**Branch: - Computer Science and Engineering Class: - III Year**

**Subject: - C-Skill Lab-IV Sem: - VI**

**Teacher Manual**

**PRACTICAL NO. 2**

**Aim:** Demonstrate installation of Java and Apache Tomcat Server.

**Tomcat Server:**

Apache Tomcat can run various Java technologies, and runs the JavaServer (JSP), JavaServlet, and Java Expression languages. Apache Tomcat Server can be installed right from Ubuntu’s software repository, which contains the latest, most stable version of the Tomcat server.

**Step 1: Update APT**

First, as always, update your APT.

**$ sudo apt update**

**Step 2: Check for Tomcat in Repository**

Check for the Tomcat server package in the repository. The repository will show you all the latest packages available for download.

**$ sudo apt-cache search tomcat**

### Step 3: Download Tomcat

Download the tomcat9 package and the tomcat9 admin package and its dependencies with the following terminal command.

**$ sudo apt install tomcat9 tomcat9-admin**

### Step 4: Install Apache Tomcat Server

### When the download is finished, it will install the Apache Tomcat Server, which will start up automatically. For verification, type the following ss command, which will show you the 8080 open port number, the default open port reserved for Apache Tomcat Server.

### $ ss -ltn

### Step 5: Change Tomcat Settings

When the Ubuntu OS reboots, the Apache Tomcat Server will start automatically. This program setting can be changed by entering one of the following two commands.

**$ sudo systemctl enable tomcat9**

**Or**

**$ sudo systemctl disable tomcat9**

### Step 6: Allow Traffic to Port 8080

### If firewall ports, specifically UFW, are active on your system, devices that want to connect with the Apache Tomcat Server will have difficulty connecting. To allow traffic from any source to port 8080 of the Tomcat Server, type in the following command.

**$ sudo ufw allow from any to any port 8080 proto tcp**

### Step 7: Test Tomcat Server

### Now, you may test your Tomcat server. When Tomcat starts running, you can test the program in a web browser. Using the system’s loopback address, you can connect to the Tomcat server by specifying the port with the address in the URL search bar, as follows:

### http://127.0.0.1:8080

### Tomcat is up and running if you see this page, “it works!”.

**Conclusion:** Thus, I have Demonstrate installation of Java and Apache Tomcat Server.