The University of Azad Jammu and Kashmir, Muzaffarabad

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Course Name	Operating System
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Virtual Machine

A virtual machine (VM) is a software-based computer that behaves like a physical computer but is created from a pool of hardware resources. It lets you run another operating system, like Windows or Linux, without needing a separate physical device.

For example, you can run Windows on a Mac or test software safely in a separate environment.

How it works

A hypervisor (a Virtual Machine Monitor) manages the creation and execution of VMs. There are two types:

- **Bare-metal hypervisor**

Runs directly on the host's hardware (e.g., VMware Esi, Microsoft Hyper-V).

- **Hosted hypervisor**

Runs on an existing OS (e.g., VMware Workstation, Oracle VirtualBox).

Benefits

Virtual Machines have many benefits, including

i. **Cost savings**

VMs can reduce ongoing support and maintenance costs.

ii. **Flexibility**

Test different operating systems or software without affecting your main system.

iii. **Disaster recovery**

If the host crashes, VMs can be easily moved from one hypervisor to another.

iv. **Security**

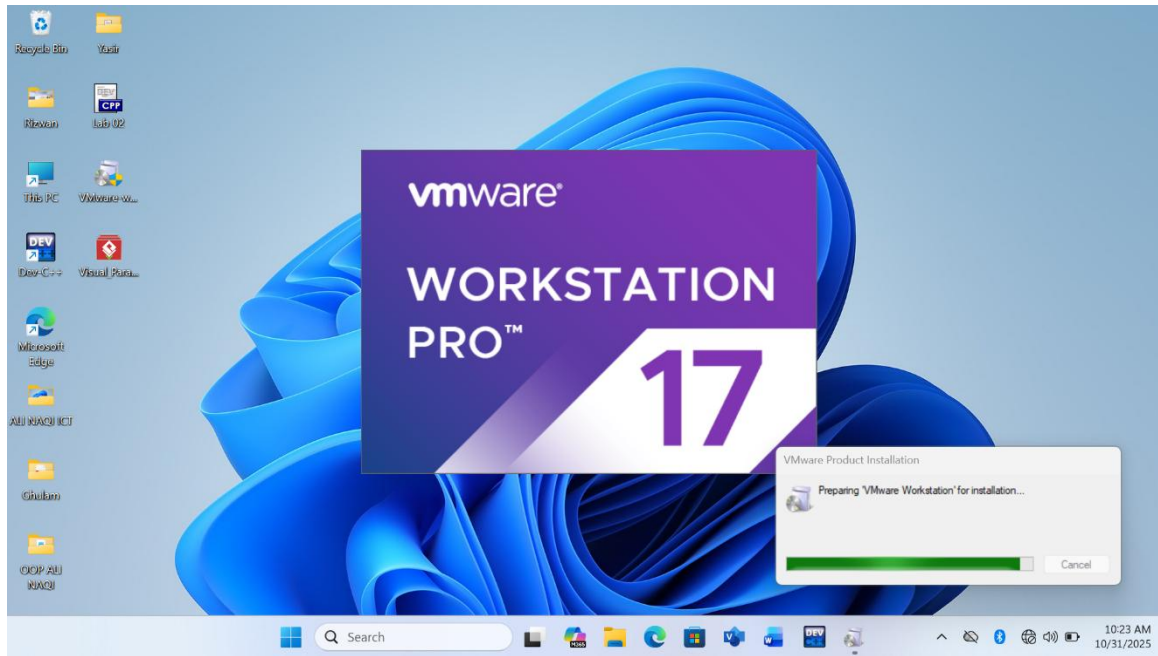Use VMs to run risky software or isolate suspicious files safely.

v. **Isolation**

Each VM is separate, so problems in one won't harm the others or the host machine.
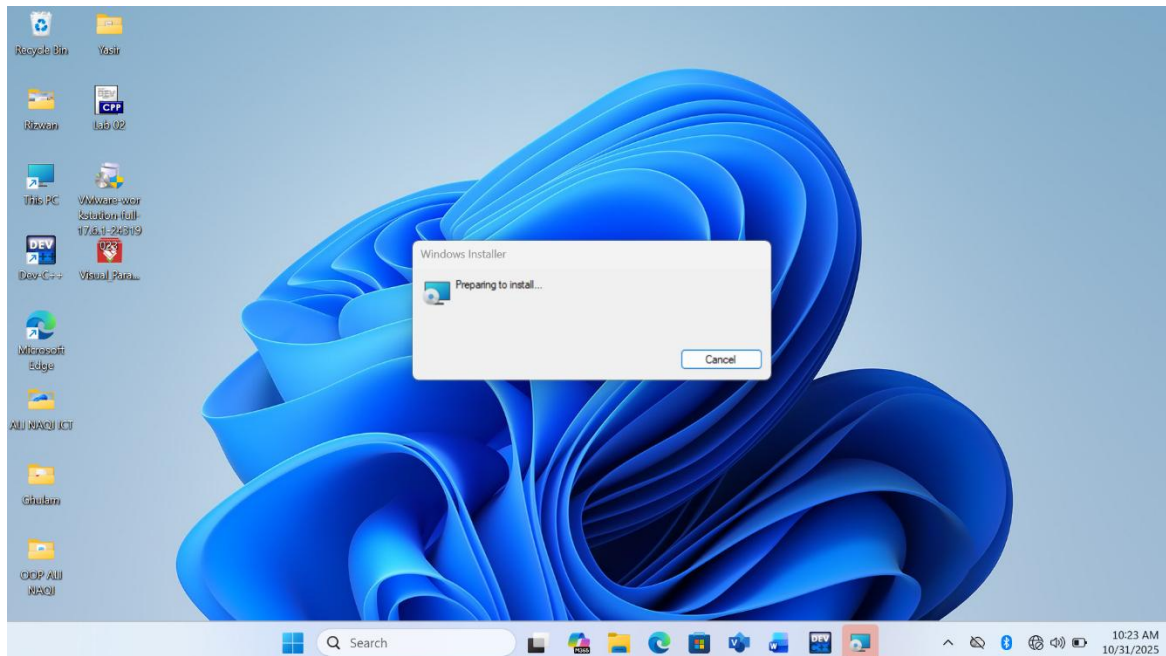
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Step-by-step Installation of VMware

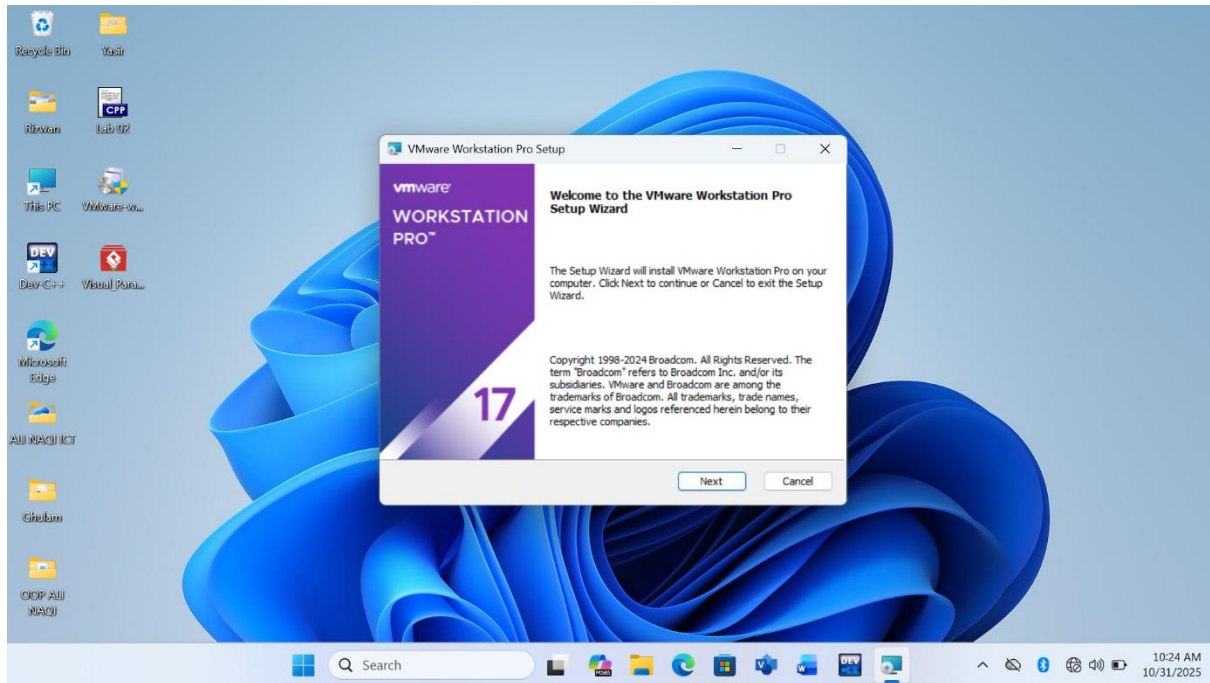Below are the detailed steps for installing VMware Workstation.

Step 1.

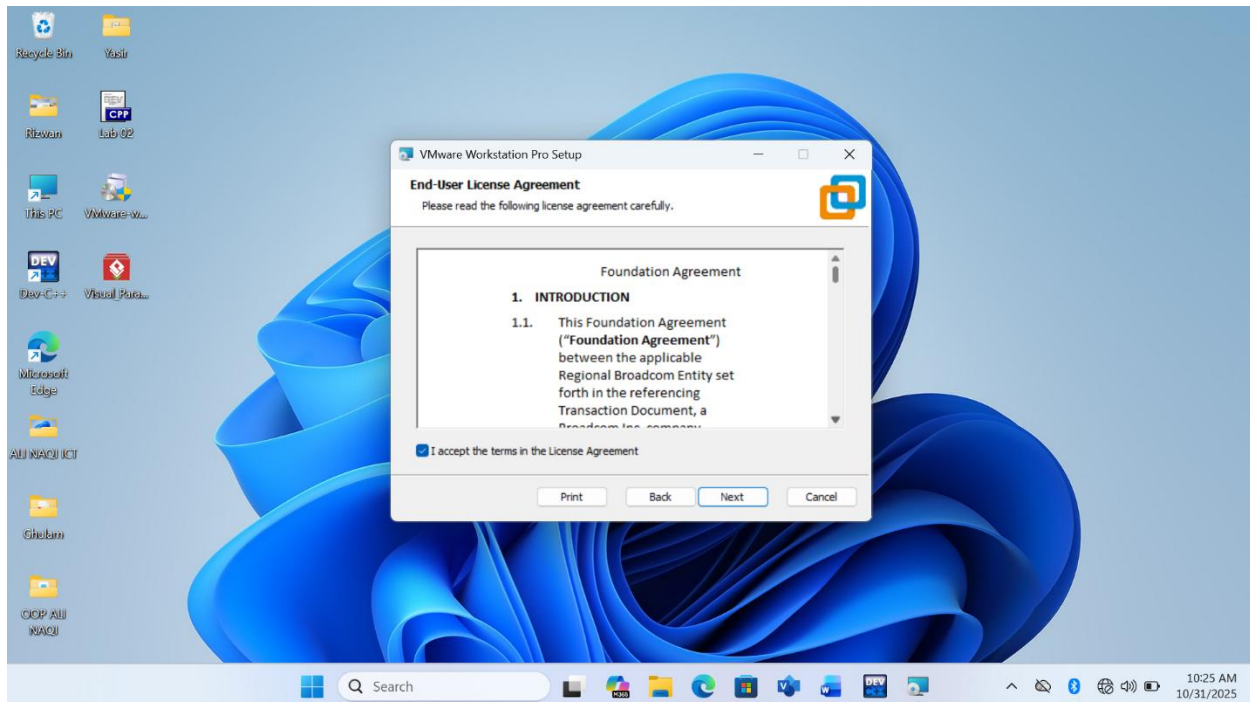**Step 2.** Run the .exe to install VMware Workstation. A popup will appear.

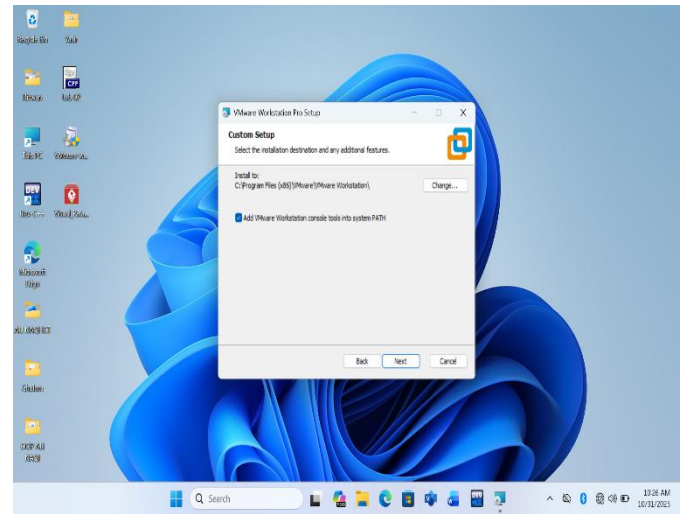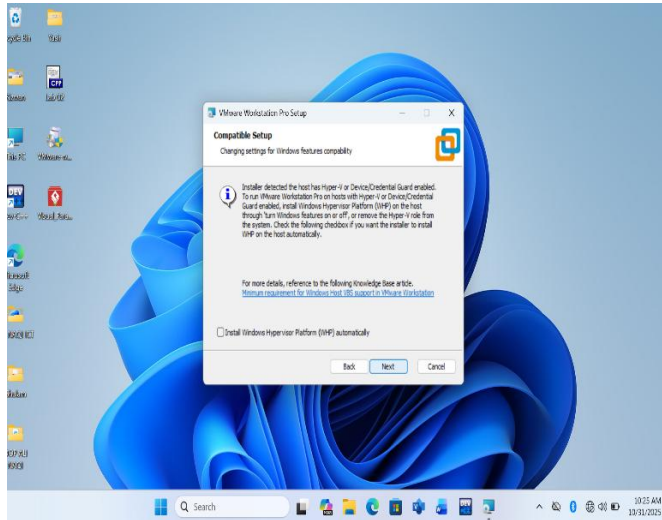*Department of Software Engineering*

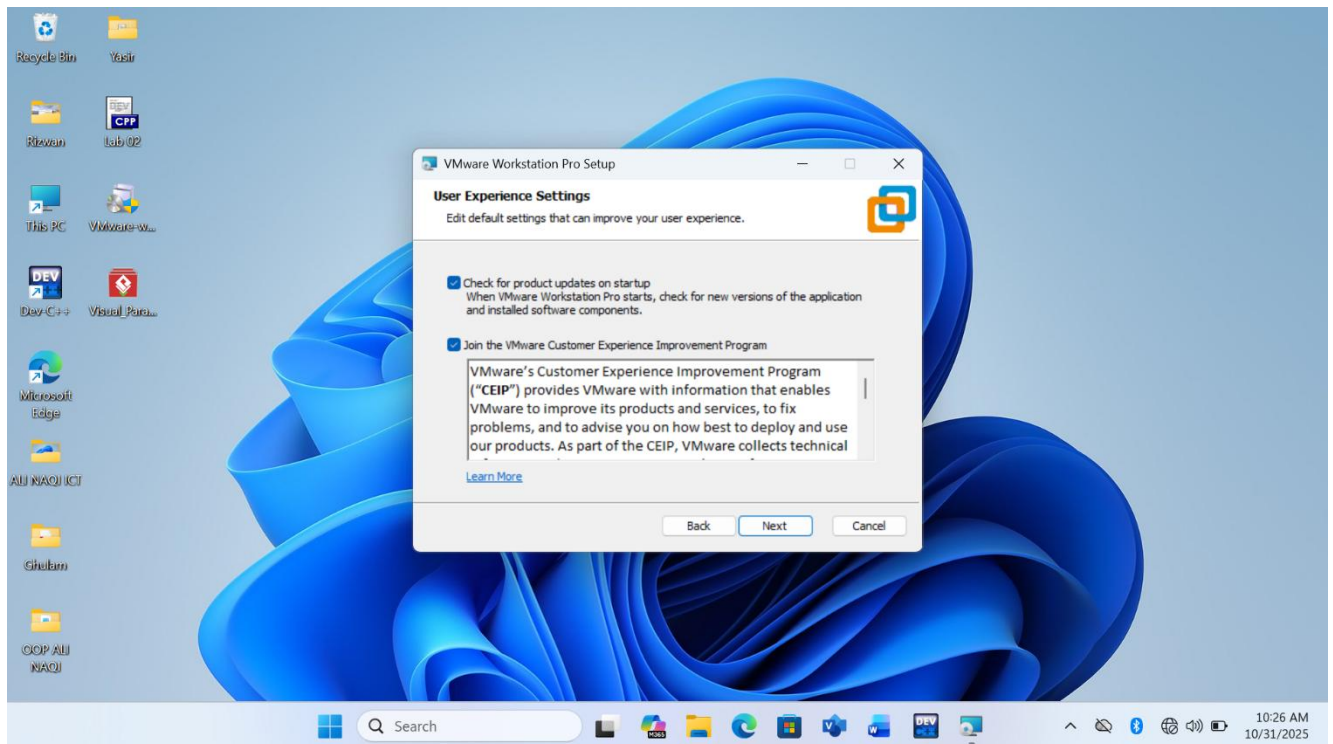**Step 3.** Once Initialization gets completed, click Next.

Step 4. Accept the terms and click next

Step 5. On the next screen, it will ask for additional features; it is not mandatory to check this box. Click on Next
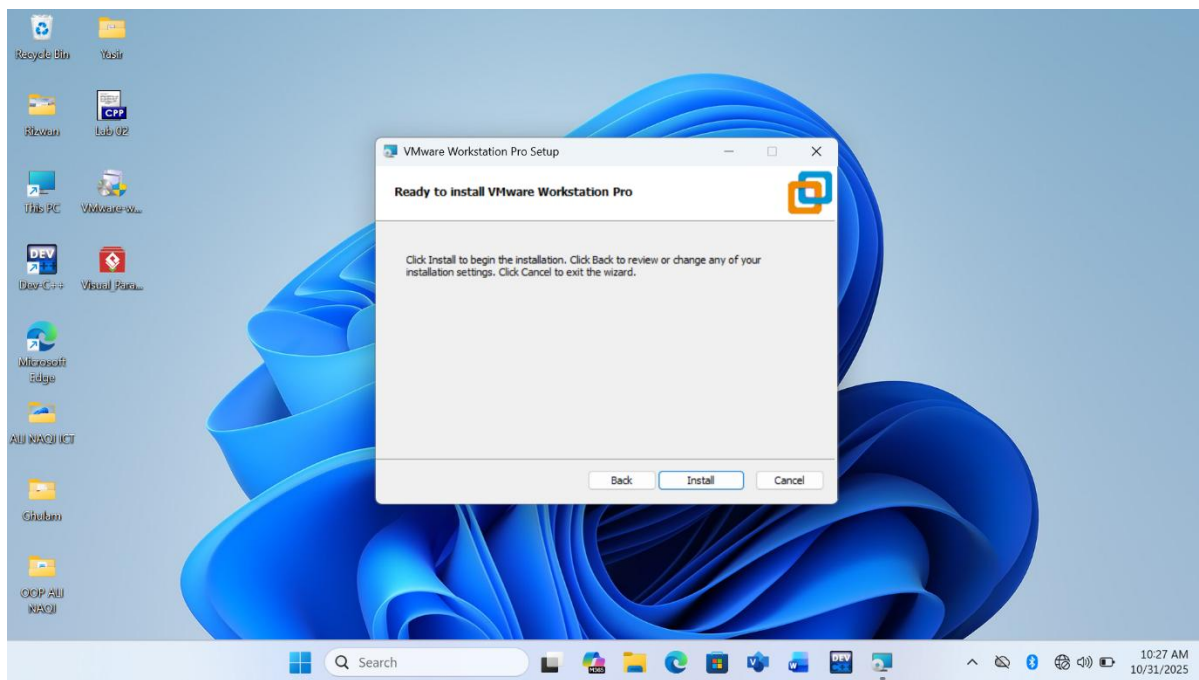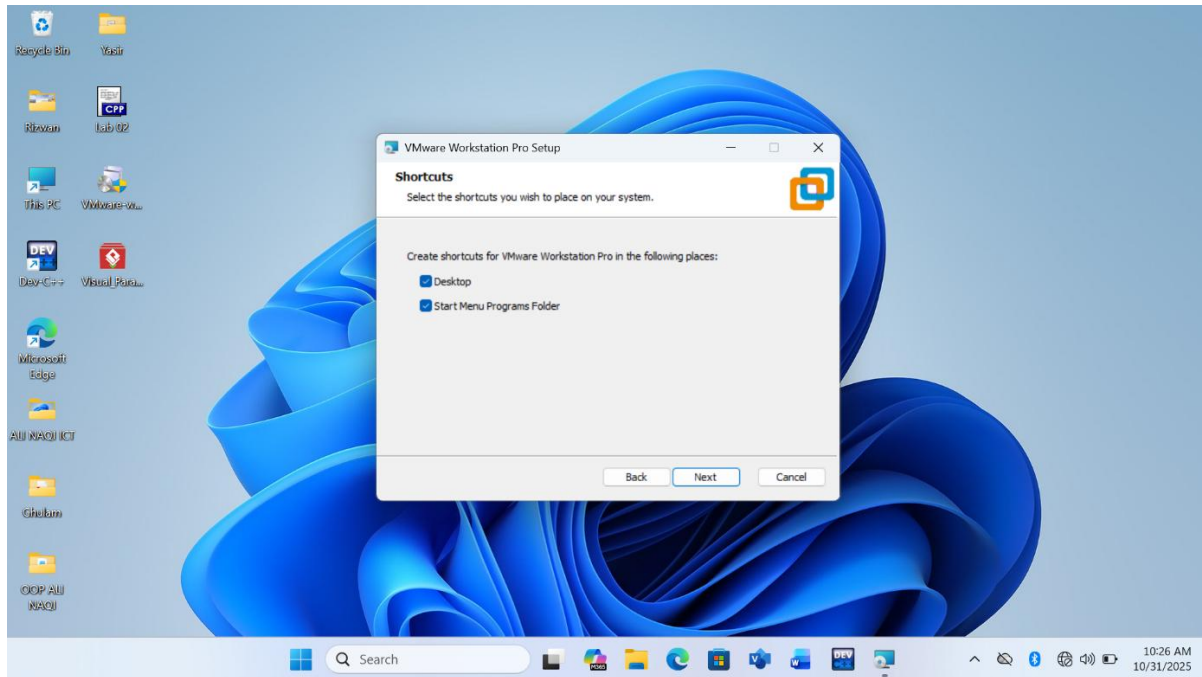

Step 6. On the next screen, some checkboxes are populated; check them as per your requirement.

Click on Next.

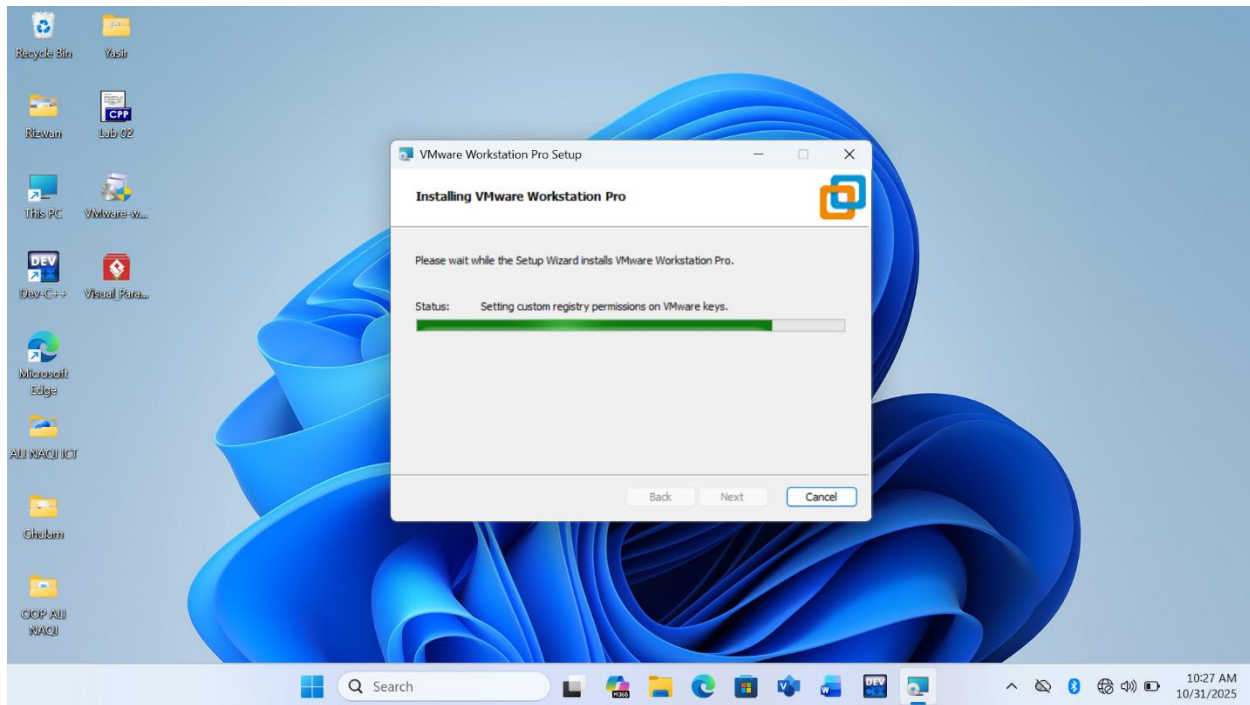
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Step 7. At this step, VMware Workstation is ready to install. Click on Install.

Step 8. At this step, you can see installation taking place. The installation will take some time; wait for it to be installed properly.

Step 9. Once the installation is completed, you will see the following dialogue box. Click on Finish. If you have purchased the product and have a license key, click on License to enter the key.

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