pif=piffile
.pko=PKOFile
.ple=Photoshop.PLEFileType.140
.pnf=pnffile
.png=pngfile
.pot=PowerPoint.Template.8
.pothtml=powerpointhtmltemplate .potm=PowerPoint.TemplateMacroEnabled.12
.potx=PowerPoint.Template.12
.ppa=PowerPoint.Addin.8
.ppam=PowerPoint.Addin.12
.ppk=PPK_Assoc_ProgId
.ppkg=Microsoft.ProvTool.Provisioning.1 .pps=PowerPoint.SlideShow.8
.ppsm=PowerPoint.SlideShowMacroEnabled.12 .ppsx=PowerPoint.SlideShow.12
.ppt=PowerPoint.Show.8
.ppthtml=powerpointhtmlfile
.pptm=PowerPoint.ShowMacroEnabled.12 .pptmhtml=powerpointmhtmlfile
.pptx=PowerPoint.Show.12
.pptxml=powerpointxmlfile
.prf=prffile
.ps1=Microsoft.PowerShellScript.1 .ps1xml=Microsoft.PowerShellXMLData.1
.psb=Photoshop.PSBFile.140
.psc1=Microsoft.PowerShellConsole.1 .psd=Photoshop.Image.21
.psd1=Microsoft.PowerShellData.1 .psdt=Photoshop.PSDTFile.140
.psf=Photoshop.ProofSetup
.psm1=Microsoft.PowerShellModule.1
.psp=Photoshop.PreferencesFile
.pssc=Microsoft.PowerShellSessionConfiguration.1 .pwz=PowerPoint.Wizard.8
.pxr=Photoshop.PXRFile.140
.qds=SavedDsQuery
.rat=ratfile
.RData=RWorkspace
.RDP=RDP.File
.reg=regfile
.resmoncfg=Diagnostic.Resmon.Config
.rle=rlefile
```

```
.rll=dllfile
.rmi=WMP11.AssocFile.MIDI
.Rproj=RStudio.Rproj
.rqy=rqyfile
.rtf=Word.RTF.8
.scf=SHCmdFile
.scp=txtfile
.scr=scrfile
.sct=Photoshop.SCTFile.140
.search-ms=SearchFolder
.searchConnector-ms=SearchConnectorFolder .settingcontent-ms=SettingContent
.sfcache=RDBFileProperties.1
.shc=Photoshop.ShapeCurves
.shh=Photoshop.SHHFile.140
.shtml=shtmlfile
.sldm=PowerPoint.SlideMacroEnabled.12 .sldx=PowerPoint.Slide.12
.slk=Excel.SLK
.snd=WMP11.AssocFile.AU
.spc=SPCFile
.spl=ShockwaveFlash.ShockwaveFlash
.sst=CertificateStoreFile
.sta=Photoshop.STAFile.140
.svg=svgfile
.swf=ShockwaveFlash.ShockwaveFlash
.symlink=.symlink
.sys=sysfile
.tga=Photoshop.TGAFile.140
.theme=themefile
.themepack=themepackfile
.thmx=OfficeTheme.12
.tif=TIFImage.Document
.tiff=TIFImage.Document
.tpl=Photoshop.ToolPresets
.TS=WMP11.AssocFile.TTS
.ttc=ttcfile
.ttf=ttffile
.TTS=WMP11.AssocFile.TTS .txt=txtfile
.u3d=Photoshop.U3DFileType.140 .UDL=MSDASC
.URL=InternetShortcut
.uxdc=UXDCFILE
.VBE=VBEFile
.vbs=VBSFile
.vdw=VisioViewer.Viewer .vdx=VisioViewer.Viewer .vhd=Windows.VhdFile
.vhdpmem=Windows.VhdPmemFile .vhdx=Windows.VhdFile
.vsd=VisioViewer.Viewer .vsdm=VisioViewer.Viewer .vsdx=VisioViewer.Viewer
.vss=VisioViewer.Viewer .vssm=VisioViewer.Viewer .vssx=VisioViewer.Viewer
.vst=VisioViewer.Viewer .vstm=VisioViewer.Viewer .vsto=bootstrap.vsto.1
.vstx=VisioViewer.Viewer .vsx=VisioViewer.Viewer .vtx=VisioViewer.Viewer
.vxd=vxdfile
.wab=wab_auto_file
.wav=WMP11.AssocFile.WAV .wax=WMP11.AssocFile.WAX .wbcat=wbcatfile
.wbk=Word.Backup.8
.wcx=wcxfile
.wdp=wdpfile
```

```
.webpnp=webpnpFile
.website=Microsoft.Website .wiz=Word.Wizard.8
.wll=Word.Addin.8
.wm=WMP11.AssocFile.ASF .wma=WMP11.AssocFile.WMA .WMD=WMP11.AssocFile.WMD
.wmdb=WMP.WMDBFile
.wmf=wmffile
.WMS=WMP11.AssocFile.WMS       .wmv=WMP11.AssocFile.WMV       .wmx=WMP11.AssocFile.ASX
.wmz=WMP11.AssocFile.WMZ .wpl=WMP11.AssocFile.WPL .wsc=scriptletfile
.WSF=WSFFile
.WSH=WSHFile
.wtx=txtfile
.wvx=WMP11.AssocFile.WVX
.xaml=Windows.XamlDocument
.xbap=Windows.Xbap
.xevgenxml=XEV.GenericApp
.xht=xhtmlfile
.xhtml=xhtmlfile
.xla=Excel.Addin
.xlam=Excel.AddInMacroEnabled
.xld=Excel.Dialog
.xlk=Excel.Backup
.xll=Excel.XLL
.xlm=Excel.Macrosheet
.xls=Excel.Sheet.8
.xlsb=Excel.SheetBinaryMacroEnabled.12
.xlshtml=Excelhtmlfile
.xlsm=Excel.SheetMacroEnabled.12
.xlsmhtml=excelmhtmlfile
.xlsx=Excel.Sheet.12
.xlt=Excel.Template.8
.xlthtml=Excelhtmltemplate
.xltm=Excel.TemplateMacroEnabled
.xltx=Excel.Template
.xlw=Excel.Workspace
.xlxml=Excelxmlss
.xml=xmlfile
.xps=Windows.XPSReachViewer
.xrm-ms=MSSppLicenseFile
.xsl=xslfile
.ZFSendToTarget=CLSID\{888DCA60-FC0A-11CF-8F0F-00C04FD7D062} .zip=CompressedFolder

C:\>
```

Reset the time in system clock

```
Select Administrator: Command Prompt - time                    —    □    ×
Microsoft Windows [Version 10.0.19042.804]
(c) 2020 Microsoft Corporation. All rights reserved.    █

C:\WINDOWS\system32>time
The current time is: 22:54:08.44
Enter the new time: _
```

Switching Between Absolute Paths


```
Administrator: Command Prompt                              —    □    ×
C:\>cd Users

C:\Users>cd debav

C:\Users\debav>pushd d:

D:\>pushd "C:\Users\debav"

C:\Users\debav>popd

D:\>popd

C:\Users\debav>popd

D:\>popd

C:\Users\debav\Desktop>
```

Installing a Software Silently

Administrator: Command Prompt

```
Microsoft Windows [Version 10.0.19042.804]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>msiexec /i "C:\Users\debav\Downloads\putty-64bit-0.74-installer.msi" /quiet

C:\WINDOWS\system32>
```


Recently added

PuTTY

PuTTYgen

PSFTP

Expand ∨