



# Certified Application Security Engineer

LAB SETUP GUIDE

EC-COUNCIL OFFICIAL CURRICULA

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[badalshiva@gmail.com](mailto:badalshiva@gmail.com)

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## Classroom Setup Instructions: CASE

This document contains setup instructions for the Certified Application Security Engineer course. This course requires a standard modular classroom seating configuration, one computer for each student, one computer for the instructor, a dedicated hub or switch (hub preferred), dedicated firewall, and Internet connection.

Before beginning the class, install and configure all computers using the information and instructions that follow.

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## Classroom Requirements

This section describes classroom equipment required for the Certified Application Security Engineer course.

### ***Classroom Equipment***

The following equipment is required for the general classroom setup:

- Climate control system, adjustable within the classroom
- Lighting controls, adjustable within the classroom
- Whiteboard, 3 feet x 6 feet (1 m x 2 m), or larger
- Whiteboard markers with assorted colors
- Eraser, whiteboard cleaner liquid (3 oz minimum)
- Paper towels
- Easel with flipchart or butcher paper pad, 24 inches x 36 inches
- Felt-tip pens, blue and black required (other colors optional), chisel tip (not fine-point)

- Screen, projection, 6 feet diagonal measurement (non-reflective whiteboard surface may be substituted)
- Instructor station:
  - Desk and chair, ergonomic
  - Power outlet
  - Network jack
  - Projector, LCD, capable of 740 x 1280 pixels minimum with all connecting cables
- Student station (per student)
  - Chair, ergonomic
  - Workstation, minimum horizontal workspace 9 square feet (3 feet x 3 feet)
  - Power outlet, one per student station
  - Network jack, one per student station

## Hardware

Hardware requirements for instructor and student computers are identical: The following are the hardware requirements:

- Intel Dual Core or equivalent CPU with minimum CPU speed of 3.2 GHz
- RAM, 4GB or more
- Hard disk, 80 GB or larger, 7200 RPM or faster
- DVD drive (DVD R/W drive preferred)
- 1 Network adapters, 10/100 Mb/s required, full duplex (disable any additional network adapters installed)
- Super VGA (SVGA) monitor, minimum 15-inch (17-inch preferred)
- Mouse or compatible pointing device
- Sound card with amplified speakers
- Internet access
- BIOS boot up configuration set to DVD-ROM, hard disk 1 (C:\ drive)

The following additional hardware is also required:

- Hub or unmanaged switch (hub preferred), with sufficient ports to allow connection of all instructor and student workstations plus at least 5 additional, unused ports for connection of additional equipment or for use as “spares.”

## Software

All computers in the class require the following software:

- Windows 10(64-bit, GUI Version), fully patched
- Java 8
- Oracle 11g
- Adobe Acrobat Reader 11 or later version
- WinRAR 4 or later version
- Web Browsers: Firefox, Chrome, etc.
- Notepad++

**Note:** All the above tools except for the Operating Systems are available in **CASE Tools** on ASPEN.

## Classroom Connectivity

The network for the class must be logically and physically separated from any other networks present in the training facility and must have its own connection to the Internet.

## Configuration

This section describes the procedures for setting up the instructor and student computers, as well as general directions for the configuration of the firewall appliance.

This guide assumes that you will use disk-imaging software to create images of the classroom computers for future use. To that end, configuration tasks common to all computers are presented first. Perform these tasks on the computer that will become the Instructor computer. Create a disk image after setting up a single student computer. You may then deploy this image to remaining classroom machines while completing configuration of the Instructor computer.

## Setup Document Overview

This document provides background information for technical staff responsible for setting up a training room facility for the CASE Java course. This guide describes the requirements for the network equipment and computer stations that are installed and configured by the facilities personnel for the training courses.

## Training Room Environment

The training room environment consists primarily of the following equipment:

- Instructor's Computer
- Student Workstation

Equipment	Number (Class of 12 Students)	Operating System	Minimum System Requirements
Instructor's Computer	1	Windows 10	Intel Dual Core PC with 80 GB free disk space, 4 GB RAM (8 GB preferred), 1 NIC (disable or unplug extras), 15-inch monitor and cards to drive at 1024 x 768 (or at monitor's native resolution) and configured at 16 million colors, and compatible mouse
Student Workstations	12	Windows 10	Intel Dual Core PC with 80 GB free disk space, 4GB RAM (8 GB preferred), 1 NIC (disable or unplug extras), 15-inch monitor and cards to drive at 1024 x 768 (or at monitor's native resolution) and configured at 16 million colors, and compatible mouse

## Instructors Computer Setup

### **The instructor's computer must:**

- be installed with **Windows 10** (64-bit, GUI version) with the latest service packs and full patches applied
- make sure C Drive having full permission to access files and folder for any change (See CT#2 in the configuration task).
- have copied all folders and files from the CASE Tools folder to the hard drive in the D:\CASE Tools folder (The Lab Tools are available from the CASE courseware kit) for easy access (See CT#3 in the Configuration Task section)
- be installed with **Java 8** (See CT#10 in Configuration Task section).
- be installed with **Oracle 11g** (See CT#14 in Configuration Task section).
- install **Notepad++** (See CT#8 in Configuration Task section).
- install **SQLDeveloper** and create Database and schema (See CT#15 in Configuration Task section).
- install **XAMPP** (See CT#12 in Configuration Task section).
- configure the **Lab Setup** (See CT#16 in Configuration Task section).
- have **Adobe Acrobat** or later version and **WinRAR 5.01** or later version installed (both can be found in the Lab Prerequisites directory in D:\CASE Tools folder) (See CT#18 and CT#9 in Configuration Task section).
- have installed latest versions of Web browsers: **Firefox**, **Chrome** etc. (See CT#4 in Configuration Task section).
- disable XSS filter in Google Chrome (See CT#5 in Configuration Task section) and Firefox (See CT#7 in Configuration Task section).
- install EditThisCookie Extension for Google Chrome (See CT#6 in Configuration Task section).
- have an LCD Projector connected to instructor's machine.
- have the **firewall** turned off in all the machines (See CT#1 in the Configuration Tasks section).

**Note:** The use of ghost images is recommended to reduce setup time if computer failure occurs.

## Student Workstations Setup

### **Student workstations must:**

- be installed with **Windows 10** (64-bit, GUI version) with the latest service packs and full patches applied
- have copied all folders and files from the CASE Tools folder to the hard drive in the D:\CASE Tools folder (The Lab Tools are available from the CASE courseware kit) for easy access (See CT#3 in the Configuration Task section)
- be installed with **Java 8** (See CT#10 in Configuration Task section)
- be installed with **JDK Java Development Kit** (See CT#11 in Configuration Task section)
- be installed with **Oracle 11g** (See CT#14 in Configuration Task section)
- have **Adobe Acrobat** or later version and **WinRAR 5.01** or later version installed (both can be found in the **Lab Prerequisites** directory in D:\CASE Tools folder) (See CT#18 and CT#9 in Configuration Task section)
- have installed latest versions of **Web browsers**: Firefox, Chrome etc. (See CT#4 in Configuration Task section)
- have an LCD Projector connected to instructor's machine
- set the Windows Explorer to show all files and file type, including hidden files and extensions (See CT#19 in Configuration Task section)
- have the **firewall** turned off in all the machines (See CT#1 in the Configuration Tasks section)

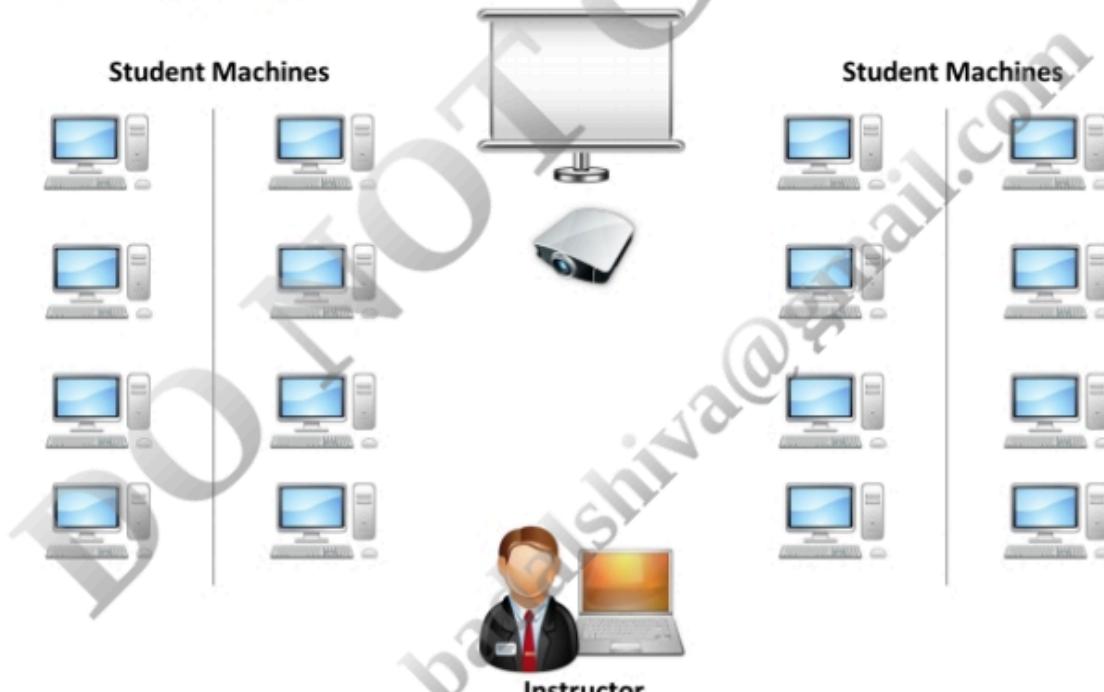
**Note:** The use of ghost images is recommended to reduce setup time if computer failure occurs.

## Room Environment

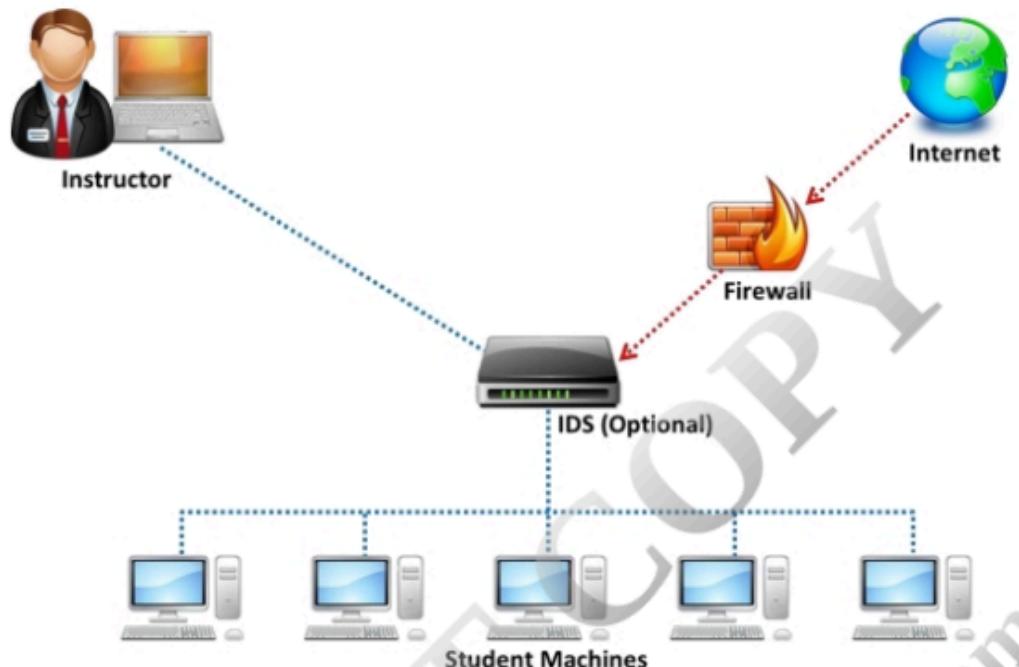
- The room must contain a whiteboard measuring a minimum of 3 feet by 6 feet in length (1 meter by 2 meters)
- The room should contain an easel and large tablet (optional)
- The room must be equipped with legible black and blue felt-tip pens (chisel tip, not fine-point)

## Classroom Configuration

The configuration of this classroom is modular. Computers can be added or removed by either row or column, depending on the needs of the particular class. The following is a sample room setup that provides optimal support. This setup allows the instructor easy access to “trouble spots,” and allows students to break into functional small and large teams. Set up the machines based on the classroom setup diagram.



Instructor and Student Machine Operating System: Windows 2012 Server(Fully patched)



Instructor and Student Machine Operating System: Windows 2012 Server(Fully patched)

## Computer Names

Assign computer names to student machines like CASESTUDENT1, CASESTUDENT2, CASESTUDENT3, and so on. Instructor machine should be named as INSTRUCTOR.

## Instructor Acceptance

Before the training class is scheduled to begin, the instructor must visit the training facility to inspect and accept the setup. The technical contact (System Administrator) for the facility must be available to answer questions and correct any setup issues. Both the instructor and the facility technical contact will ensure completion of the following checklists before the training setup is deemed acceptable.

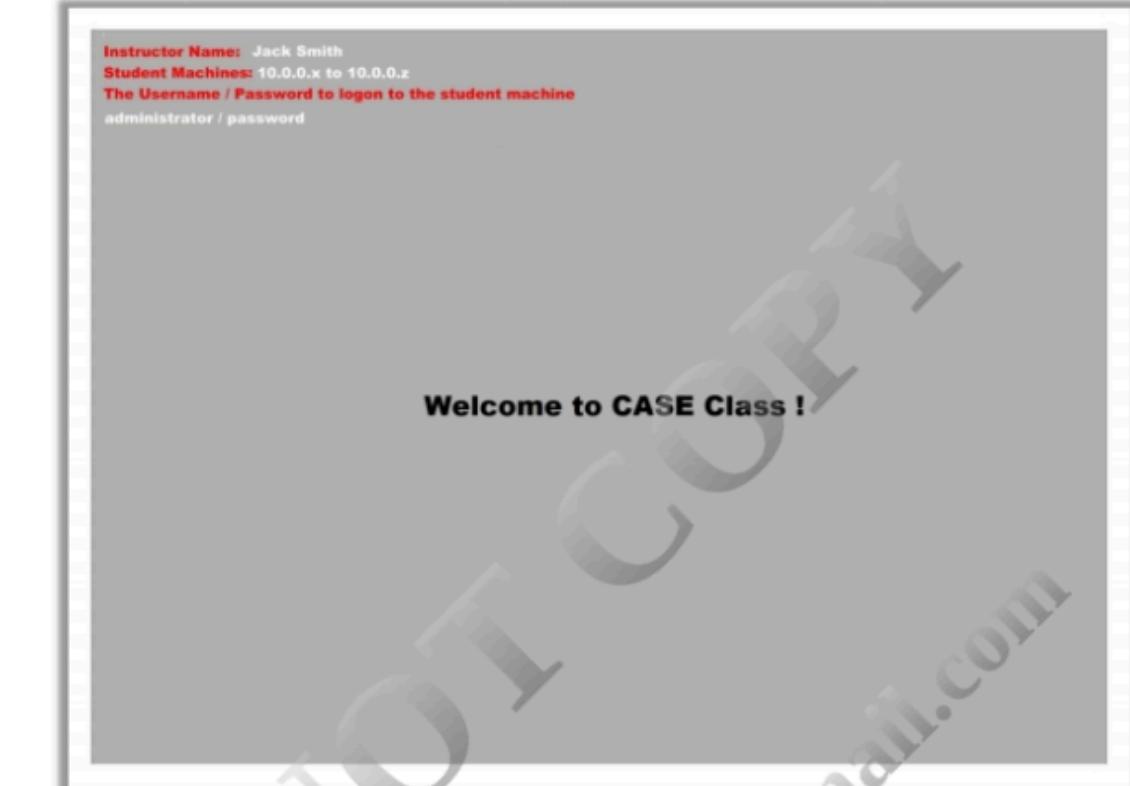
Disable XSS Filter in Mozilla Firefox

## Blackboard

- Write the following on the blackboard in the top-left corner:
  - Instructor name: <Name of the instructor>
  - The username/password to log on to the student machine
- At the center of the board, write **Welcome to CASE Class!** in bold.

**Instructor Name:** Jack Smith  
**Student Machines:** 10.0.0.x to 10.0.0.z  
**The Username / Password to logon to the student machine**  
administrator / password

**Welcome to CASE Class !**



## Setup Checklist

The arrangement of items in the setup checklists is designed to allow the process to be completed in the most efficient manner that is possible and also validate that the setup has been done correctly. Before beginning the setup checklist, log off any connected users.

Tick Here	Setup Verification Tasks
<input type="checkbox"/>	Open Network Neighborhood. Verify that all classroom computers are visible in Network Neighborhood
<input type="checkbox"/>	Verify that the CASE Java Tools are on the computer in the <b>D:\CASE Tools</b> folder
<input type="checkbox"/>	Verify that <b>Internet</b> access is available
<input type="checkbox"/>	Visit <a href="http://www.eccouncil.org">http://www.eccouncil.org</a> and view the page to check internet access
<input type="checkbox"/>	Verify <b>Acrobat Reader</b> and <b>WinRAR</b> are installed
<input type="checkbox"/>	Verify that the instructor computer can display through the overhead projector
<input type="checkbox"/>	Verify each computer has <b>80 GB</b> or more free disk space
<input type="checkbox"/>	Verify the <b>Java 8 ,Oracle 11g</b> are installed on the machine
<input type="checkbox"/>	Verify <b>Windows Explorer</b> is set to show all files and file type, including hidden files and extensions
<input type="checkbox"/>	Verify that the cable wiring organized and labeled
<input type="checkbox"/>	Verify that the student workstations and chair placement is satisfactory
<input type="checkbox"/>	Verify that the placement of LCD (overhead) projector is appropriate
<input type="checkbox"/>	Verify that the whiteboard and dry erase markers and erasers are available
<input type="checkbox"/>	Verify that the instructor station is properly organized and oriented
<input type="checkbox"/>	Verify that the computers are labeled with client numbers
<input type="checkbox"/>	Verify that the <b>EC-Council courseware</b> is available for students
<input type="checkbox"/>	Verify that the student NDA agreement is downloaded and printed for every student in the class and placed on each student's desk
<input type="checkbox"/>	Write down the facility's technical contact person's phone number to call in the event of a network problem
<input type="checkbox"/>	Verify that Firefox, Chrome, Internet Explorer <b>web browsers</b> are installed

### Notes:

- You might want to create ghost images of the instructor and student machines so that the future installations become easier.
- Have one additional student machine available as a standby.

## Instructor Acceptance

The technical contact (System Administrator) for the facility must be available to answer questions and correct any setup issues.

The instructor will inspect both the classroom and the items covered in the setup checklist to ensure that the classroom and setup meet EC-Council standards. Any deficiencies the instructor discovers must be corrected before the scheduled start time for the class.

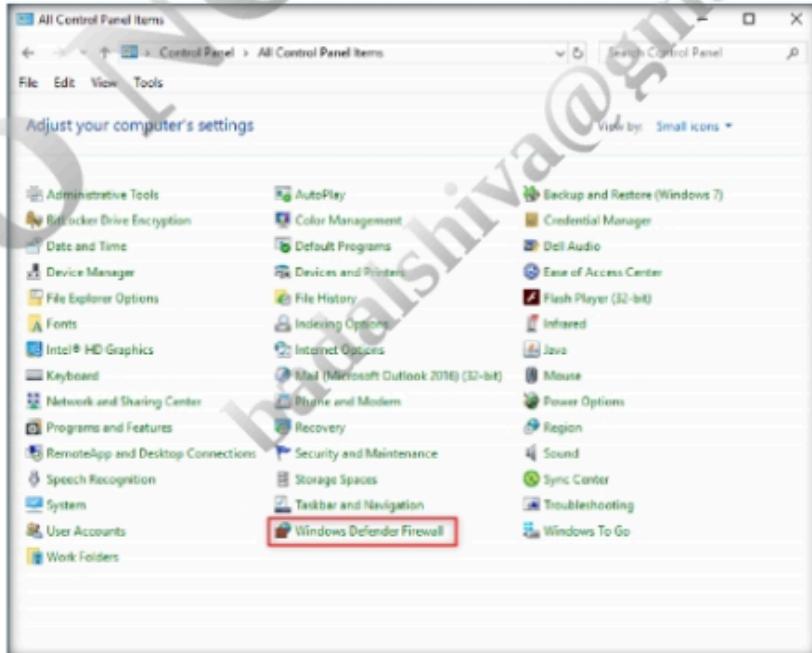
## Assistance

If you have problems or require assistance in setting up the lab for your **CASE Java class**, please email [support@eccouncil.org](mailto:support@eccouncil.org).

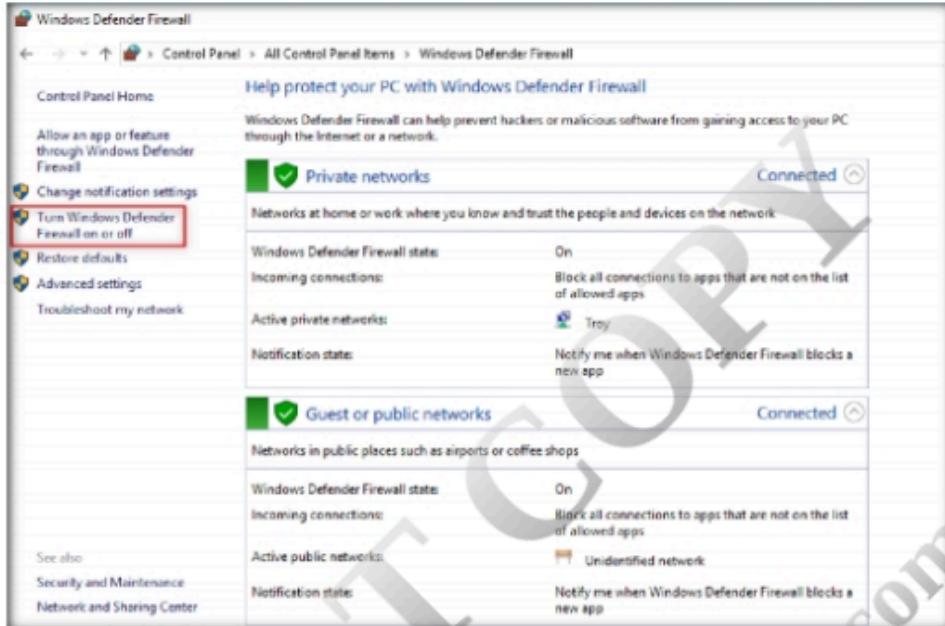
## Detailed Setup Instructions - Configuration Tasks (CTs)

### CT#1: Turn off Firewall in the Machine

1. Go to **Start** and click **Control Panel** app.
2. In **Control Panel** window, click **Windows Firewall/Windows Defender Firewall** (Windows 10 or above)

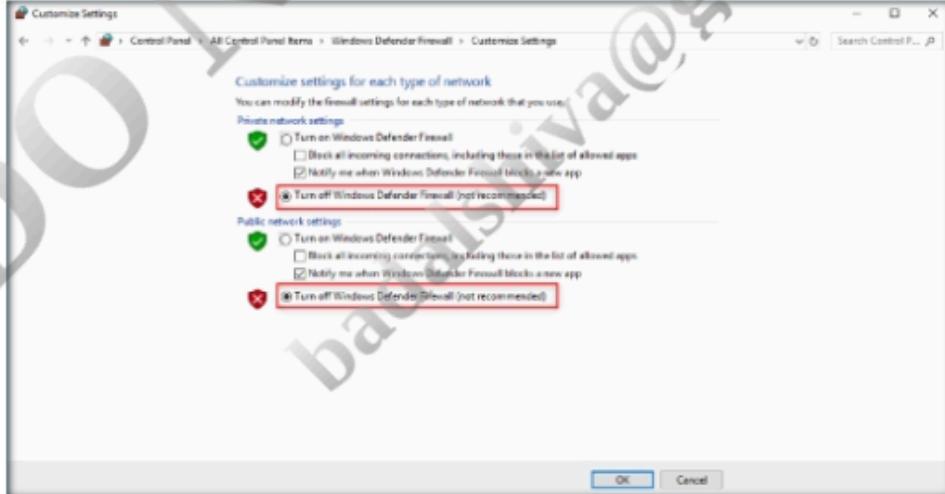


3. In **Windows Firewall** wizard, click **Turn Windows Defender Firewall on or off** in the left pane of the window



4. The **Customize Settings** wizard will appear, select **Turn off Windows Defender Firewall (not recommended)** in both **private** and **public** network settings area to turn off the firewall as shown in the screenshot.

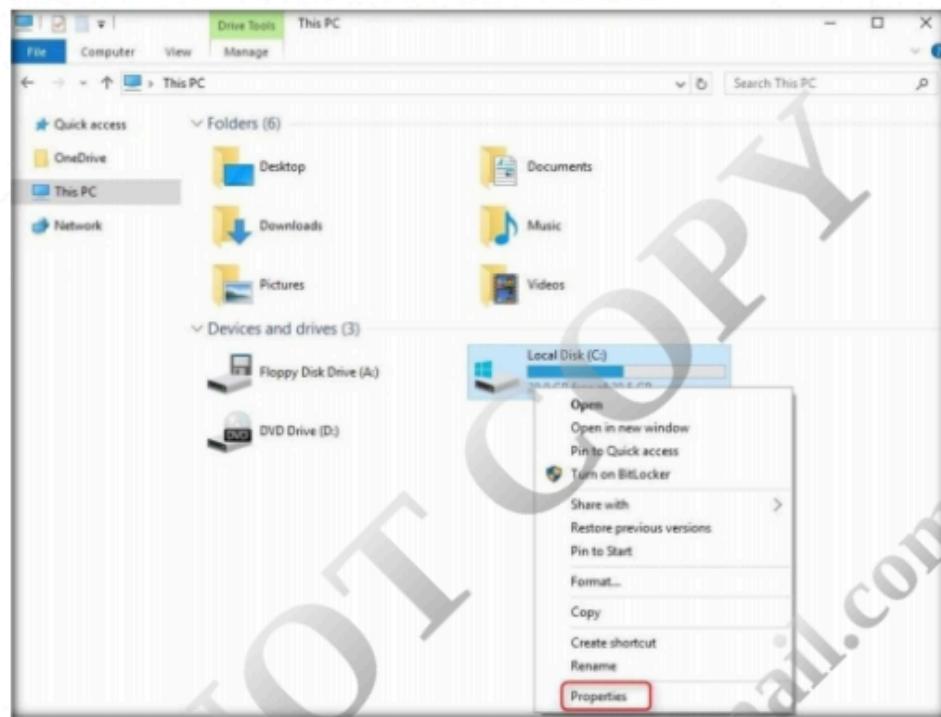
5. Click **OK**.



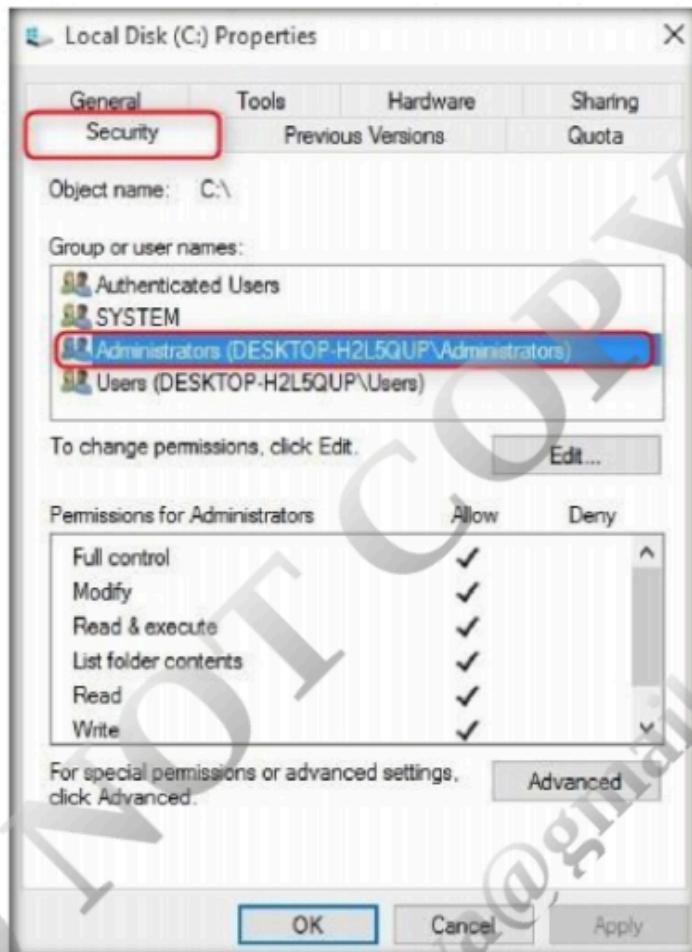
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## CT#2: Obtain Full Read/Write Permission on C: Drive

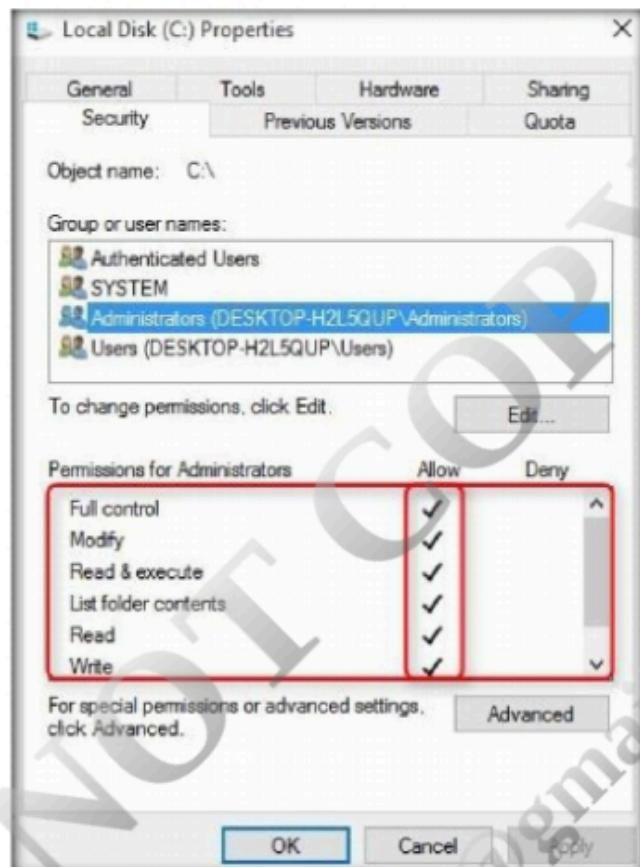
1. Go to **This PC**, right-click on **drive C:\** and click **Properties**.



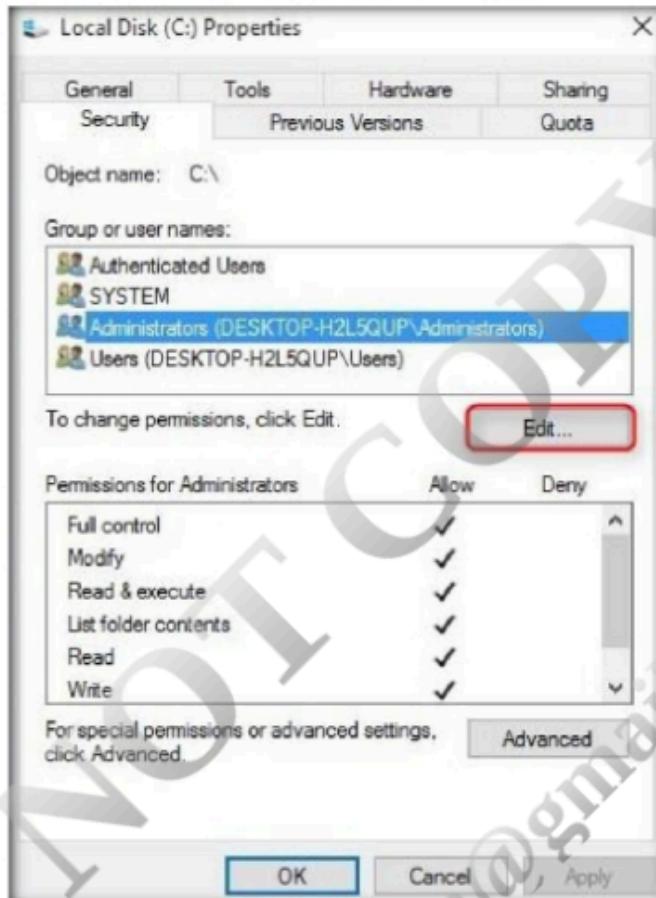
2. Click **Security** tab and select your username from **Group or user names:**



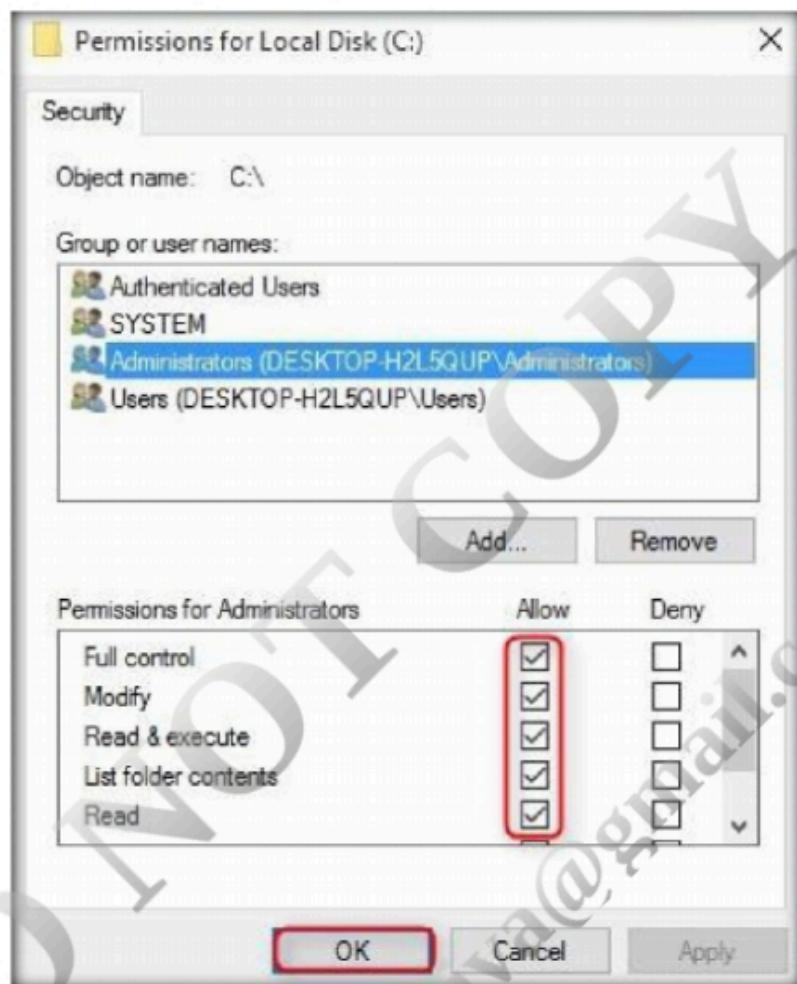
3. Ensure to **allow** all the **Permissions**.



4. To select all Permissions, click **Edit** to edit the permissions.



5. Now, click on all the Permissions in **Allow** column and click **OK** to revert the changes.



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## CT#3: Download CASE Tools

1. Create a folder in the Drive **D:** named **CASE Tools**
2. Login to your **Aspen** account (You will see your course listed under **My Courses**) → Click **TRAINING** button under the course to access the e-Courseware, Lab Manuals, and Tools in the **Training** area → Click **Download Tools** tab from the left-pane
3. Click the module names and download all the **CASE Tools** files to the **D:\CASE Tools** folder
4. Right-click the .zip files in the **D:\CASE Tools** folder and select **Extract Here** option

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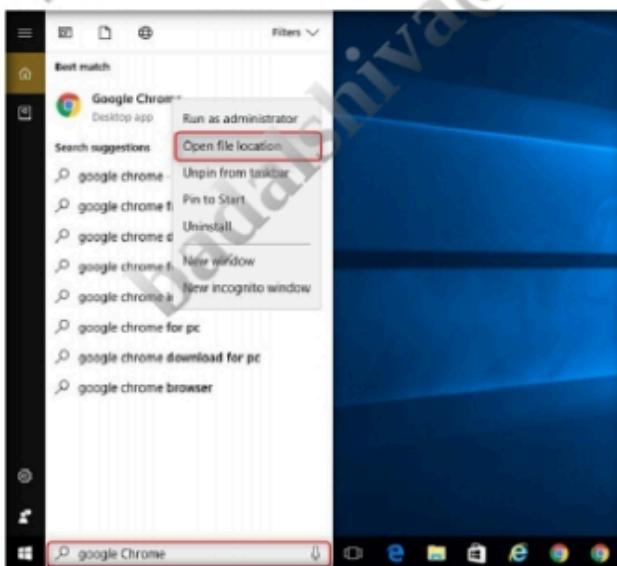
## CT#4: Install Web Browsers

1. Navigate to **D:\CASE Tools\LabPrerequisites\Web Browsers**.
2. Open the **Web Browsers (Firefox and Chrome)** folders and double-click the **setup** files.
3. Follow the wizard-driven installation steps and install the **Firefox**, and **Chrome** web browsers.
4. You can also download the latest versions of these **web browsers** from their respective **vendors**.

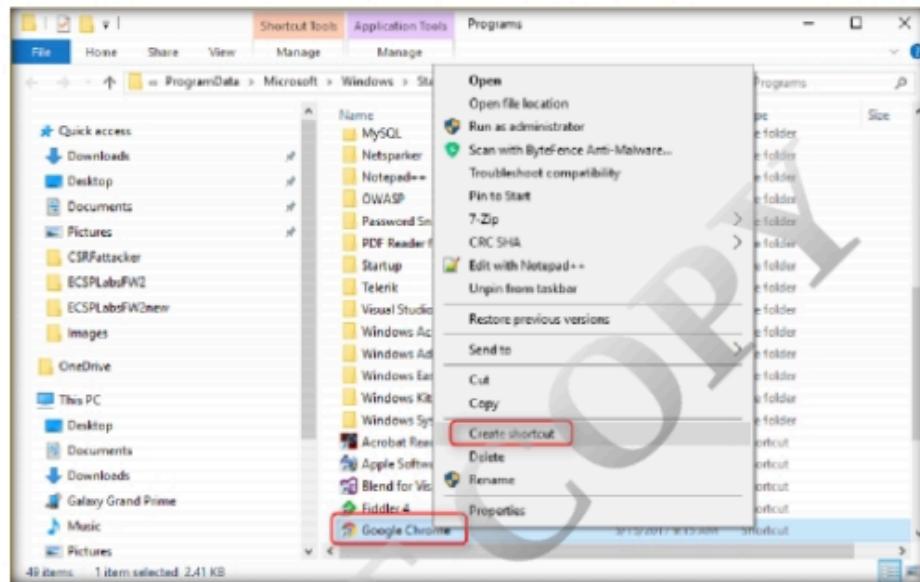
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## CT#5: Disable XSS Filter in Google Chrome

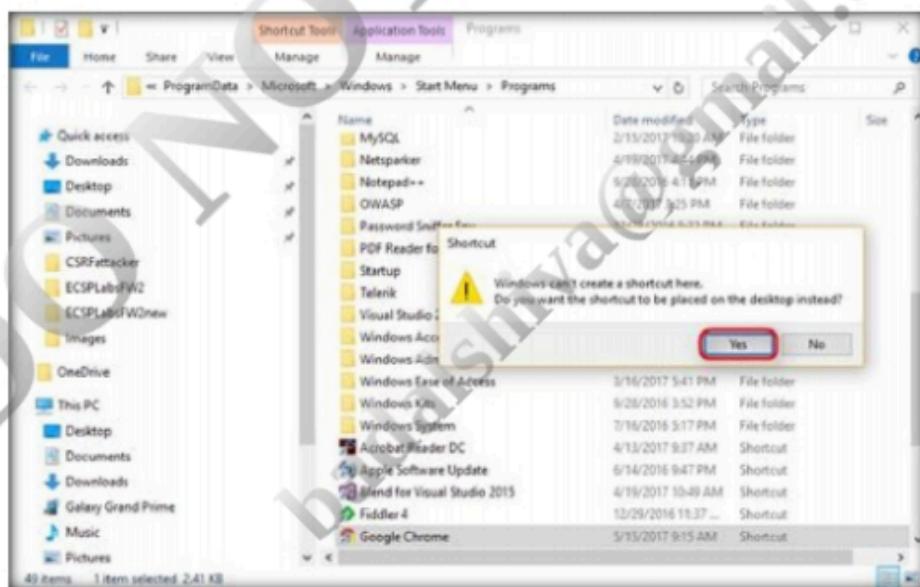
1. Type **Google Chrome** in windows search. Right click the found Google Chrome and click on **Open file location**.



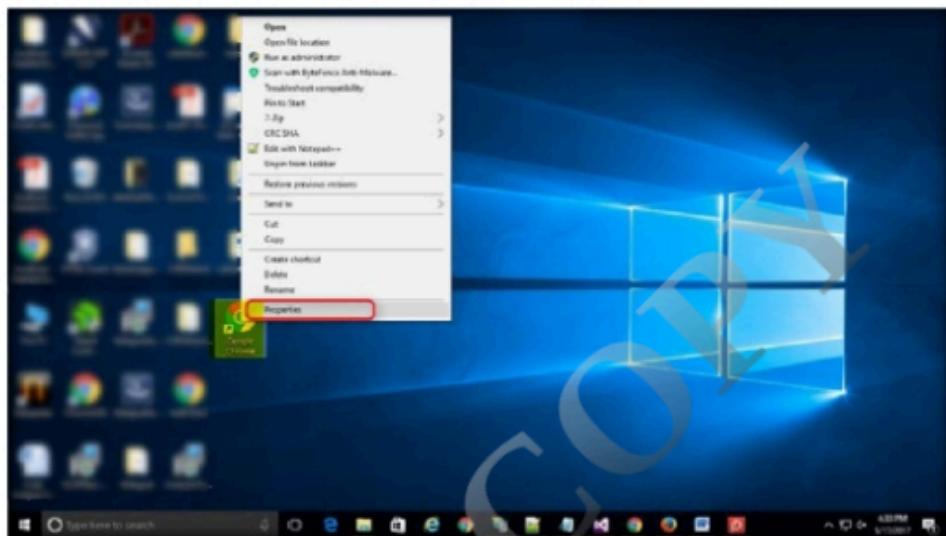
2. Right click the **Google Chrome.exe** and click **Create shortcut** from the context menu.



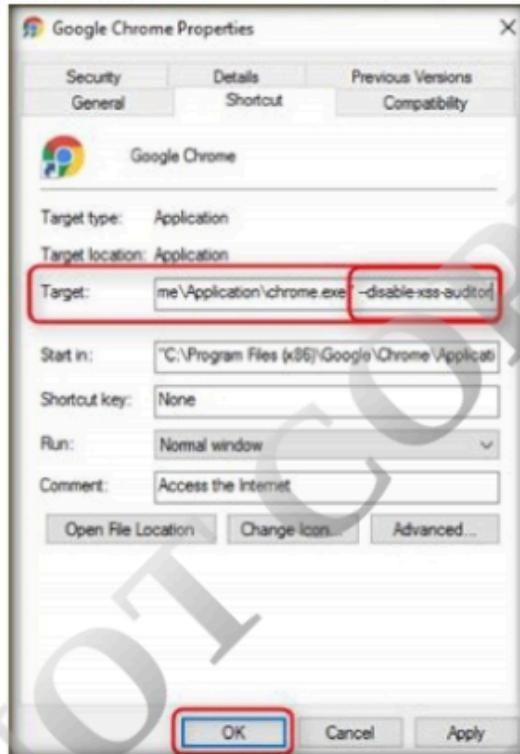
3. Click **Yes** to create the shortcut at **desktop**.



4. **Right-click** the created shortcut on the desktop and select **Properties**.



5. Add **--disable-xss-auditor** in the **Target** field of the **Google Chrome Properties** and click **OK**.



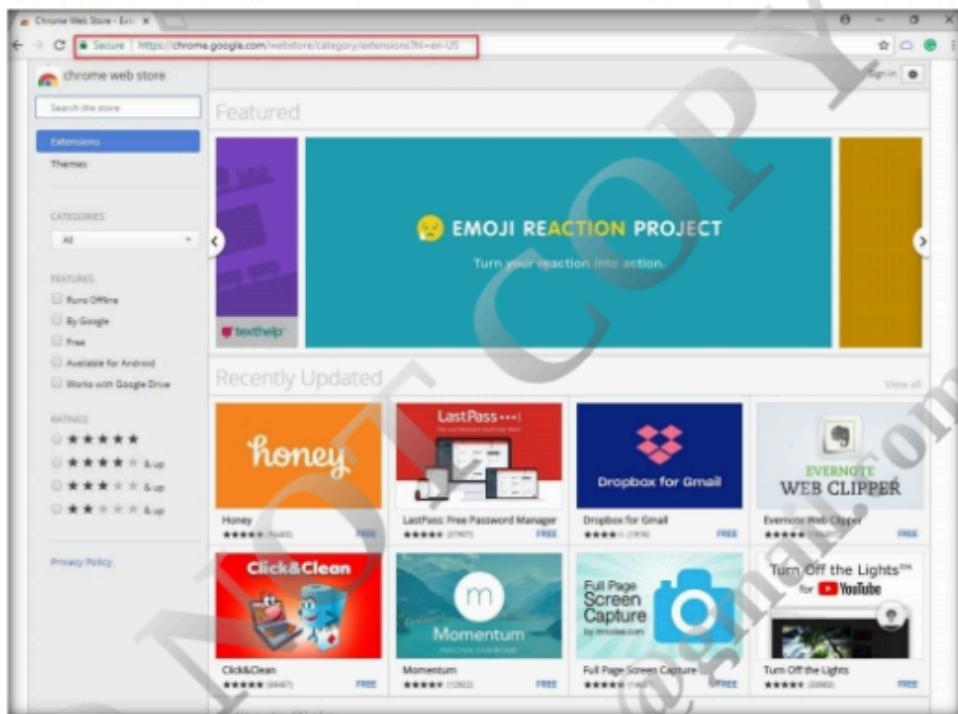
6. Use the created shortcut to **browse the Labs**.

**Note:** To execute labs demonstrating XSS attack use the created shortcut and ensure that no other instance of Chrome browser is open.

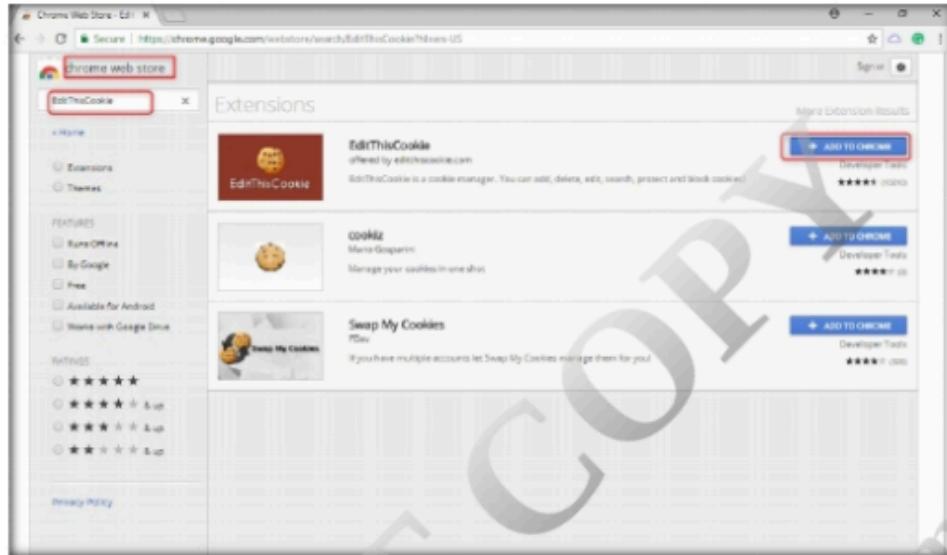
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## CT#6: Install EditThisCookie Extension for Chrome

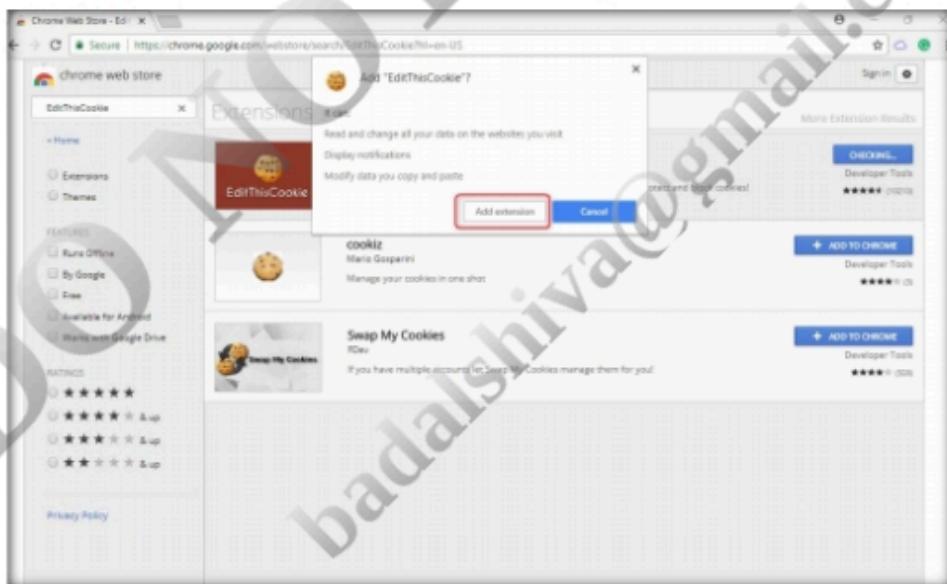
1. Launch **Chrome**.
2. Go to **Chrome Web Store** by accessing URL  
<https://chrome.google.com/webstore/category/extensions?hl=en-US>



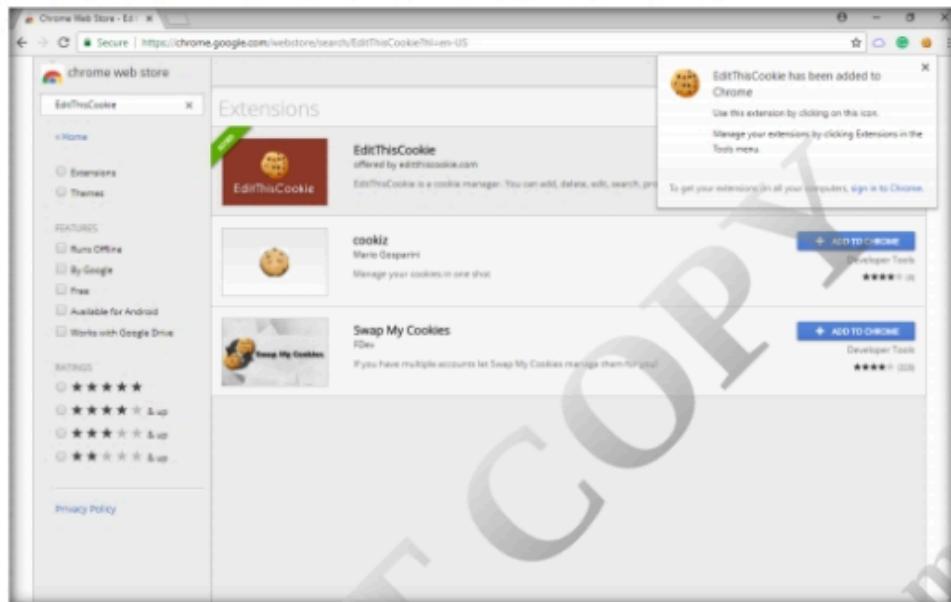
3. In the Chrome **Web Store** Search for **EditThisCookie** and click **ADD TO CHROME** of the **EditThisCookie** extension



4. Click **Add extension** in Add “**EditThisCookie**” dialog box



5. **EditThisCookie has been added to Chrome** message will appear.



6. Finally, you will see a tag **ADDED** on Extension as shown in the screenshot.

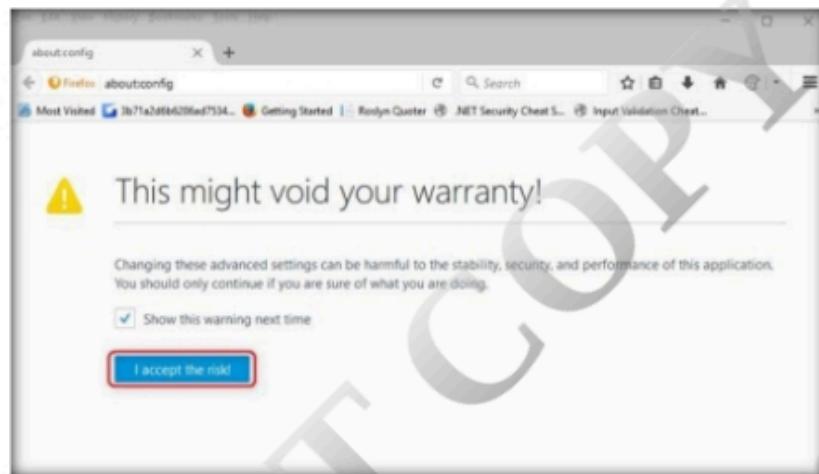
7. Close the browser



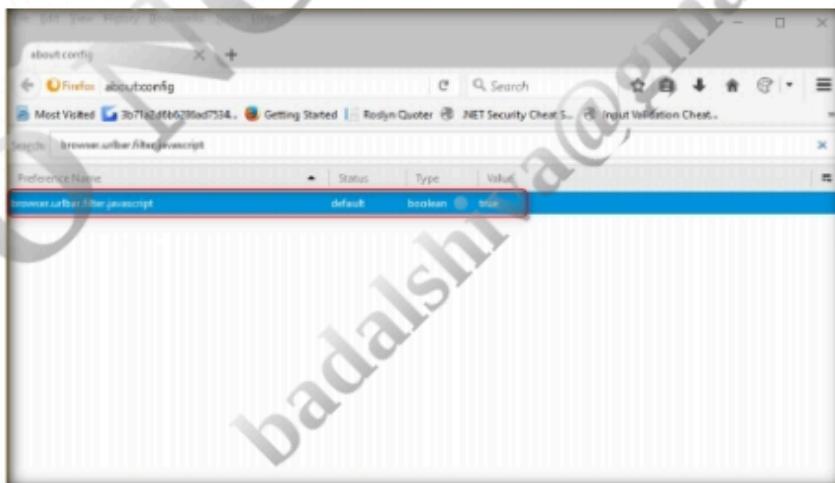
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## CT#7: Disable XSS Filter in Mozilla Firefox

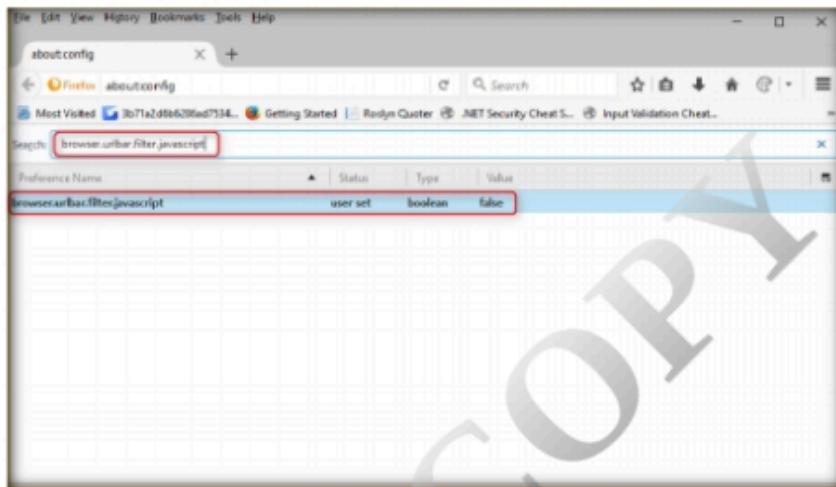
1. Launch **Firefox** Browser.
2. Type **about:config** in the address bar and press **enter**.
3. Click **I accept the risk!** to proceed.



4. Enter **browser.urlbar.filter.javascript** in the Search field and you will find **browser.urlbar.filter.javascript** in the list as shown below.



5. **Double click** on the **True** value to turn it to **False**. This will disable XSS filter.



6. The **XSS filter** will be disabled until the `browser.urlbar.filter.javascript` **false** value is changed to **true**.
7. Close the browser

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## CT#8: Install Notepad++

1. Navigate to **D:\CASE Tools\LabPrerequisites\Notepad++**
2. Double-click **npp.7.3.2.Installer.exe** to begin the installation.
3. Follow the wizard-driven installation steps and complete the installation by choosing **defaults** throughout the installation process.
4. Alternatively, you can install the latest **Notepad++** from its website.

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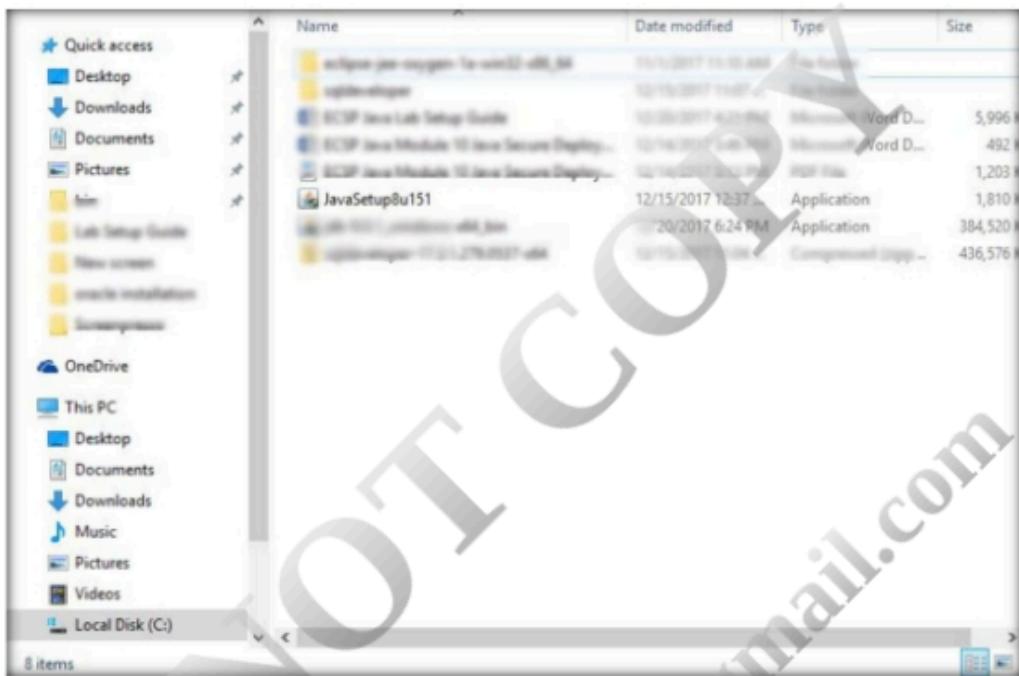
## CT#9: Install WinRAR v5.01

1. Navigate to **D:\CASE Tools\LabPrerequisites\WinRAR**.
2. Double-click **winrar-x64-540.exe** to begin the installation.
3. Complete the installation by choosing **defaults** throughout the installation process.
4. After the install completes, a window opens automatically showing the location of the installed WinRAR files.
5. Close the **window**.

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## CT#10: Install Java 8 on Host Machine

1. Navigate to **D:\CASE Tools\LabPrerequisites\JAVA Setup\** and double-click **JavaSetup8u151.exe**. (You can also download the latest version Java Setup available at <https://java.com/en/download/win10.jsp>)



2. Java Welcome Setup wizard appears, click **Install**.



3. The installer begins to install Java Runtime Environment as shown in the screenshot.



4. If you have an Out-of-Date Java version installed, you will see the screenshot. Click **Uninstall**.



5. Click **Next**.



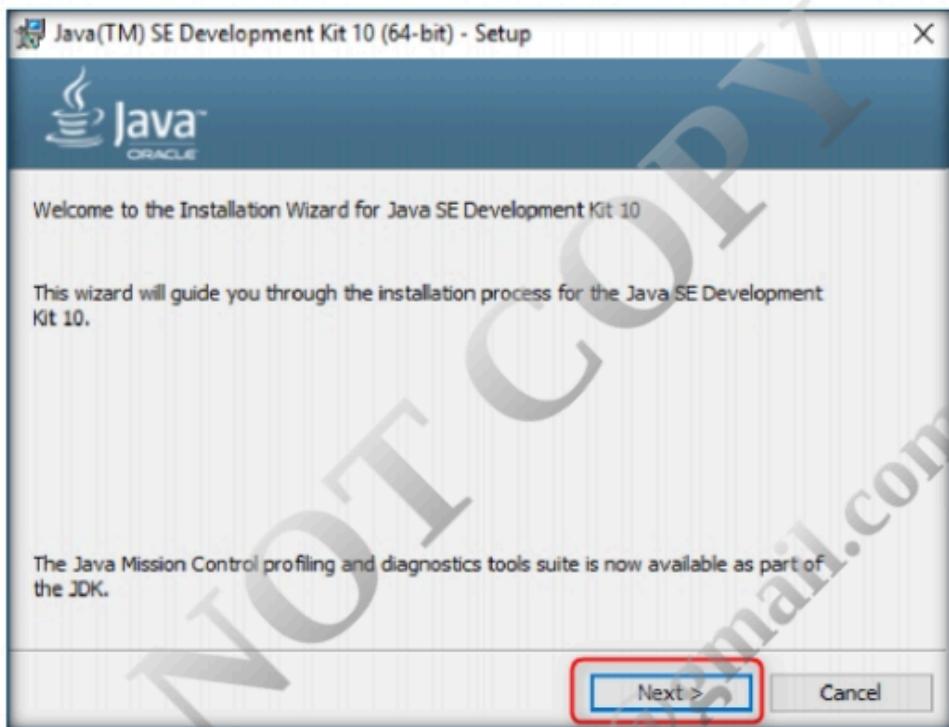
6. Java Setup Complete Wizard will appear which shows "**You have Successfully installed Java**". Click **Close**.



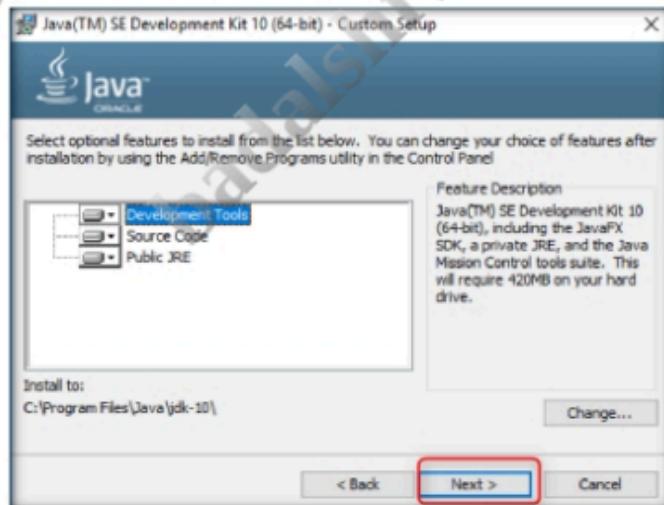
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## CT#11: Install JDK

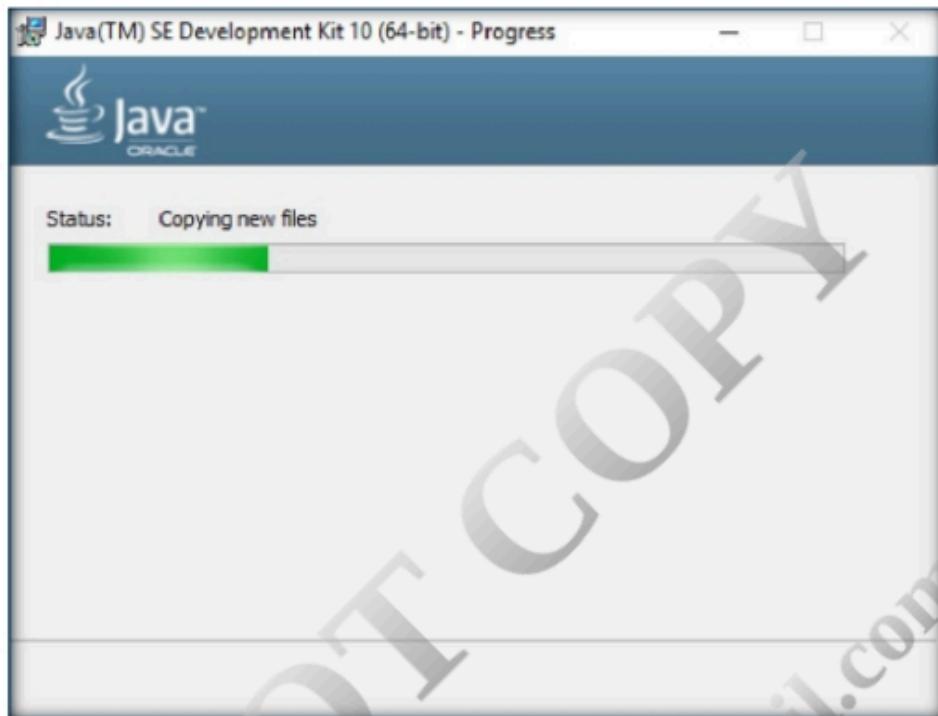
1. Navigate Folder (**D:\CASE Tools\LabPrerequisites\JDK**)
2. Double Click on **jdk-10\_windows-x64\_bin.exe** file
3. **Java(TM) SE Development Kit 10 (64-bit)- Setup** wizard will appear Click to **Next** button



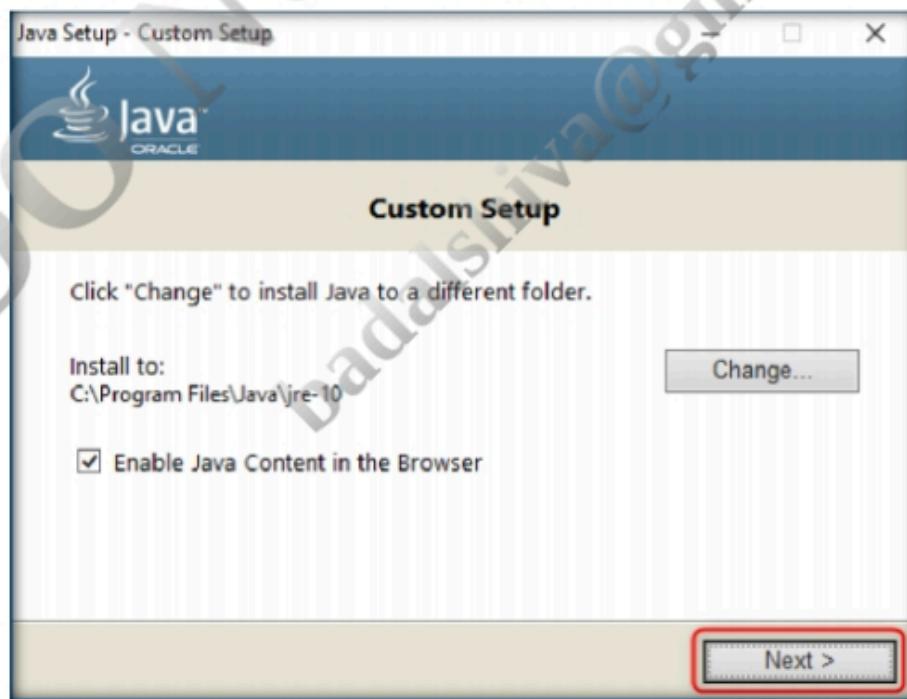
4. **Java(TM) SE Development Kit 10 (64-bit)- Custom Setup** wizard will appear Click to **Next** button



5. Wizard will copy files.



6. “Java Setup - Custom Setup” window will appear click to **Next**.



7. Then Java Setup Progress Bar will appear.



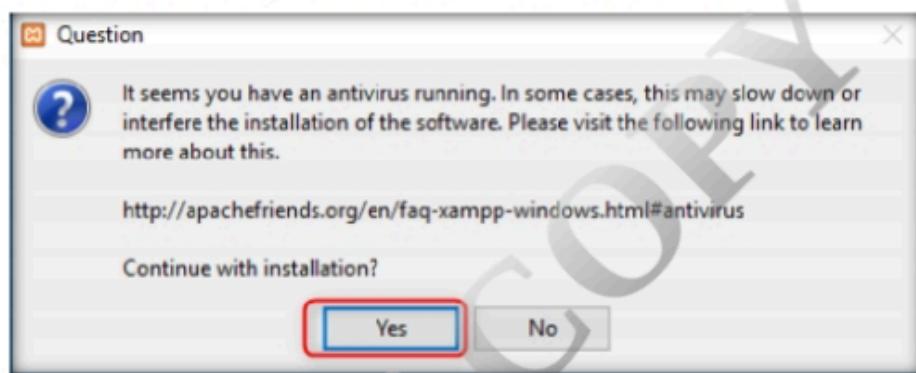
8. “**Java(TM) SE Development Kit 10(64-bit) - Complete**” window appear click **Close** to complete the installation.



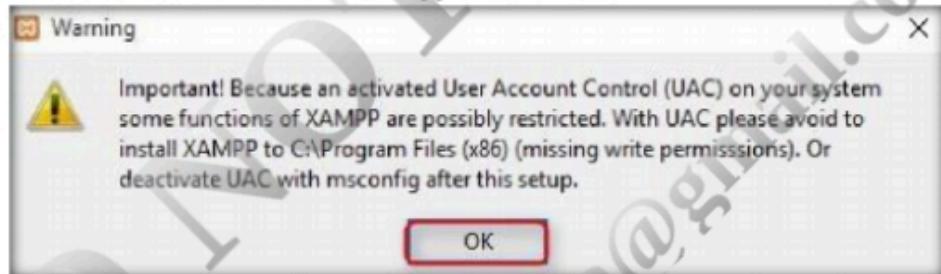
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## CT#12: Install XAMPP

1. Navigate to **D:\CASE Tools\Module 09 Static and Dynamic Application Security Testing (SAST & DAST)\XAMPP** and double-click **xampp-win32-7.1.1-0-VC14-installer.exe**
2. XAMPP **User Account Control** will appear, click **Yes**
3. **Question** window will appear "**Continue with installation?**" click **Yes**



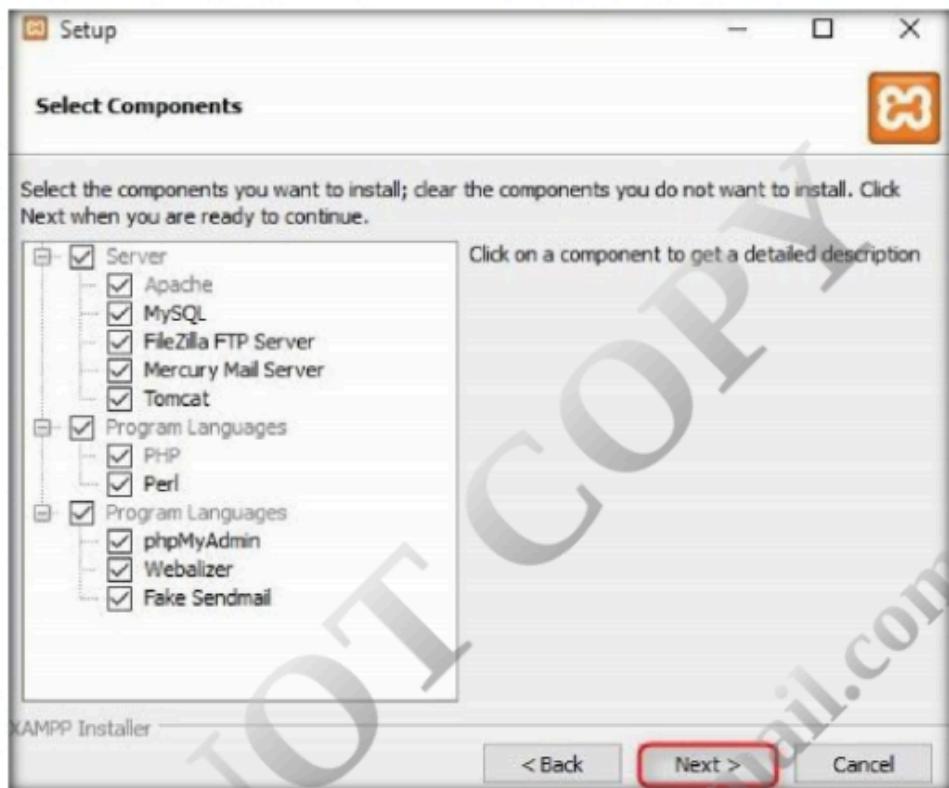
4. A **Warning** window to disable UAC appears, click **OK**



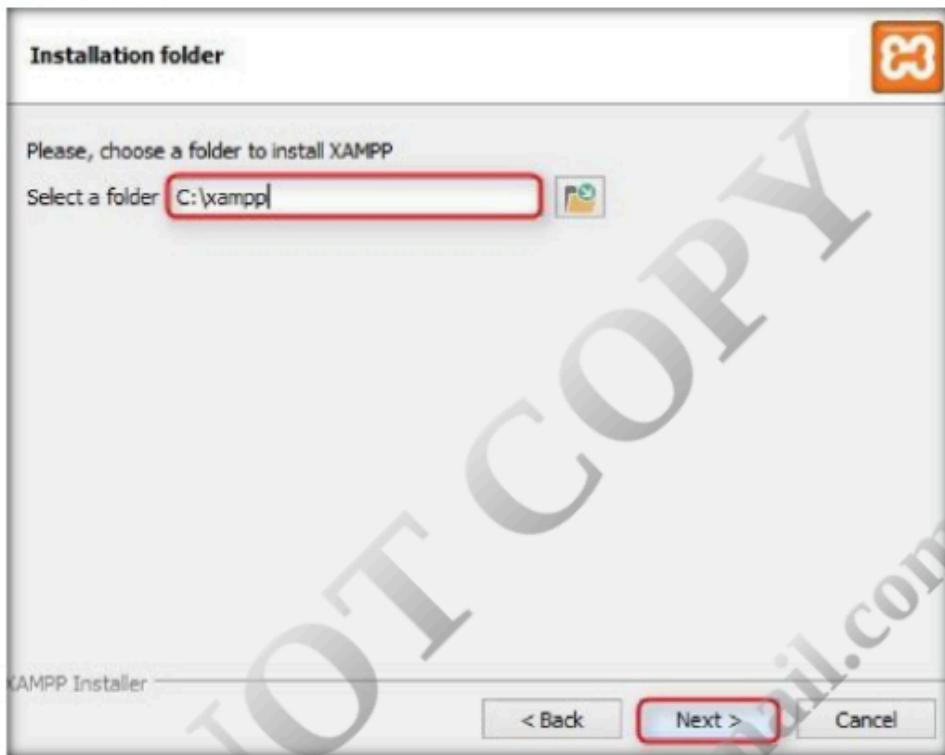
5. XAMPP setup appears, click **Next**



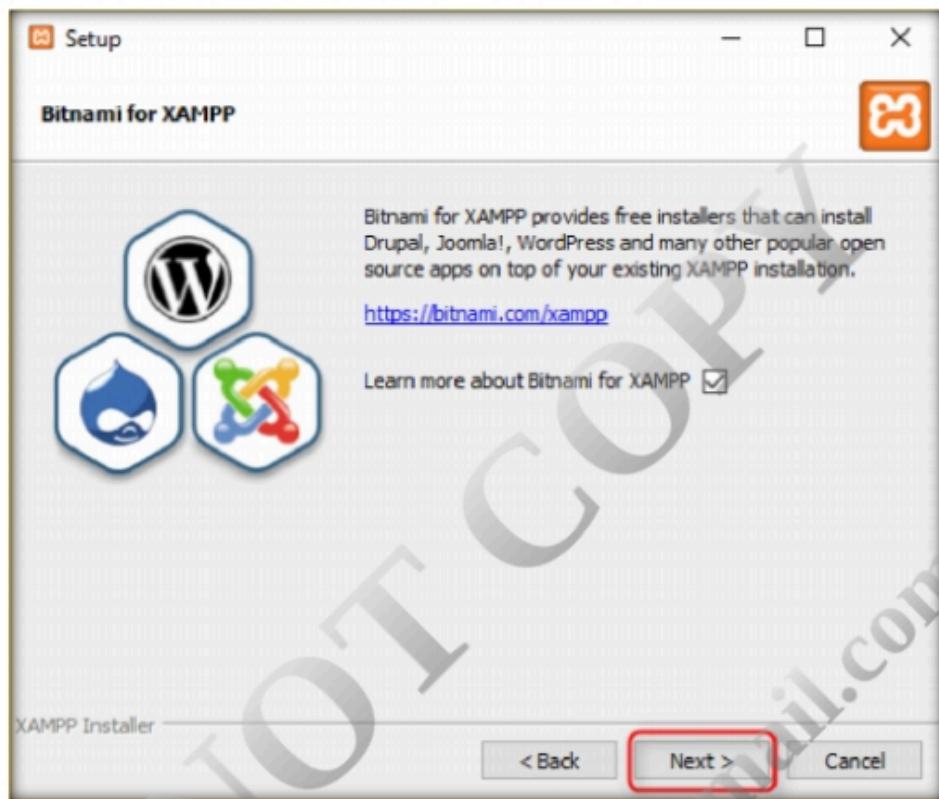
6. In the **Select Components** window, ensure that all the components are checked. Click **Next**.



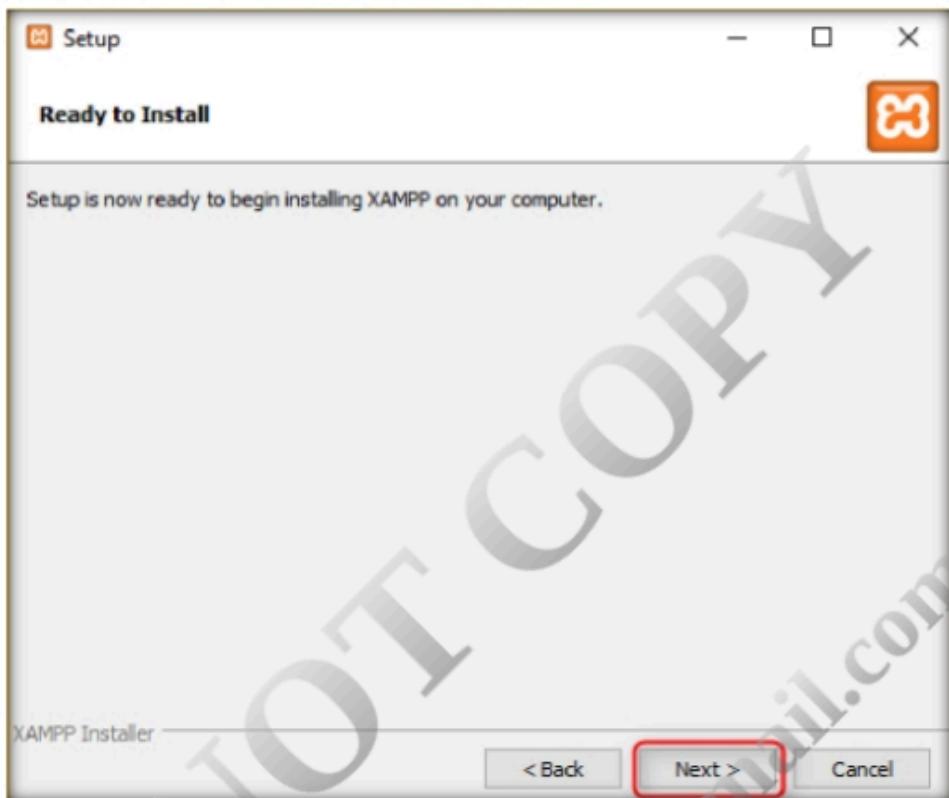
7. In the **Installation folder** window, in the Select a folder field, leave the installation path to default. Click **Next**



8. Setup Bitnami for XAMPP window appears. Click **Next**.



9. Setup **Ready to Install** window appears. Click **Next**.



10. Setup Installation Progress window appears.



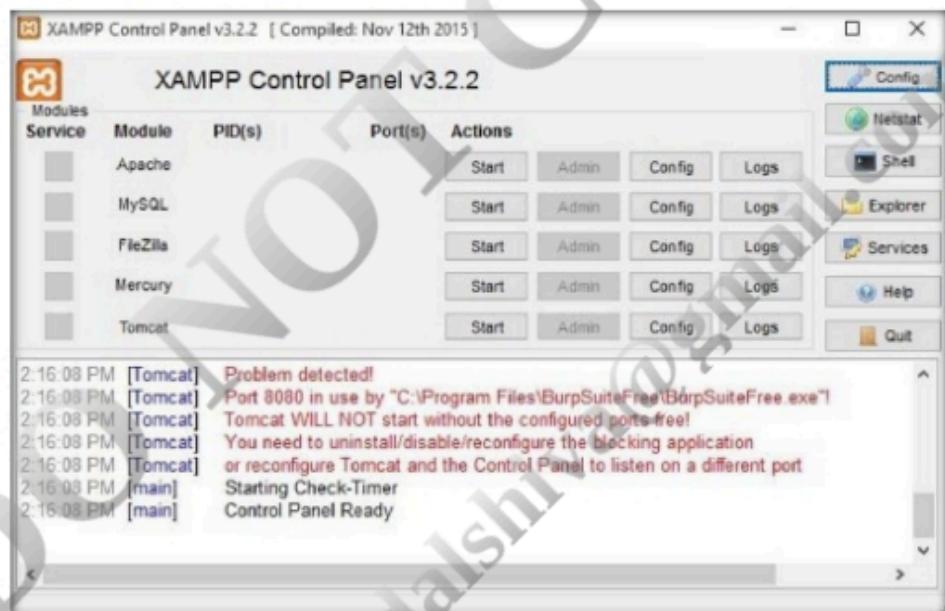
11. By default, **Do you want to start the Control Panel now?** Option is checked. Click **Finish**



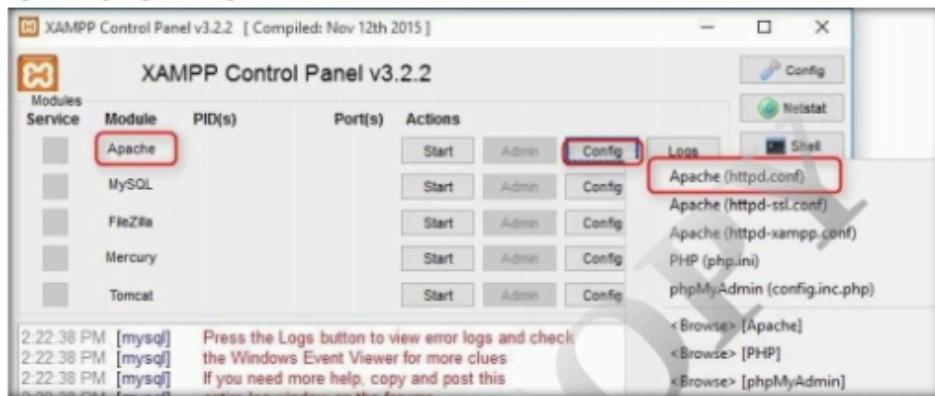
12. By default, English **language** is selected. Click **Save**.



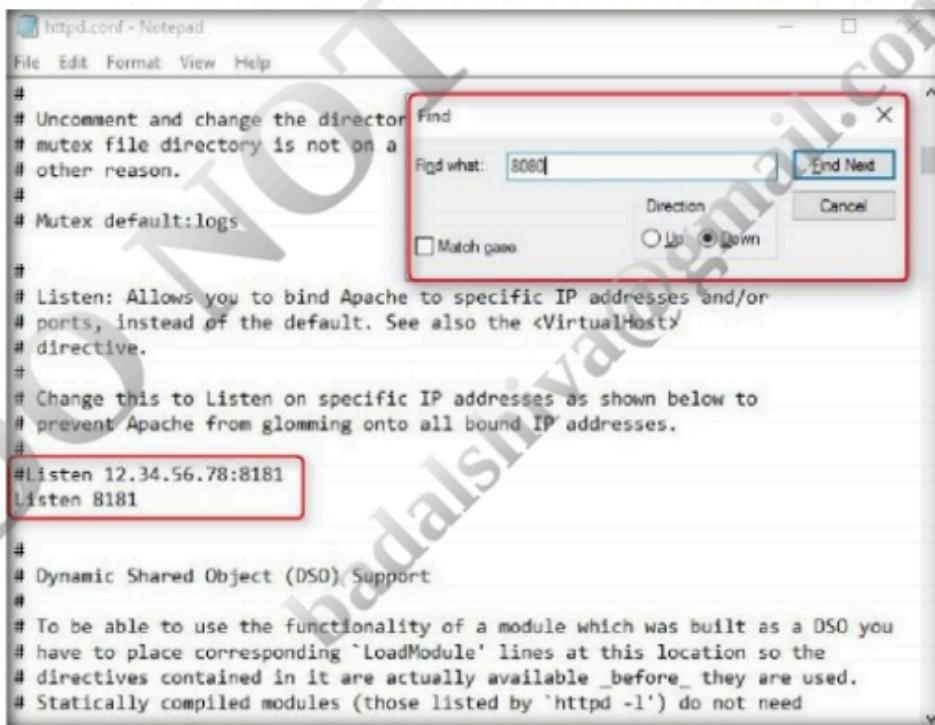
13. The **XAMPP Control Panel** window launches.

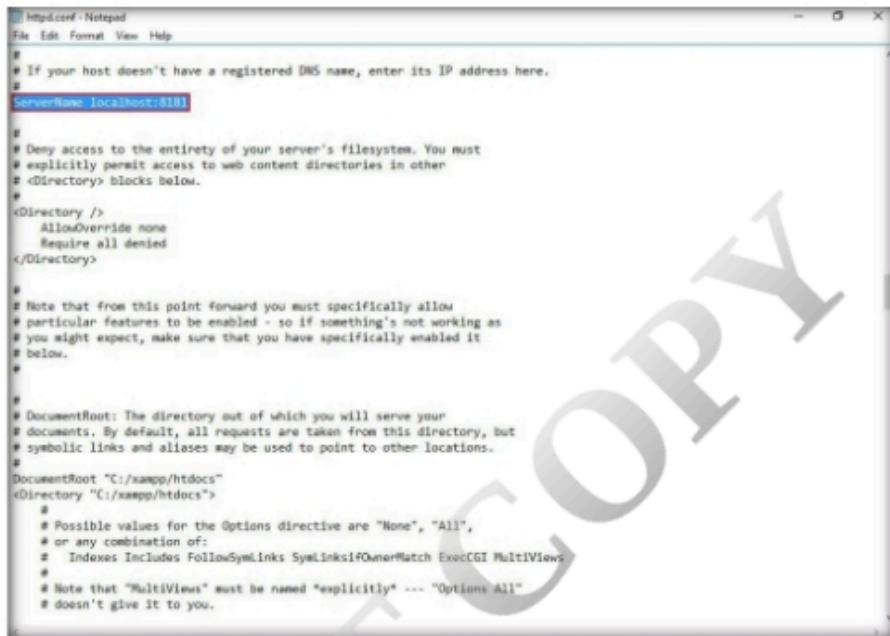


14. Due to port conflict, Apache server may not be started. To successfully run the Apache and MySQL services from **XAMPP Control Panel**, click **Config** of **Apache** service and select **Apache (httpd.conf)** from the context menu.



15. In the **httpd.conf** notepad file, replace the port no with another port. You may find Apache server listening on port 80 or 8080 by default. Search for 8080 or 80. Change the port numbers from **8080 or 80** to **8181** wherever present in the file. **Save** the notepad file.



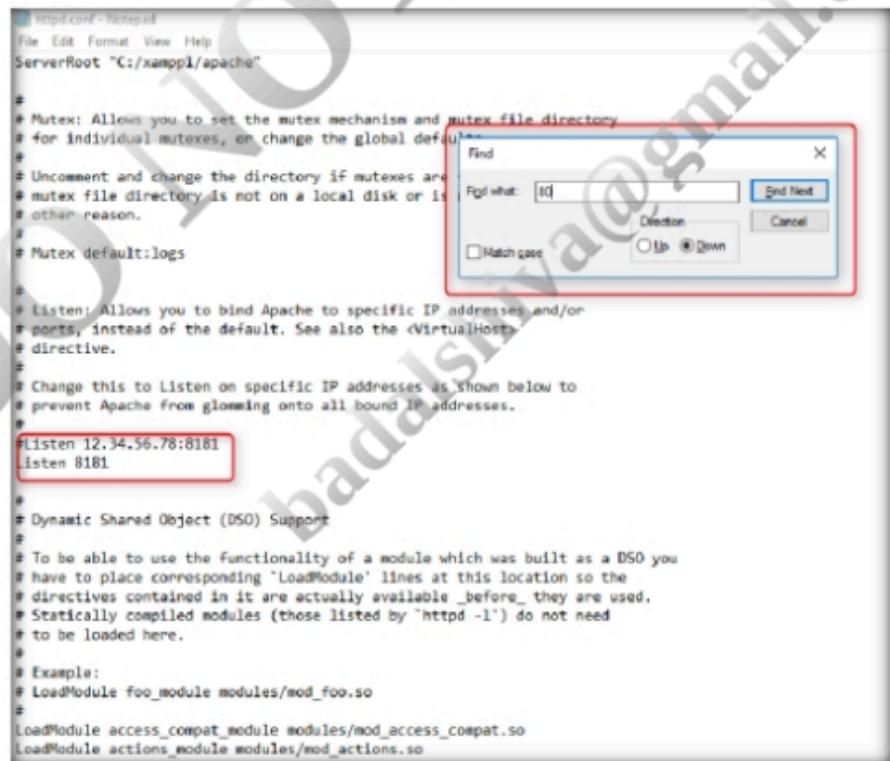


```
httpd.conf - Notepad
File Edit Format View Help
#
# If your host doesn't have a registered DNS name, enter its IP address here.
#
# ServerName localhost:8181
#
# Deny access to the entirety of your server's filesystem. You must
# explicitly permit access to web content directories in other
# <Directory> blocks below.
#
<Directory />
    AllowOverride none
    Require all denied
</Directory>

#
# Note that from this point forward you must specifically allow
# particular features to be enabled - so if something's not working as
# you might expect, make sure that you have specifically enabled it
# below.
#
#
# DocumentRoot: The directory out of which you will serve your
# documents. By default, all requests are taken from this directory, but
# symbolic links and aliases may be used to point to other locations.
#
DocumentRoot "C:/xampp/htdocs"
<Directory "C:/xampp/htdocs">
    #
    # Possible values for the Options directive are "None", "All",
    # or any combination of:
    #   Indexes Includes FollowSymLinks SymLinksIfOwnerMatch ExecCGI MultiViews
    #
    # Note that "MultiViews" must be named *explicitly* --- "Options All"
    # doesn't give it to you.

```

OR



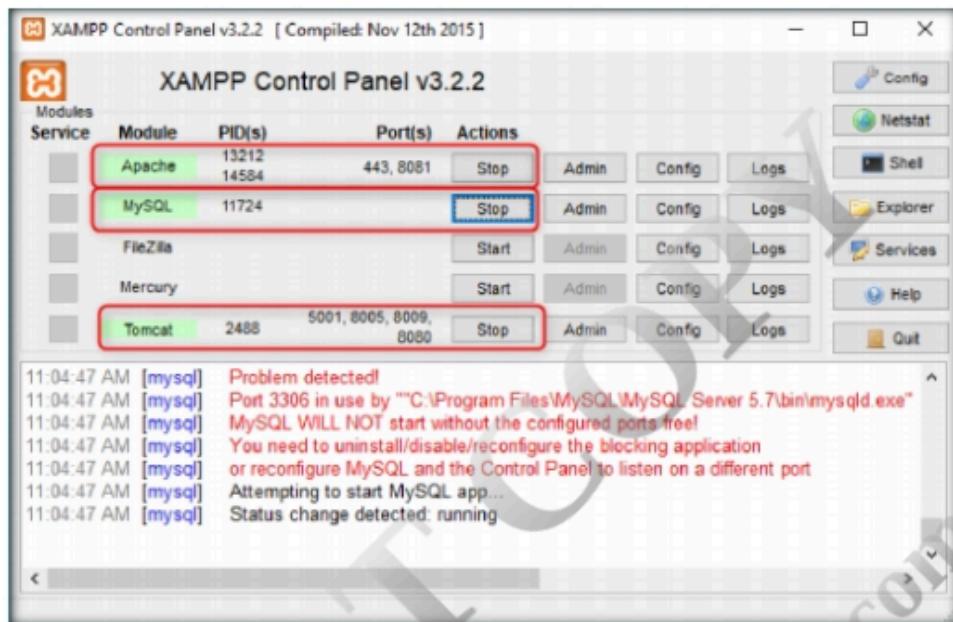
```
httpd.conf - Notepad
File Edit Format View Help
ServerRoot "C:/xampp/apache"

#
# Mutex: Allows you to set the mutex mechanism and mutex file directory
# for individual mutexes, or change the global default
#
# Uncomment and change the directory if mutexes are
# mutex file directory is not on a local disk or is
# other reason.
#
# Mutex default:logs

#
# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
# Change this to Listen on specific IP addresses as shown below to
# prevent Apache from glomming onto all bound IP addresses.
#
#Listen 12.34.56.78:8181
listen 8181

#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO you
# have to place corresponding 'LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used.
# Statically compiled modules (those listed by 'httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so
#
LoadModule access_compat_module modules/mod_access_compat.so
LoadModule actions_module modules/mod_actions.so
```

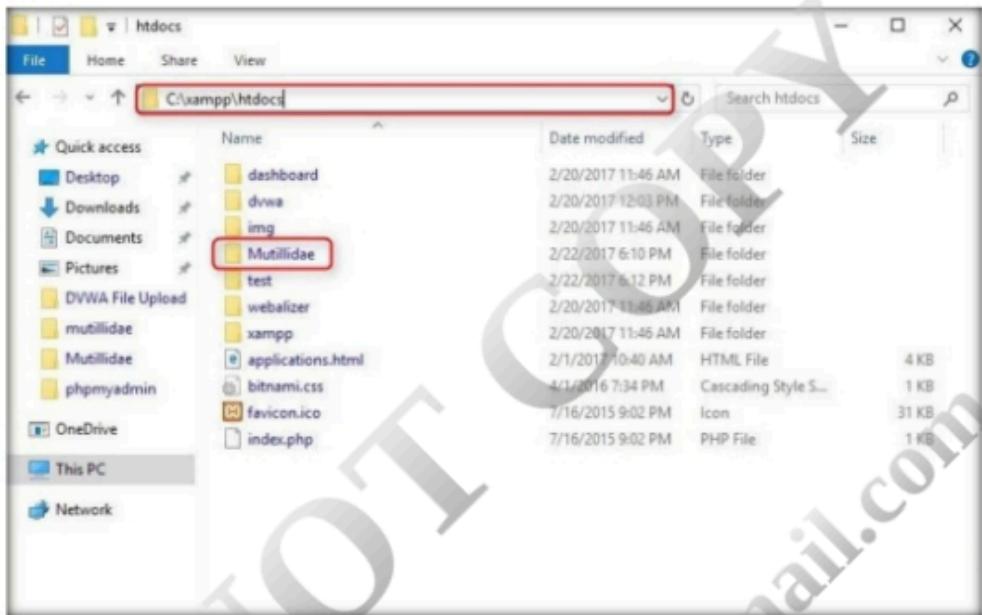
16. Click **Start** to run **Apache** and **MySQL** and **Tomcat** services in **XAMPP Control Panel**. If the services are running successfully, it will turn **green**



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## CT#13: Install Mutillidae

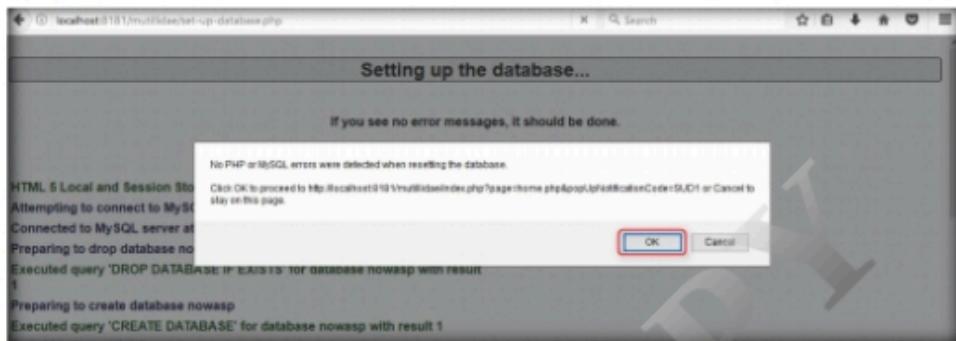
1. Navigate to **D:\CASE Tools\Module 09 Static and Dynamic Application Security Testing (SAST & DAST)**
2. Copy the folder **Mutillidae** and paste it to **C:\xampp\htdocs\**



3. Launch **Firefox** browser, type the URL **localhost:8181/mutillidae/**. (If warning message pop ups showing Apache accepts only 127.0.0.1 then enter URL **127.0.0.1:8181/Mutillidae/**)
4. **The Database server appears to be offline** page will be displayed. Click **setup/reset the DB** link as shown in the screenshot.



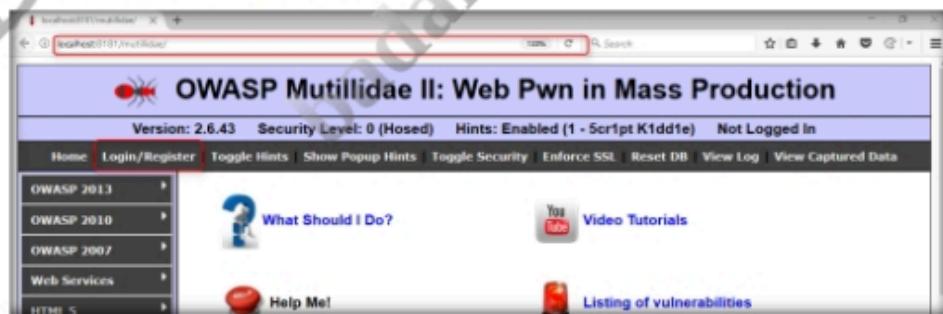
5. A message will appear as shown in the screenshot. Click **OK** to proceed.



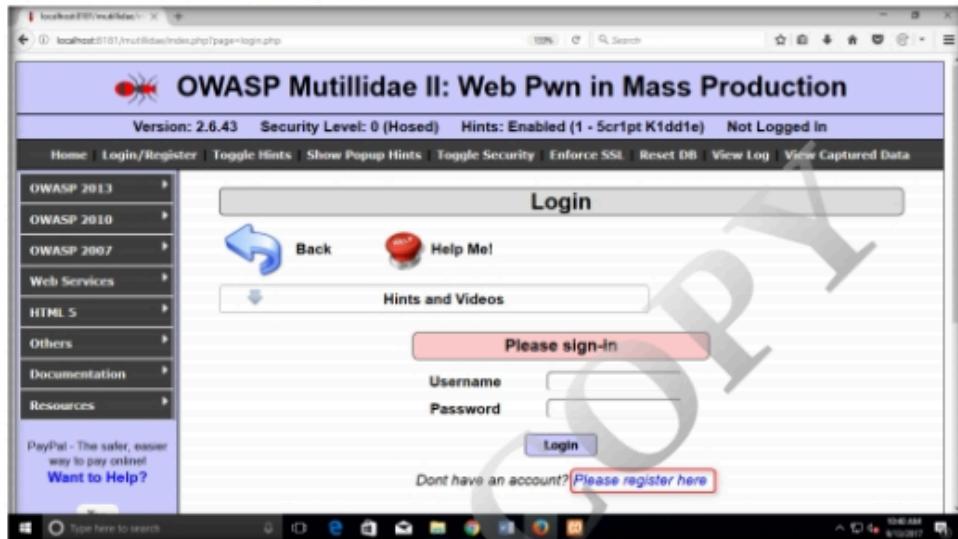
6. The main page of Mutillidae page appears.



7. Click **Login/Register** from main menu.



8. Click **Please register here** link.



9. Enter following details and click **Create Account**

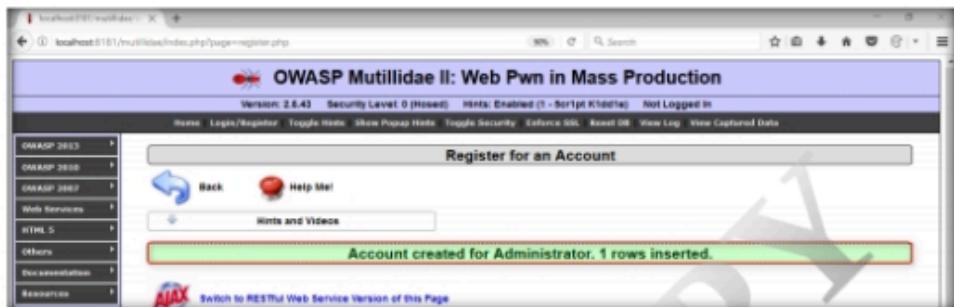
Username: **Administrator**

Password: **test@123**

Confirm Password: **test@123**



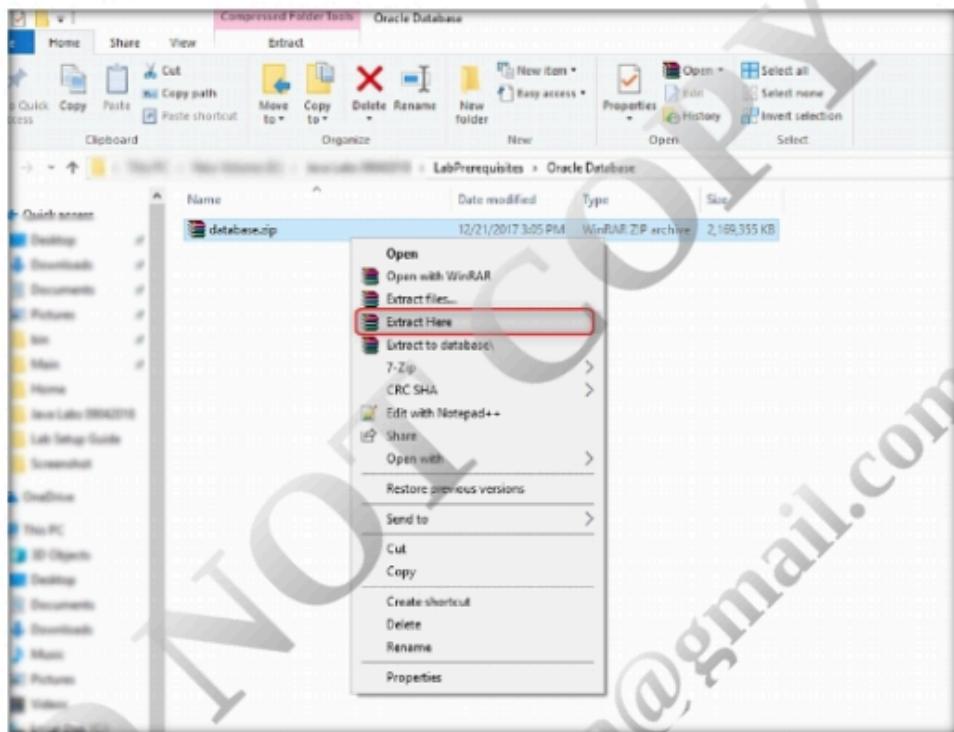
10. The account will be created successfully. Close the browser.



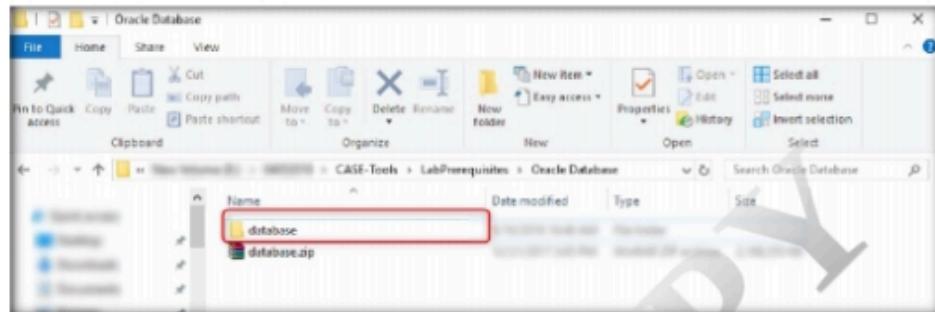
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## CT#14: Install Oracle 11g on Host Machine

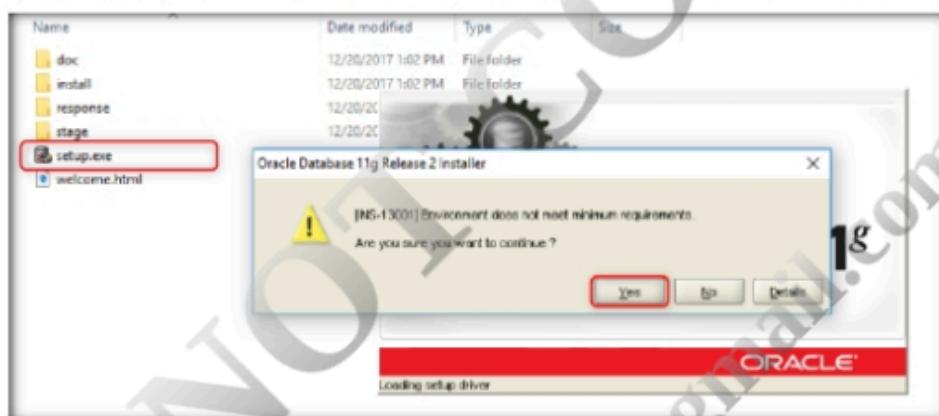
1. Navigate to **D:\CASE Tools\Lab Prerequisites\Oracle Database** and Extract **database.zip** file.
2. To extract right click on **database.zip** file, context menu will appear and click on “**Extract Here**” option.



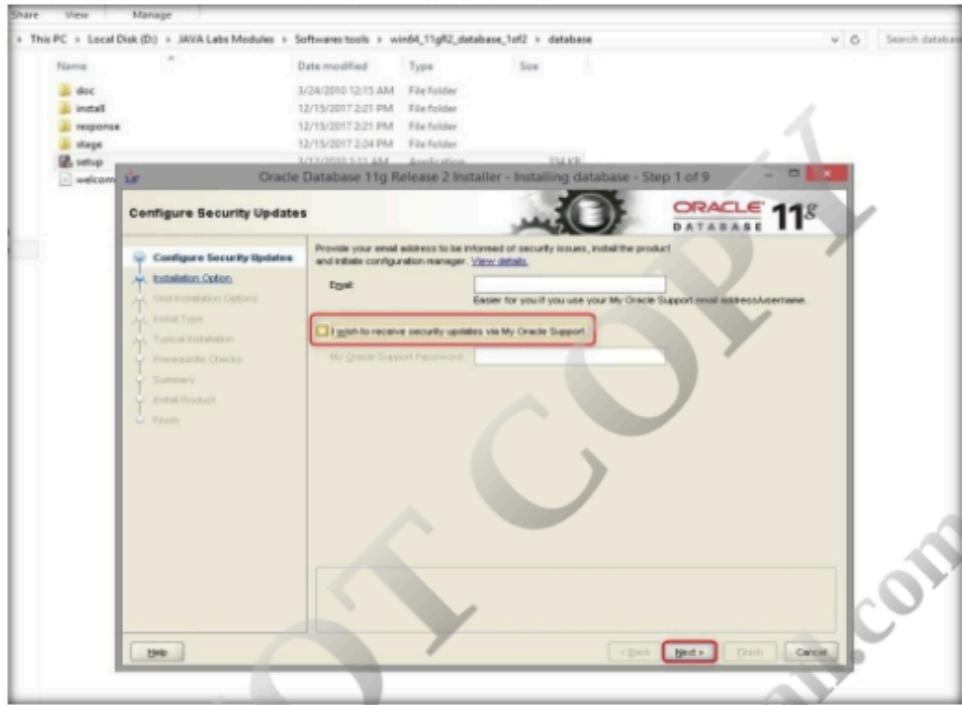
3. Navigate to **database** Folder.



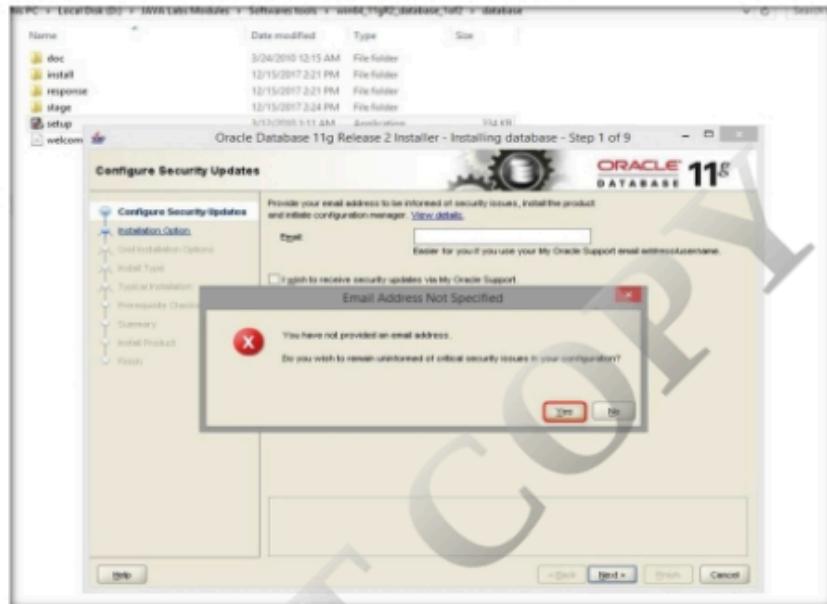
4. Double click **setup.exe**. User Account Control will appear. Click **Yes**.
5. Installer popup will appear "**Are you sure you want to continue?**" Click **Yes**.



6. Configuration Security Updates wizard appears on the screen, uncheck “**I wish to receive security updates via My Oracle Support**” and click **Next**.



7. In the “**Email Address Not Specified**” window click **Yes**.



8. In the “**Select installation Option**” window click **Next**.



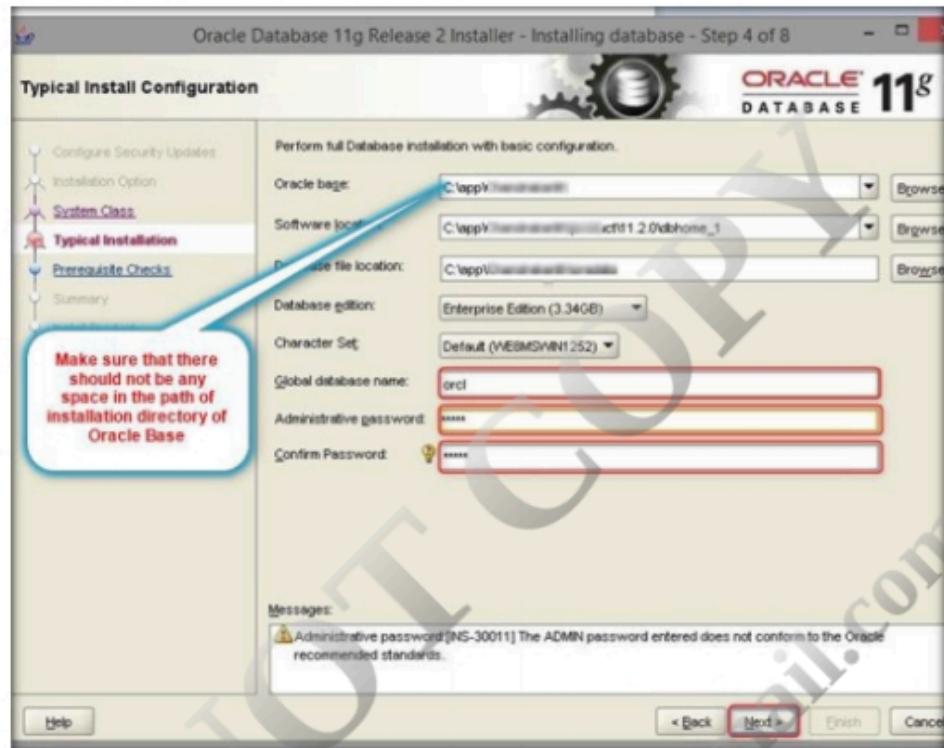
9. Click **Next** to continue with Default Option -> **Desktop Class**.



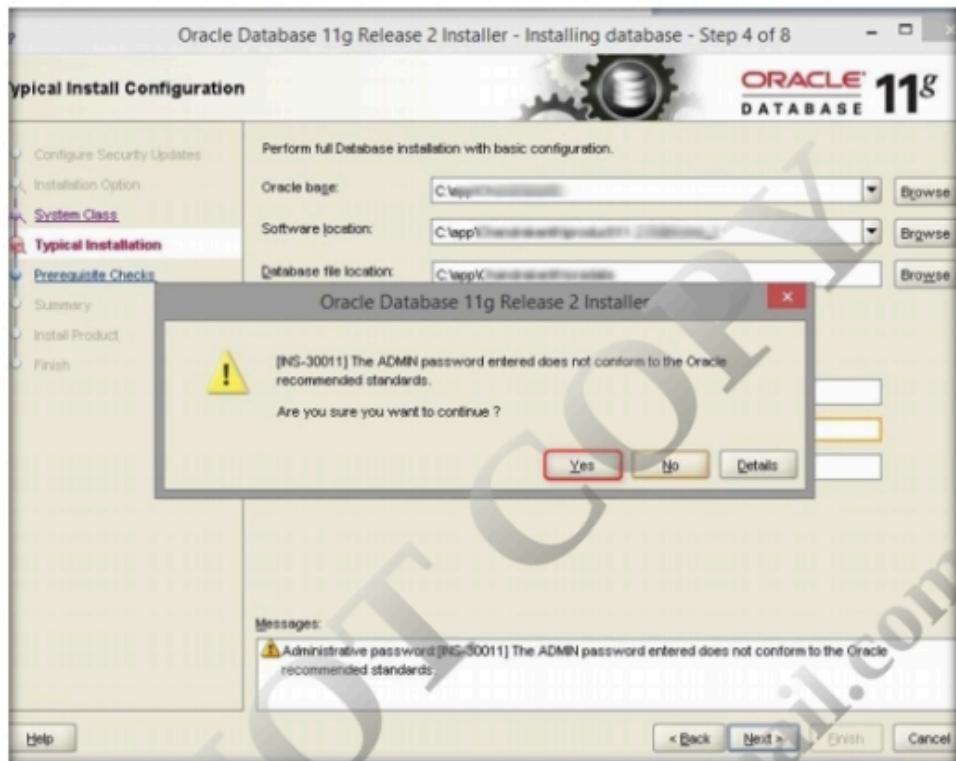
10. Give **Global database name** as **orcl** and **Administrative password** and **Confirm Password** as **admin**. Click **Next**



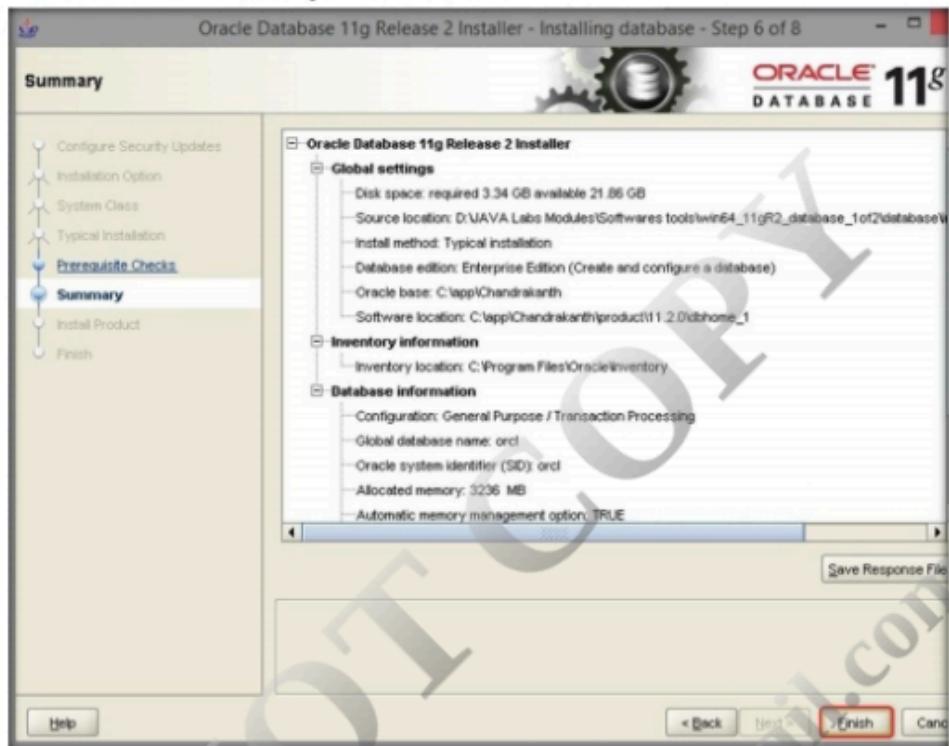
11. Ensure that there is no space in the installation directory of “**Oracle base**” to avoid **Oracle Password and user name standards** error.



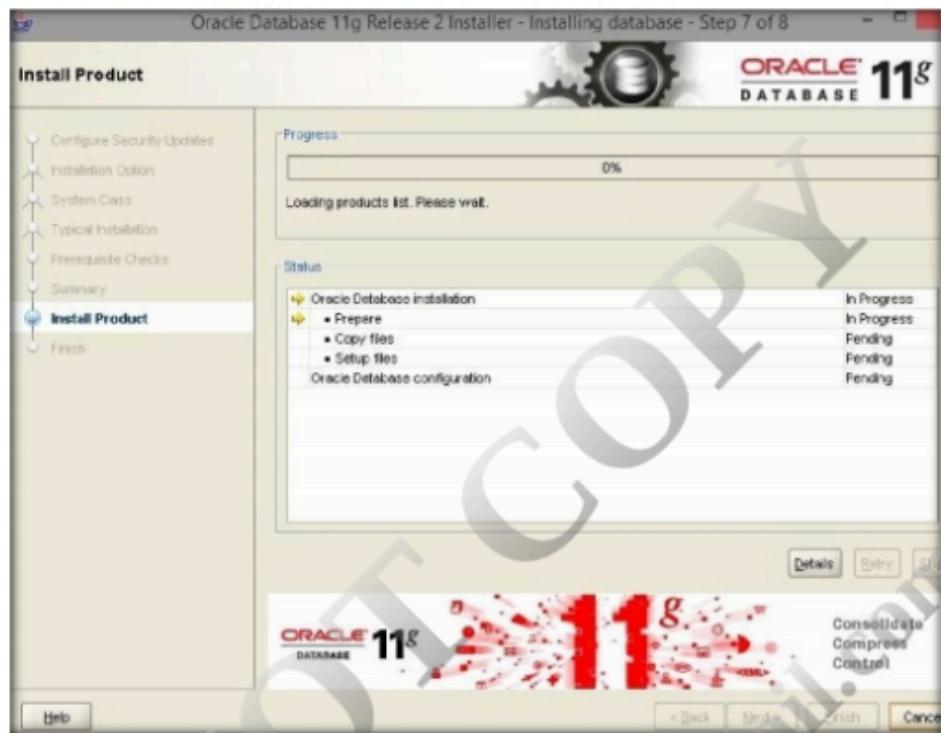
12. A popup window as shown below will appear. Click on **Yes** to continue.



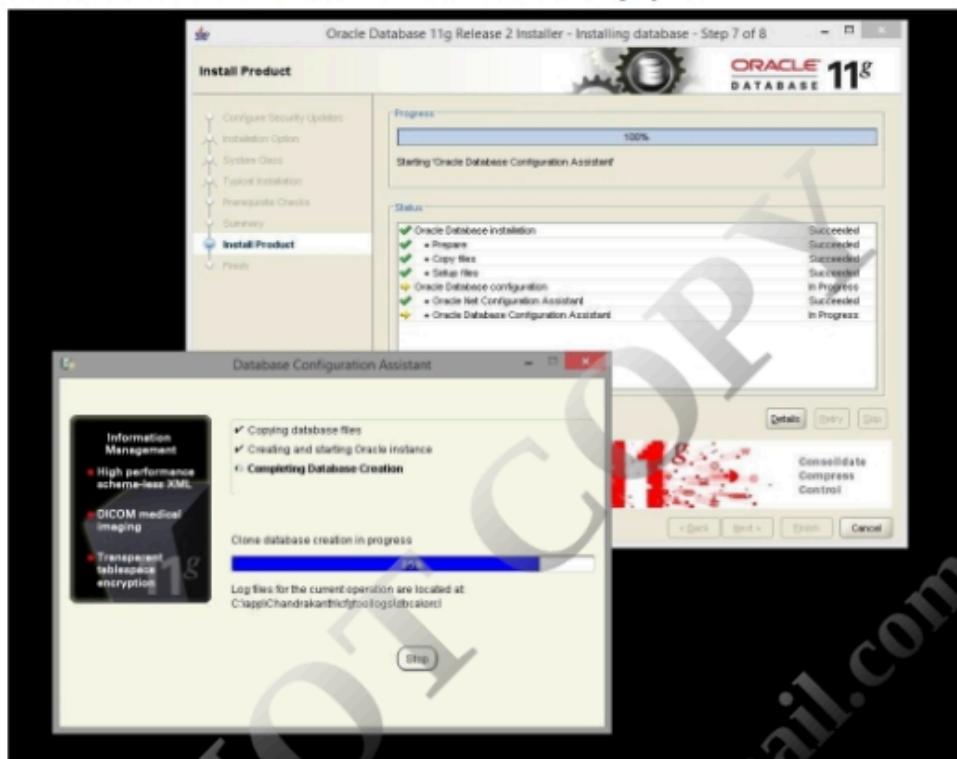
13. Click **Finish** button to complete installation.



14. Oracle **installation progress** will be displayed as shown below.



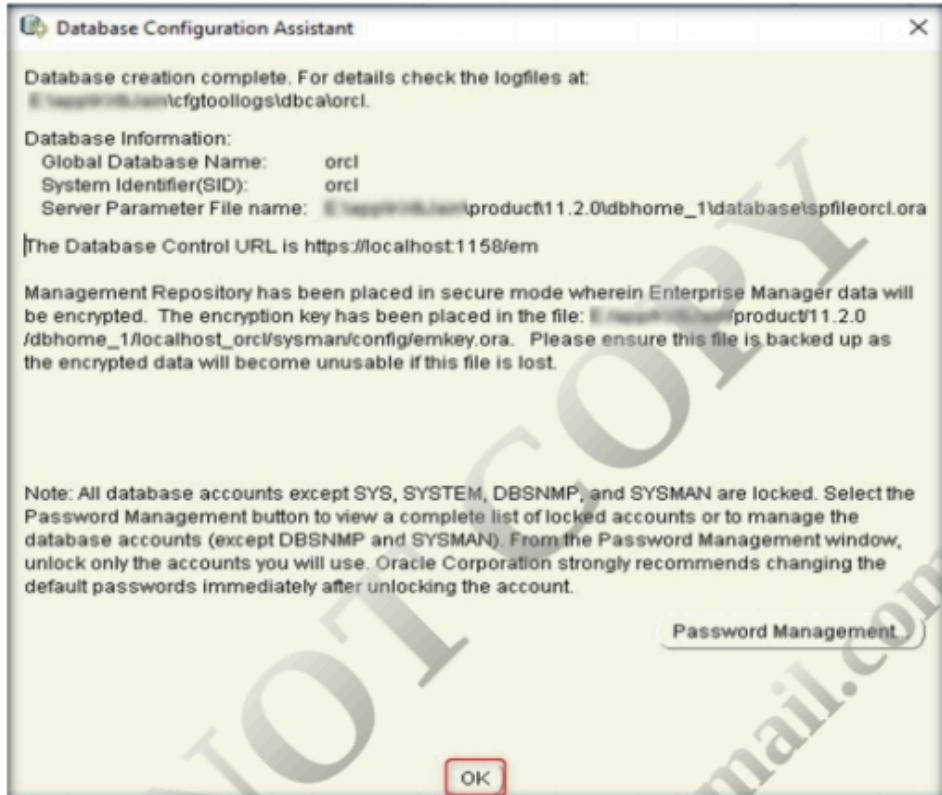
15. Database Configuration Assistant window will be displayed.



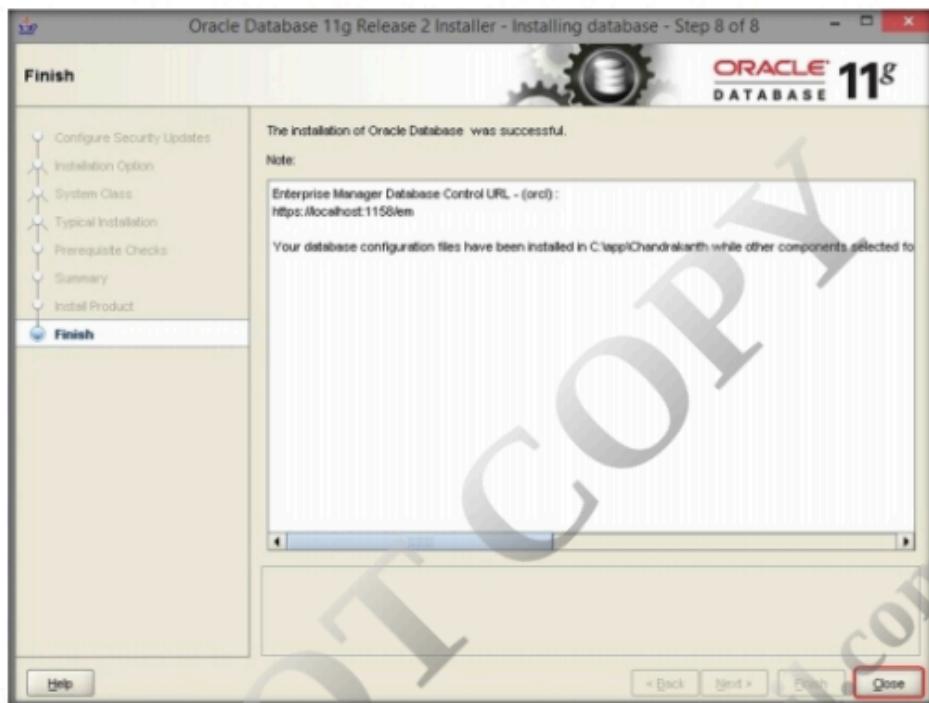
16. A pop up window displaying details will be displayed. Click **Close**.



17. Finally, Database **Configuration Assistant Dialogue** will appear Click on **OK** button.



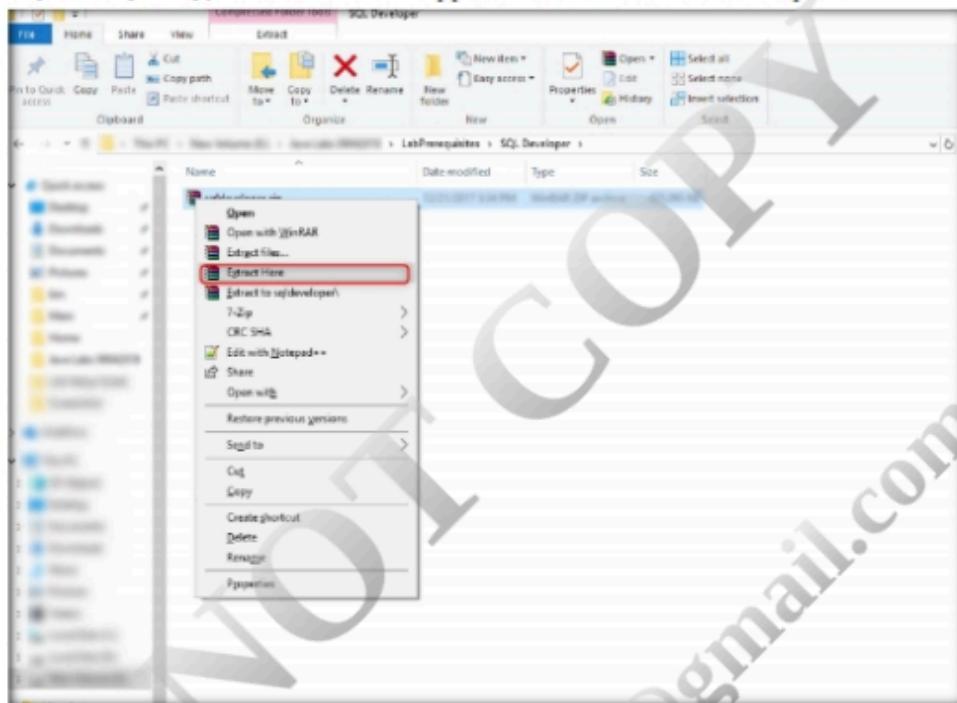
18. A window displaying **Successful installation** will be displayed. Click on **Close**.



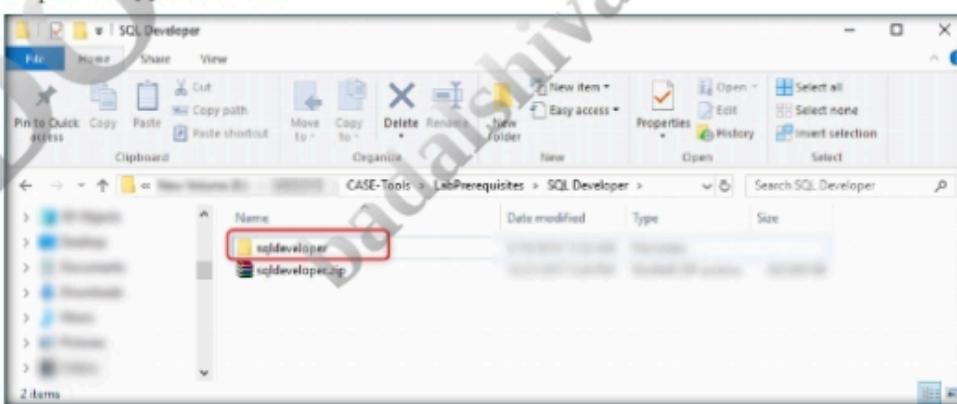
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## CT#15: Installing SqDeveloper Tool and Creating CASE Labs Database in Oracle

1. Navigate to **D:\CASE Tools\Lab Prerequisites\SQL Developer** → right click on **sqldeveloper.zip**, context menu will appear click on "**Extract Here**" option.



2. Open **unzipped** folder.



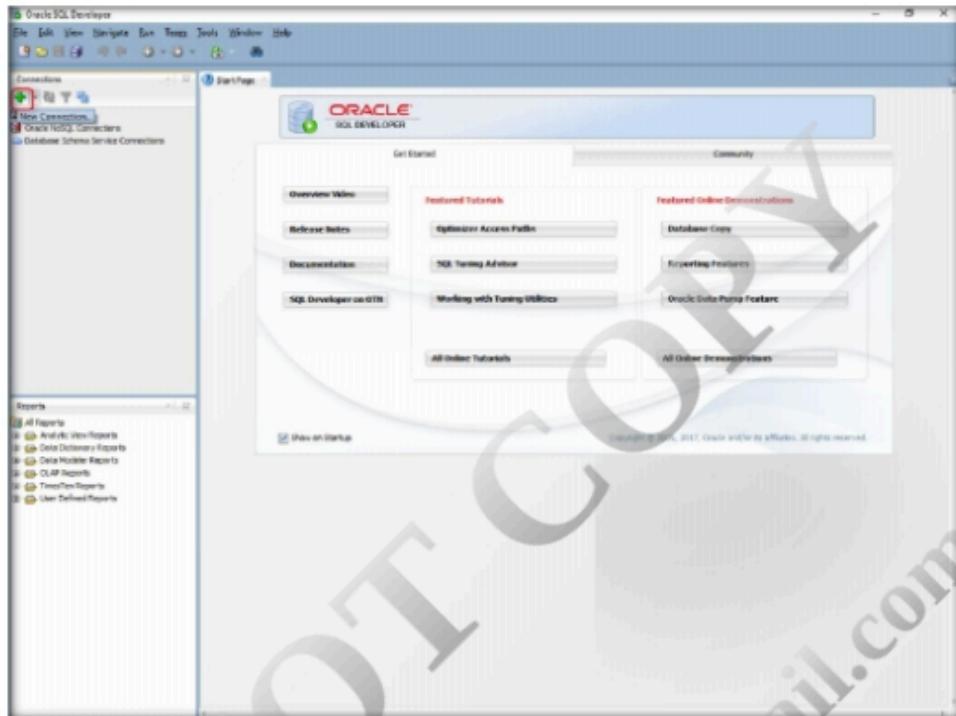
3. Double click on **sqldeveloper.exe** file

Name	Date modified	Type	Size
dataminer	12/20/2017 1:01 PM	File folder	
drops	12/20/2017 1:01 PM	File folder	
dvt	12/20/2017 1:01 PM	File folder	
equinox	12/20/2017 1:01 PM	File folder	
external	12/20/2017 1:01 PM	File folder	
ide	12/20/2017 1:01 PM	File folder	
javavm	12/20/2017 1:01 PM	File folder	
jdbc	12/20/2017 1:01 PM	File folder	
jdev	12/20/2017 1:01 PM	File folder	
jdk	12/20/2017 1:01 PM	File folder	
jlib	12/20/2017 1:01 PM	File folder	
jviews	12/20/2017 1:01 PM	File folder	
module	12/20/2017 1:01 PM	File folder	
modules	12/20/2017 1:01 PM	File folder	
netbeans	12/20/2017 1:01 PM	File folder	
ords	12/20/2017 1:01 PM	File folder	
rdbms	12/20/2017 1:01 PM	File folder	
sleepycat	12/20/2017 1:01 PM	File folder	
sqldeveloper	12/20/2017 1:02 PM	File folder	
sqlj	12/20/2017 1:02 PM	File folder	
svnkit	12/20/2017 1:02 PM	File folder	
icon.png	10/6/2017 5:37 AM	PNG File	2 KB
sqldeveloper.exe	10/6/2017 5:37 AM	Application	62 KB
sqldeveloper.sh	10/6/2017 5:37 AM	SH File	1 KB

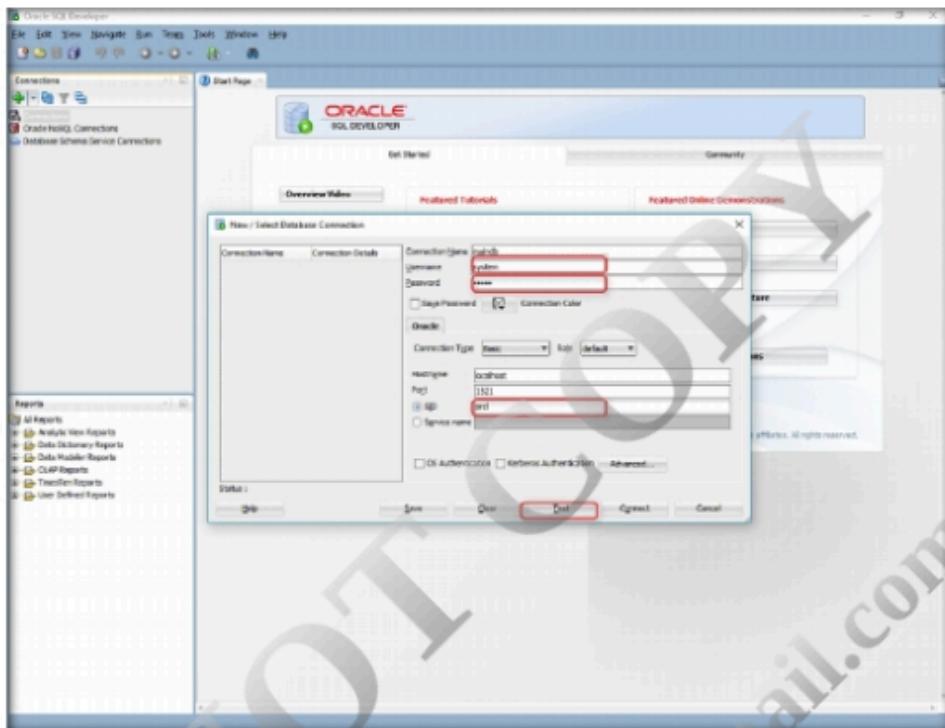
4. If SqlDeveloper Tool is already installed a pop up window "**Would you like to import preferences from a previous SQL Developer installation?**" will appear. Click **No**.
5. Oracle Usage Tracking popup will appear and uncheck "**Allow automated usage reporting to Oracle**" checkbox as shown in the screenshot.



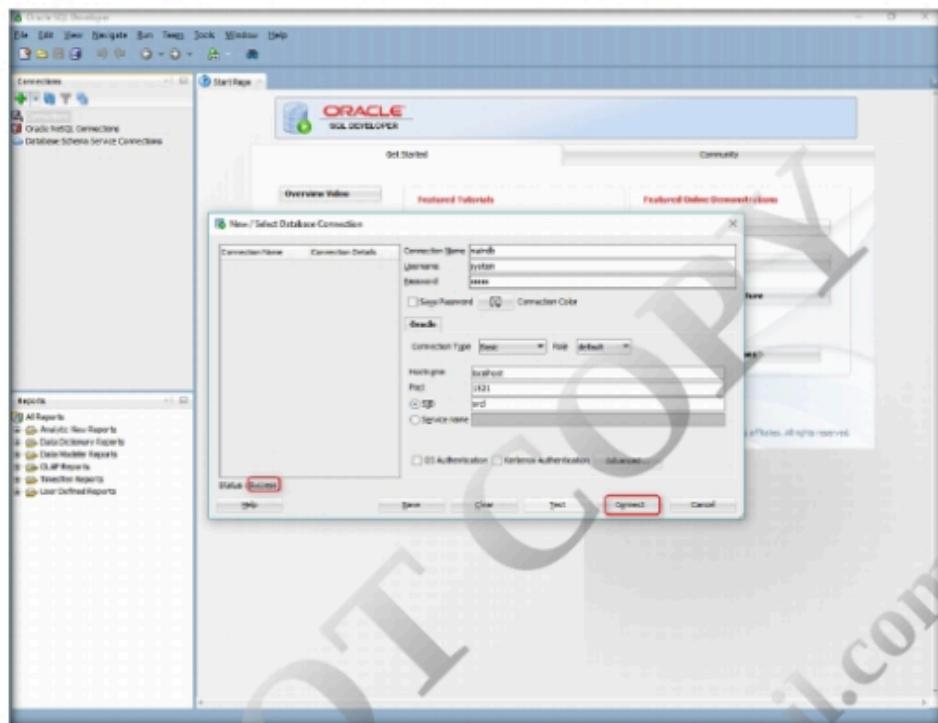
6. **Oracle SQL Developer** Wizard will appear. the click  symbol in connection pane to add New Connection.



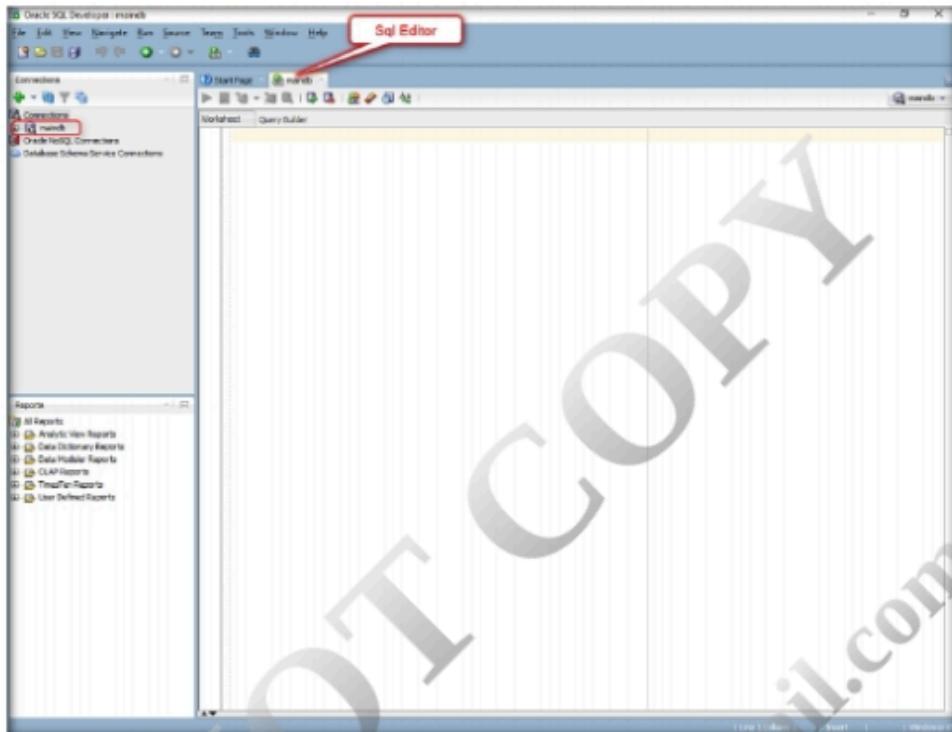
7. Enter any **Connection Name** e.g. maindb. Enter Username as **system** and **Password** as **admin**, change **SID** as **orcl** and click on **Test** button.



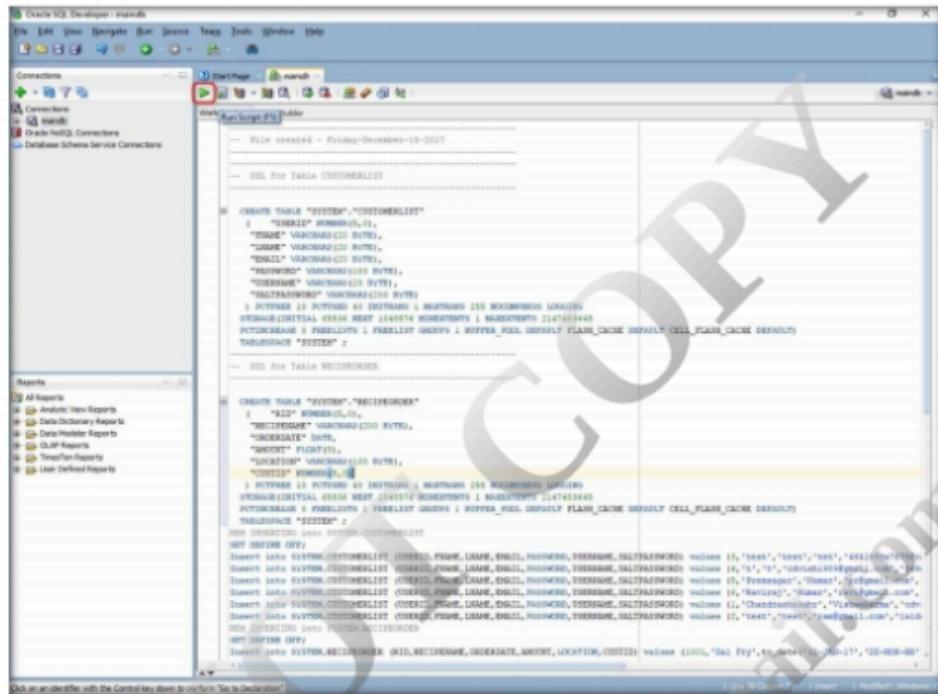
8. You will see **Status** as **Success**. Click on **Connect** button.



9. **SQL Script Editor** will open.



10. Navigate to **D:\CASE Tools\Lab Prerequisites\LabDatabase**. Extract **DB File.zip** and open **Import.sql** file with **notepad++**. Copy the file content and paste it into **sqldeveloper editor** window.

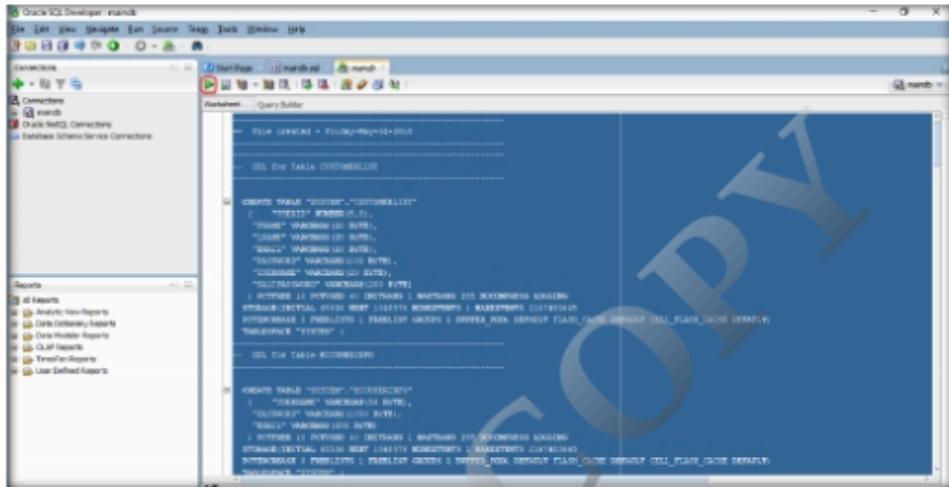


The screenshot shows the Oracle SQL Developer interface with the 'SQL Worksheet' tab selected. The 'Workspaces' section on the left shows a workspace named 'mantis'. The main area displays the 'Import.sql' script. The script contains SQL commands to create tables and insert data into them. A large watermark reading 'DONTCOPY badalshiva@gmail.com' is diagonally across the screen.

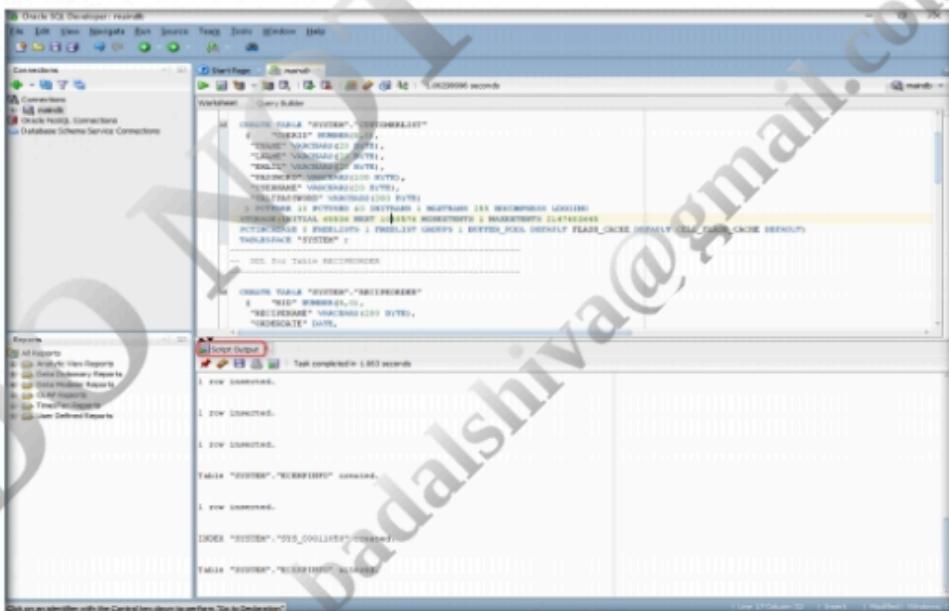
```
-- File created - Friday-December-15-2017
-- SQL for Table CUSTOMERLIST
CREATE TABLE "SYSTEM"."CUSTOMERLIST"
(
    "CUSTID" NUMBER(5,0),
    "NAME" VARCHAR2(20 BYTE),
    "EMAIL" VARCHAR2(20 BYTE),
    "PHONE" VARCHAR2(20 BYTE),
    "ADDRESS" VARCHAR2(200 BYTE),
    "CITYNAME" VARCHAR2(200 BYTE),
    "MILTPASSWORD" VARCHAR2(200 BYTE)
)
INTERVAL 1Z PCTFREE 40 INITRANS 1 MAXTRANS 255 NOCOMPRESS LOGGING
STORAGE(INITIAL 4KB NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFERRED CELL_FLASH_CACHE DEFERRED
TABLESPACE "TESTER" ;

-- SQL for Table RECIPIENDER
CREATE TABLE "SYSTEM"."RECIPIENDER"
(
    "RECID" NUMBER(5,0),
    "RECIPIENT" VARCHAR2(200 BYTE),
    "ORDERDATE" DATE,
    "AMOUNT" FLOAT(12),
    "CITYNAME" VARCHAR2(200 BYTE),
    "CUSTID" NUMBER(5,0)
)
INTERVAL 1Z PCTFREE 40 INITRANS 1 MAXTRANS 255 NOCOMPRESS LOGGING
STORAGE(INITIAL 4KB NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1 BUFFER_POOL DEFERRED FLASH_CACHE DEFERRED CELL_FLASH_CACHE DEFERRED
TABLESPACE "TESTER" ;
SET DEFINE OFF;
Insert into SYSTEM.RECIPIENDER (RECID,RECIPIENT,ORDERDATE,AMOUNT,CITYNAME,CUSTID) values (1000,'Sal fry',to_date('2016-12-17','DD-MON-RR'),1000,'Delhi',100);
Insert into SYSTEM.RECIPIENDER (RECID,RECIPIENT,ORDERDATE,AMOUNT,CITYNAME,CUSTID) values (1001,'Shyam',to_date('2016-12-17','DD-MON-RR'),1000,'Delhi',101);
Insert into SYSTEM.RECIPIENDER (RECID,RECIPIENT,ORDERDATE,AMOUNT,CITYNAME,CUSTID) values (1002,'Premdas',to_date('2016-12-17','DD-MON-RR'),1000,'Delhi',102);
Insert into SYSTEM.RECIPIENDER (RECID,RECIPIENT,ORDERDATE,AMOUNT,CITYNAME,CUSTID) values (1003,'Ravinder',to_date('2016-12-17','DD-MON-RR'),1000,'Delhi',103);
Insert into SYSTEM.RECIPIENDER (RECID,RECIPIENT,ORDERDATE,AMOUNT,CITYNAME,CUSTID) values (1004,'Chandramukhi',to_date('2016-12-17','DD-MON-RR'),1000,'Delhi',104);
Insert into SYSTEM.RECIPIENDER (RECID,RECIPIENT,ORDERDATE,AMOUNT,CITYNAME,CUSTID) values (1005,'Teeku',to_date('2016-12-17','DD-MON-RR'),1000,'Delhi',105);
SET DEFINE OFF;
Insert into SYSTEM.RECIPIENDER (RECID,RECIPIENT,ORDERDATE,AMOUNT,CITYNAME,CUSTID) values (1006,'Sal fry',to_date('2016-12-17','DD-MON-RR'),1000,'Delhi',106);
```

11. Select entire script displayed in the editor and click on Run Statement button as shown in the screenshot.

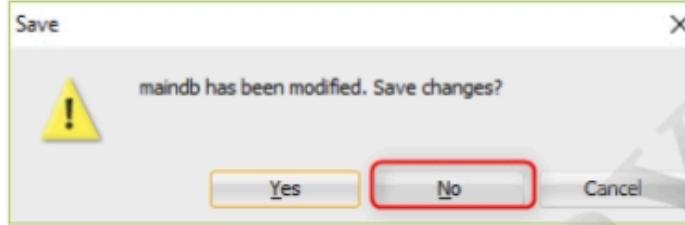


12. After successfully execution of script you can see the tables created and data inserted successfully in the **Script Output** tab.



13. Click Close button of the “**Oracle SQL Developer**” application.

14. “Save” popup will appear as shown in the screenshot click “No” then “Oracle SQL Developer” will close.

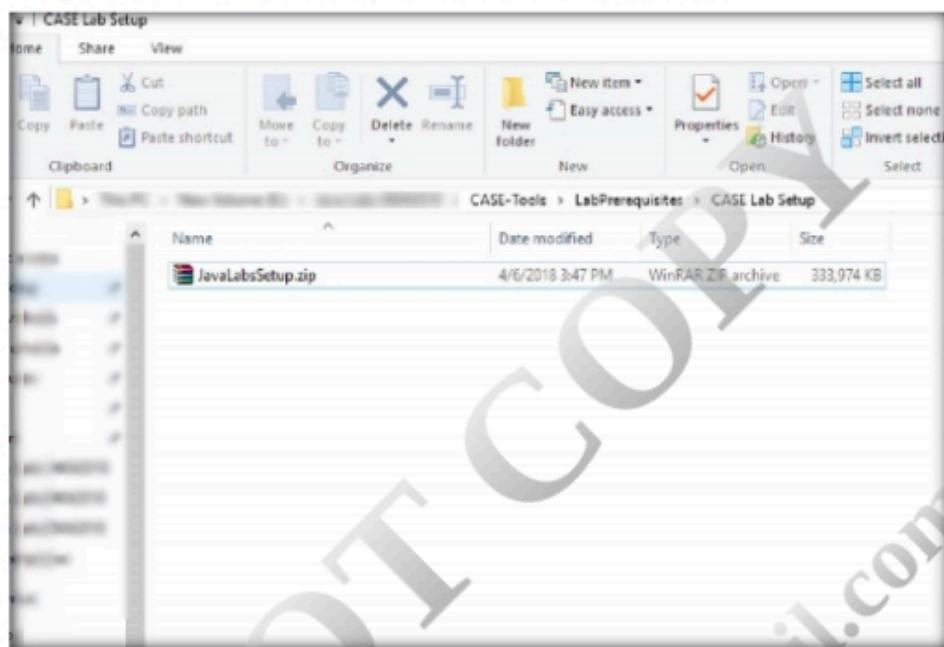


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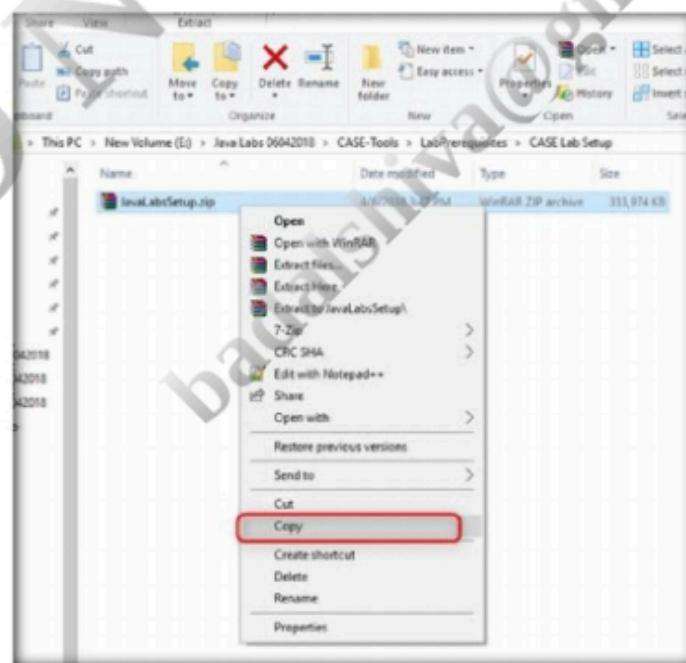
DO NOT COPY  
badalshiva@gmail.com

## CT#16: Install and Configure CASE Lab Setup

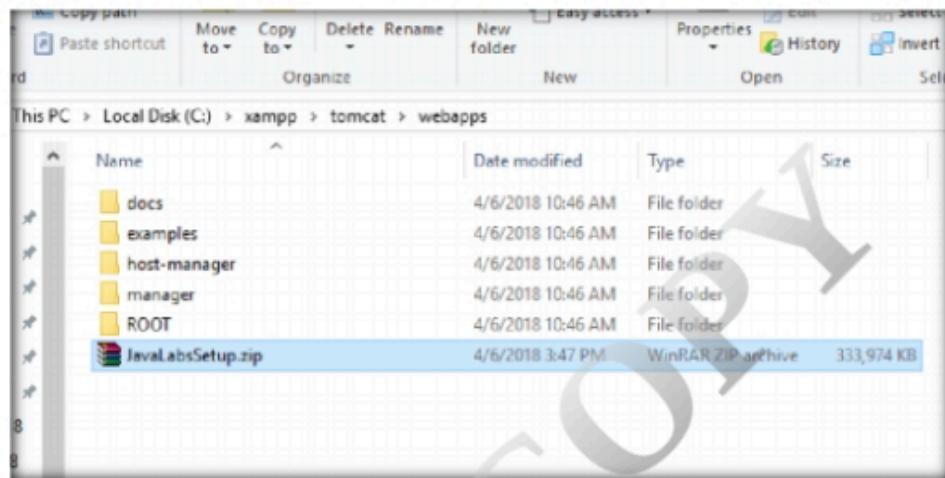
1. Navigate to **D:\CASE Tools\Lab Prerequisites\CASE Lab Setup**.



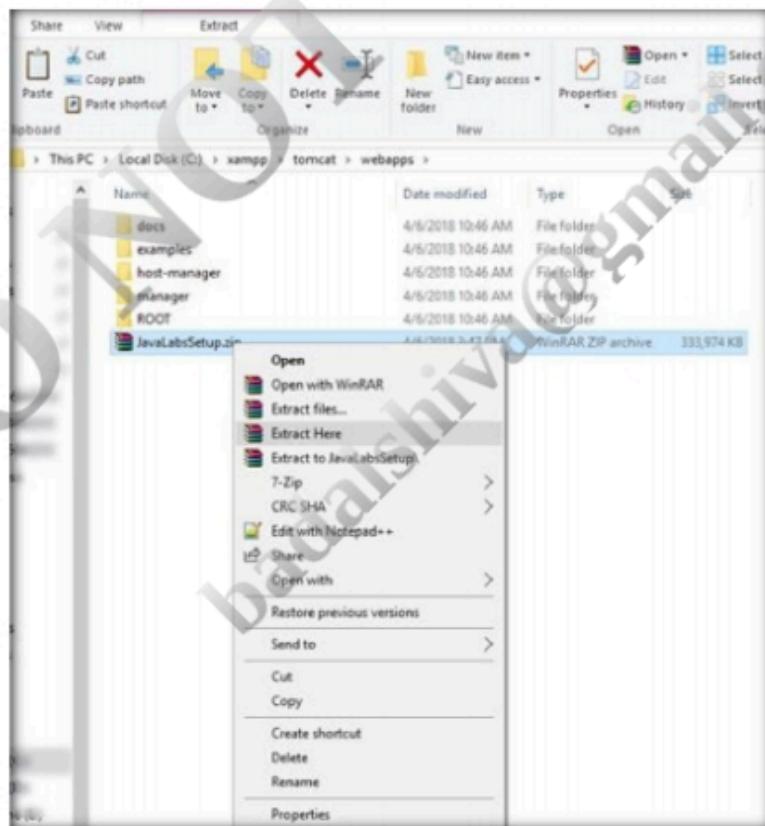
2. Right-click on **JavaLabsSetup.zip** then select **Copy** option.



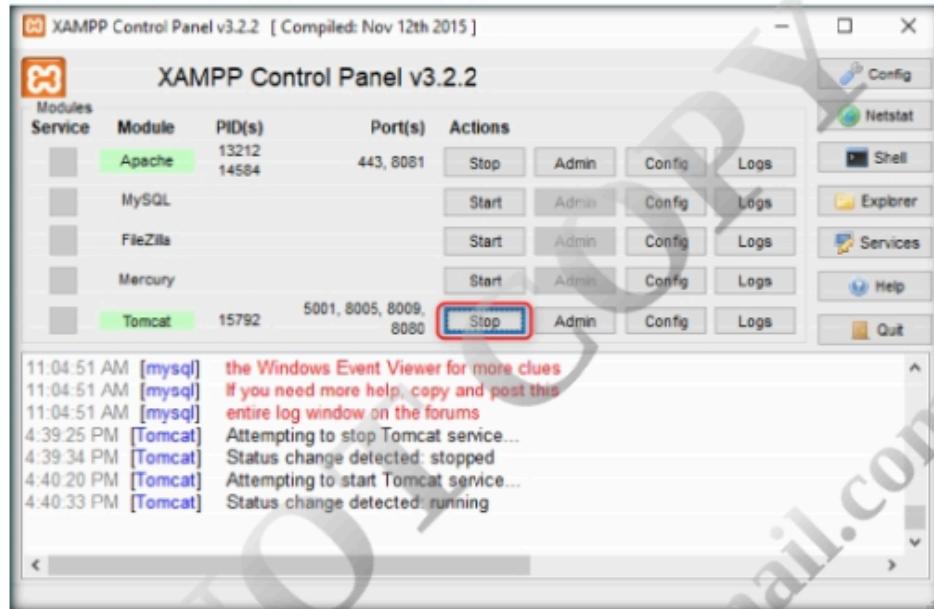
3. Navigate to “**C:\xampp\tomcat\webapps**” and paste the copied zip (**JavaLabsSetup.zip**)



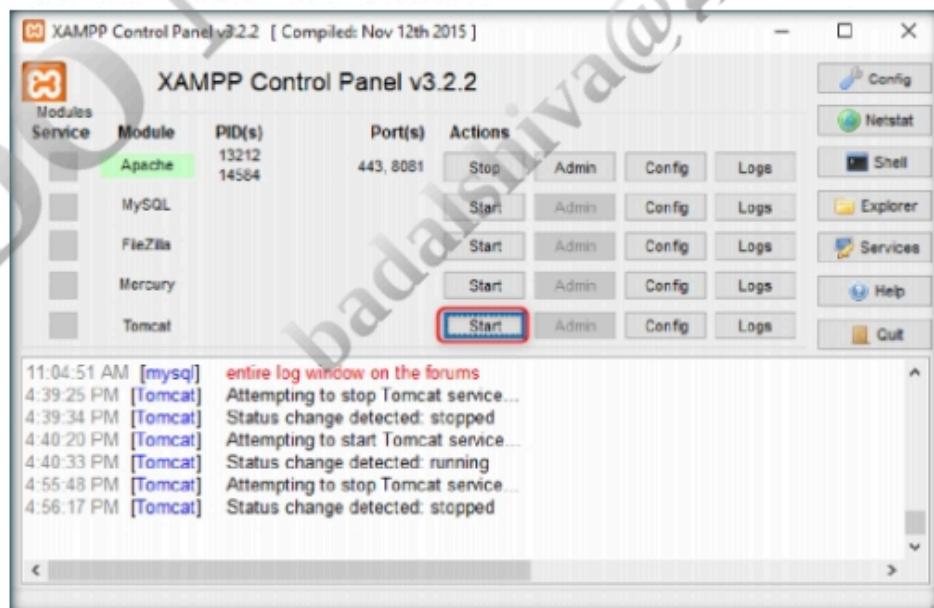
4. Right-click **JavaLabsSetup.zip** file and click **Extract Here** option. Now all .war files will be extracted in **webapps** directory of tomcat.



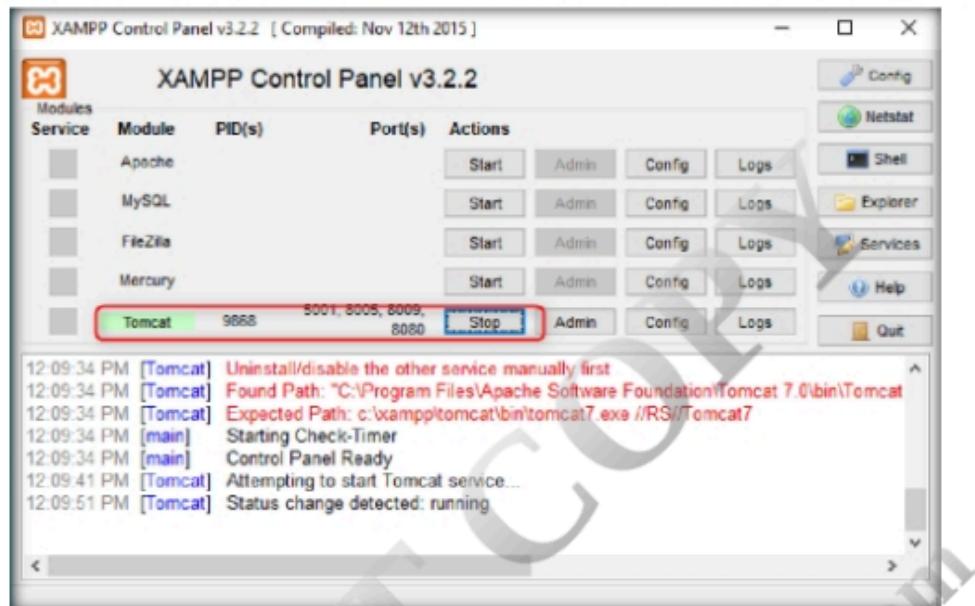
5. Now Restart Tomcat services. To do this launch "**XAMPP Control panel**", Click windows start button then search for **XAMPP**.  
The "**XAMPP Control Panel**" option will appear and press Enter.
6. The "**XAMPP Control Panel**" window will appear as shown in the screenshot. Click Tomcat Action **Stop button**.



7. Now click on Tomcat Action **Start button**.



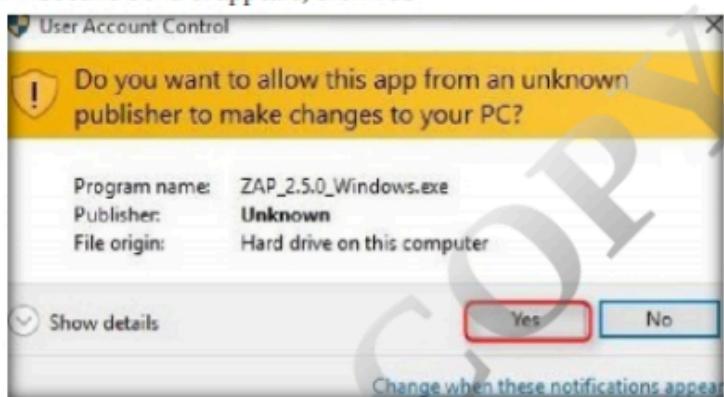
8. Tomcat will start as per shown in the screenshot and close the XAMPP Control Panel.



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## CT#17: Installing OWASP ZAP Proxy

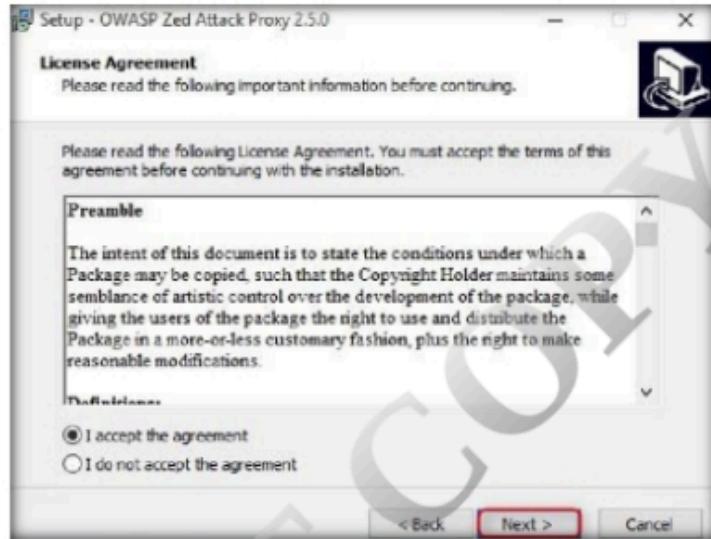
1. Navigate to **D:\CASE Tools\Module 09 Static and Dynamic Application Security Testing (SAST & DAST)\OWASP ZAP** and double-click **ZAP\_2.5.0\_Windows.exe**.
2. ZAP **User Account Control** appears, click **Yes**



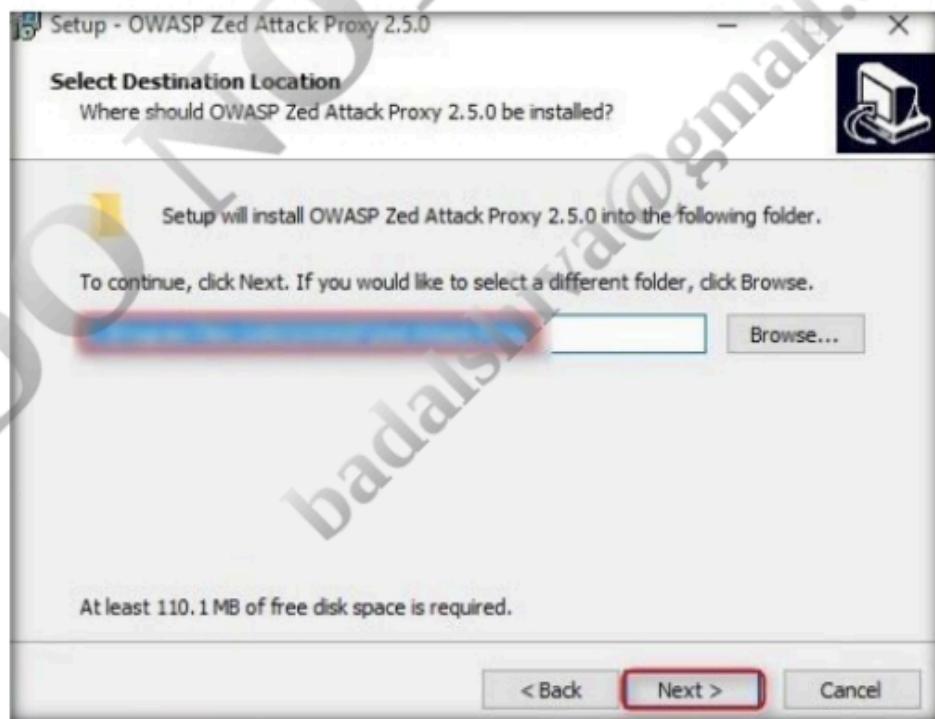
3. ZAP **Welcome Setup** window appears. Click **Next**.



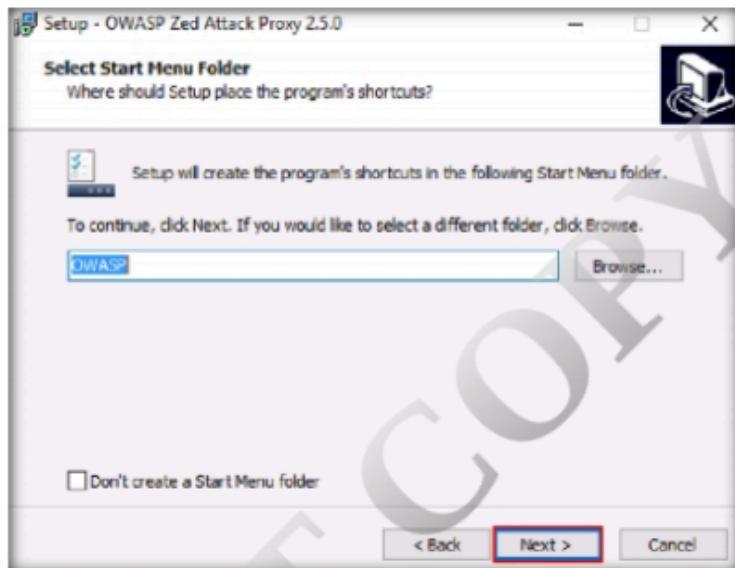
4. In the **License Agreement** window, choose **I accept the agreement** radio button. Click **Next**.



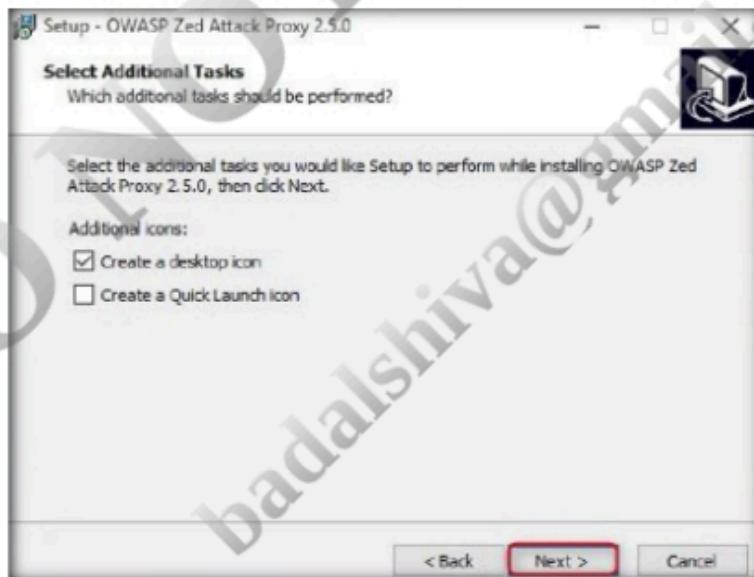
5. In **Select Destination Location** window, leave the location to default. Click **Next**.



6. In **Select Start Menu Folder** window, leave the setting to default. Click **Next**.



7. In **Select Additional Tasks** window, leave the setting to default. Click **Next**.



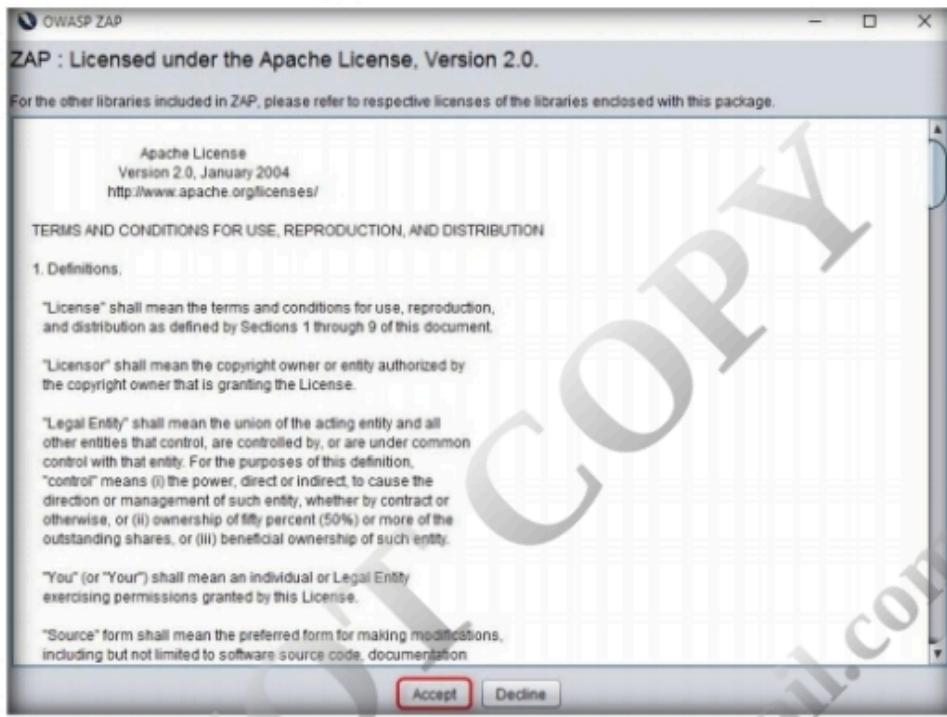
8. In **Ready to Install** window, click **Install**.



9. In **Completing ZAP setup wizard**, click **Finish**.



10. Double-click on **OWASP ZAP 2.5.0 desktop icon** to launch. ZAP : Licensed under the Apache License, Version 2.0 window appears. Click **Accept**



11. The main window of OWASP ZAP will appear with dialogue box as shown in the screenshot. Choose **No, I do not want to persist this session at this moment in time**. Click **Start**. Click **Close** at top right corner of the window to OWASP ZAP.



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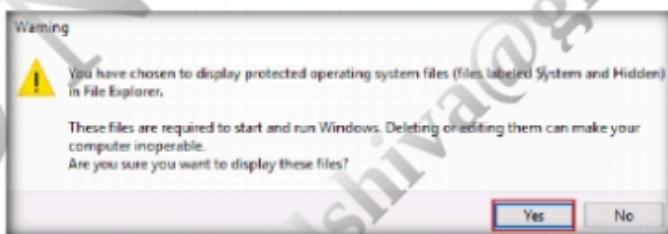
## CT#18: Install Adobe Reader

1. Navigate to **D:\CASE Tools\Lab Prerequisites\Adobe Reader**.
2. Double-click **readerdc\_en\_jd\_cra\_install.exe** to begin the installation.
3. Follow the wizard-driven installation steps and complete the installation by choosing **defaults** throughout the installation process.
4. Alternatively, you can install the latest Adobe Reader from the **Adobe website**.

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## CT#19: Configure Windows Explorer to Show all Files, File Types and Extensions

1. Click **Start → File Explorer → View → Options**
2. Double-click **Options** folder.
3. The **Folder Options** window appears.
4. In the **Folder Options** window, click the **View** tab.
5. In the **Advanced Settings** section, under **Hidden files and folders**, choose **Show hidden files, folders, and drives** radio button. Ensure **Hide extensions for known file types** option is unchecked. Scroll down and uncheck **Hide protected operating system files (Recommended)**. After unchecking, **Hide protected operating system files (Recommended)** option, a warning dialogue box will appear. Click **Yes** to proceed.

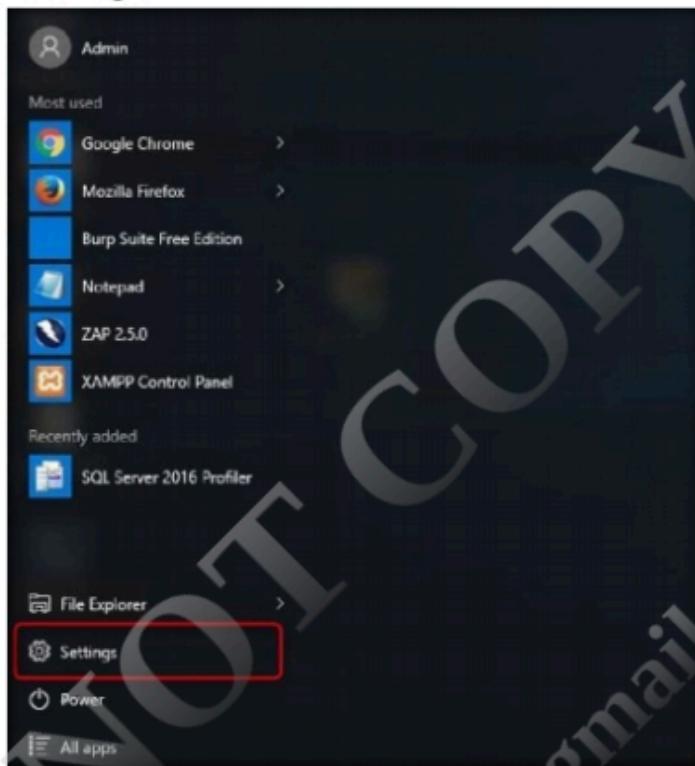


6. Click **Apply** and **OK** in **Folder Options** window

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## CT#20: Turn off Screen Saver in the Machine

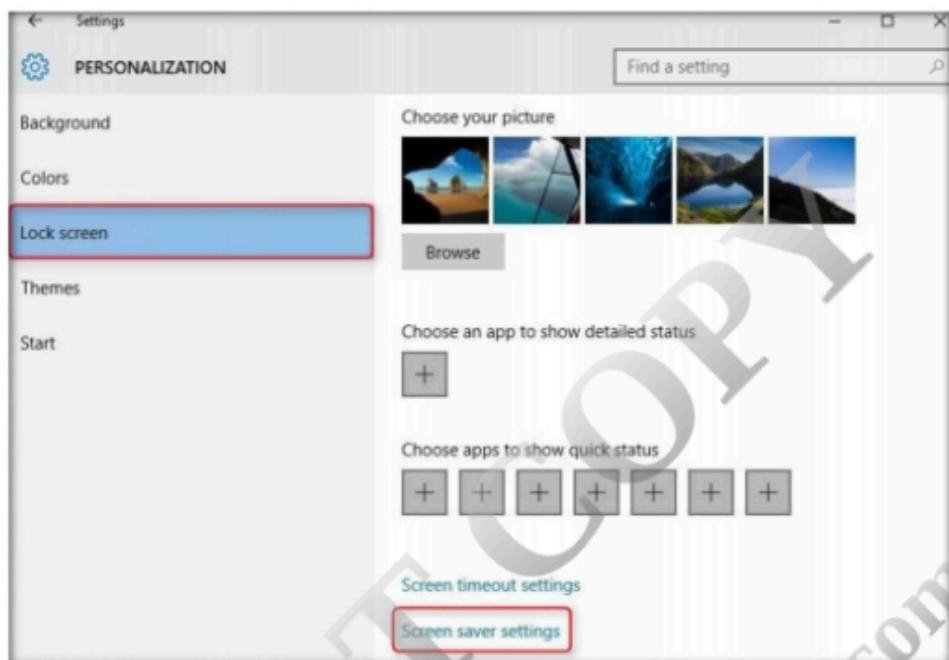
1. Click **Start** → **Settings**



2. In the **Settings** window, click **Personalization** icon.



3. In **PERSONALIZATION**, select **Lock screen**→**Screen saver settings**.



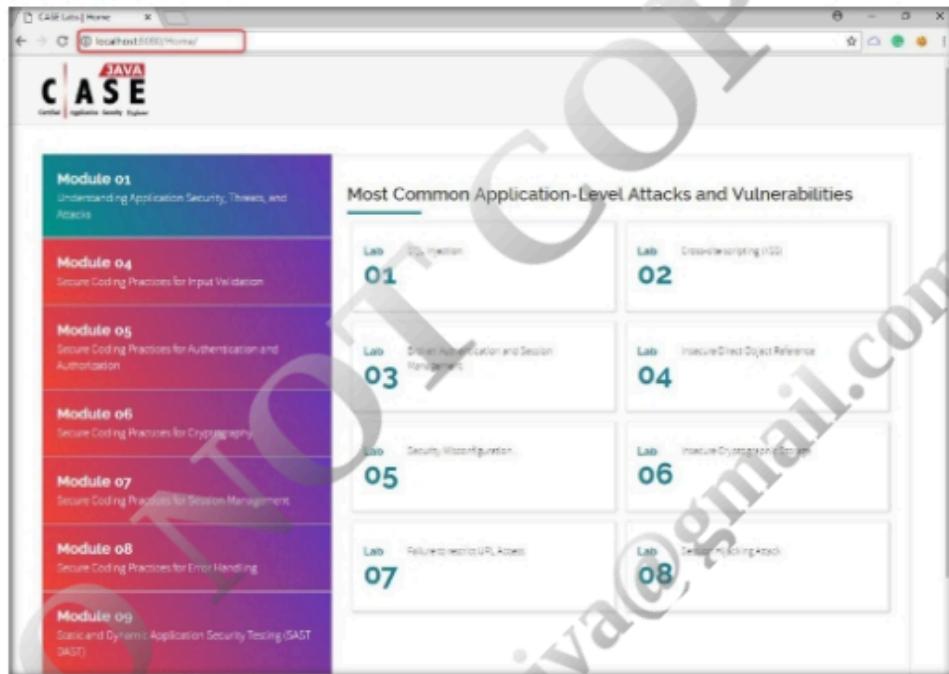
4. In the **Screen Saver Settings** window, select **(None)** from the drop-down list. Click **OK**.



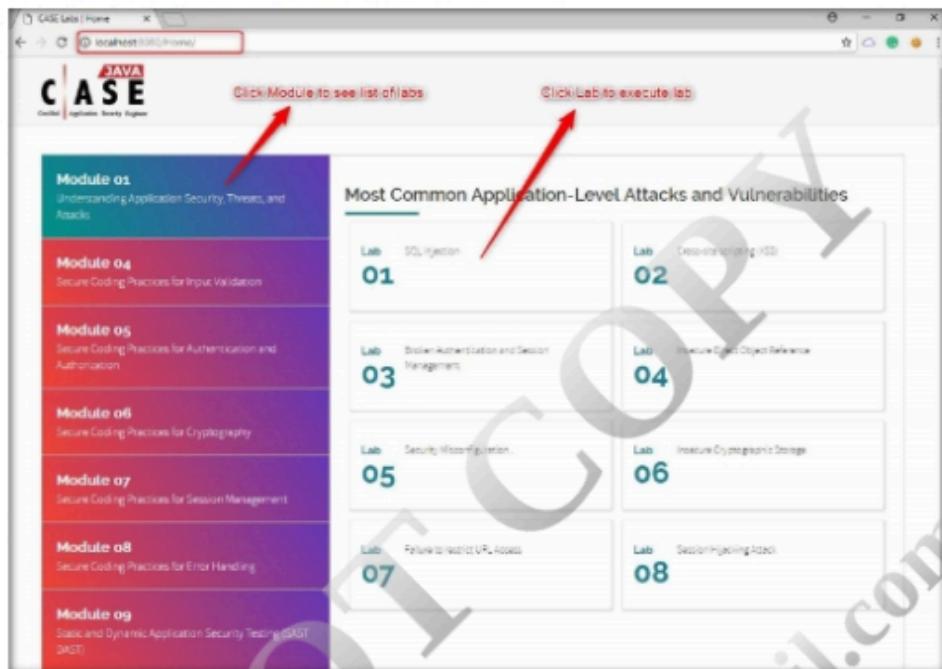
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## CT#21: Start Lab Environment

1. Double-click the **Google Chrome** shortcut created in [CT#5](#) to launch **Google Chrome**. (Note: Use only Google Chrome shortcut to launch **Lab Environment**).
2. Make sure Apache Tomcat is running.
3. Type URL: <http://localhost:8080/Home> in the address bar.
4. Click **Enter** and list of modules and the labs will be appeared in the browser as shown in the screenshot.



5. Click on **Lab** link and start doing labs for the respective module by following the instructions given in the Lab Instruction Window.



## CT#22: Troubleshooting 404 Error

1. If you encounter 404 error during execution your labs, follow the below steps.
  - i. Stop the tomcat services from Xampp control panel.
  - ii. Delete the Lab folder of respective module in which the error has encounter from the directory **xampp\tomcat\webapps**
  - iii. Start Tomcat services again and access URL <http://localhost:8080/Home>.
  - iv. You can now resume the execution your labs.

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