

Operating System Bonus Assignment

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Roll-No: 22P-9278

1 Grub Interface : showing all three Operating Systems



Figure 1: Triple Boot

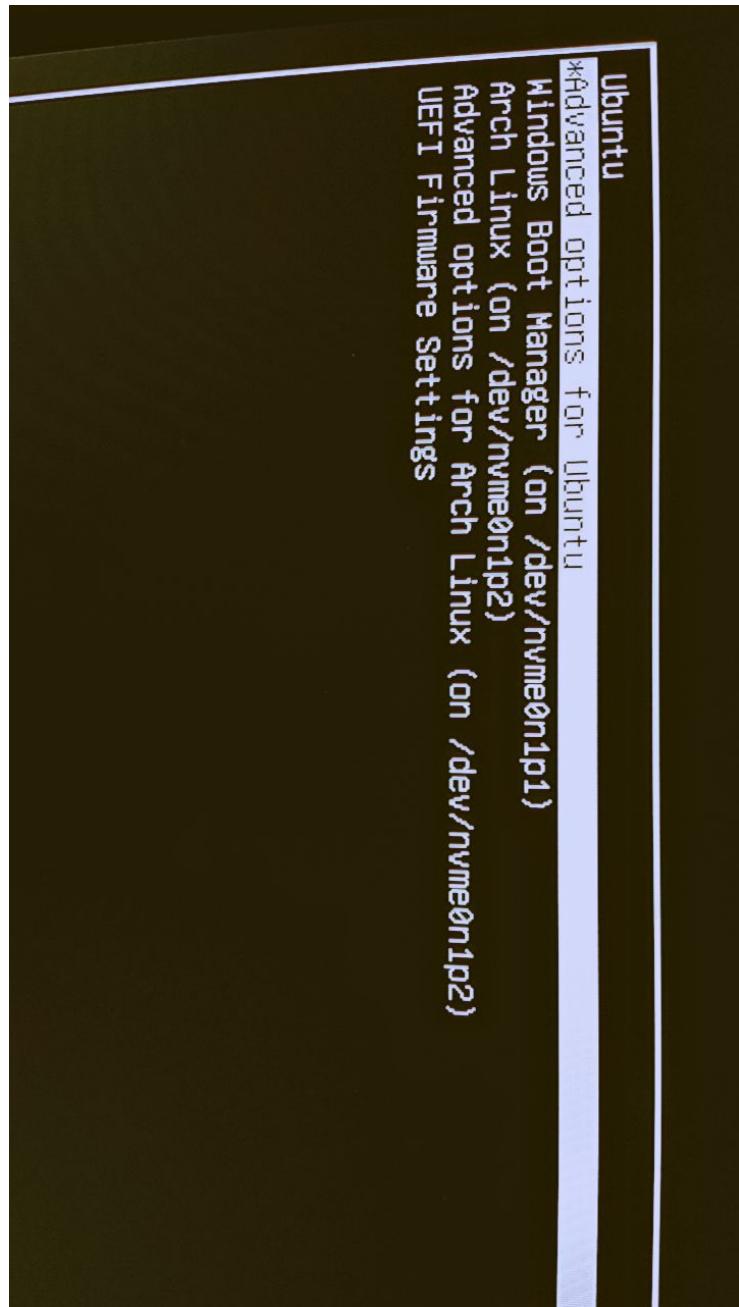


Figure 2: Triple Boot

2 Ubuntu Installation

2.1 Step 1: GRUB Menu

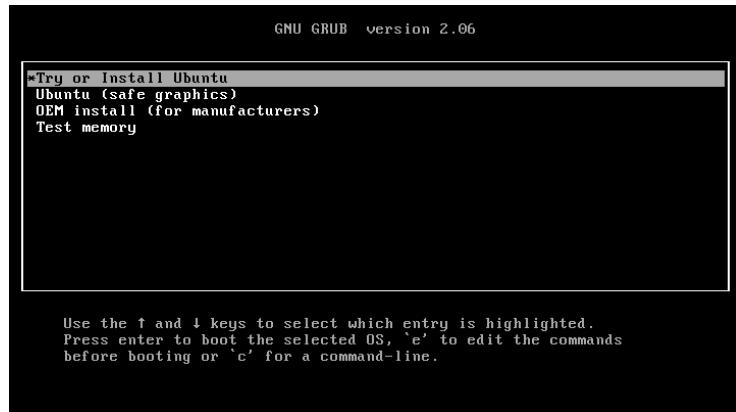


Figure 3: GRUB menu offers options to try or install Ubuntu, alongside other useful choices.

2.2 Step 2: Booting into the Installer

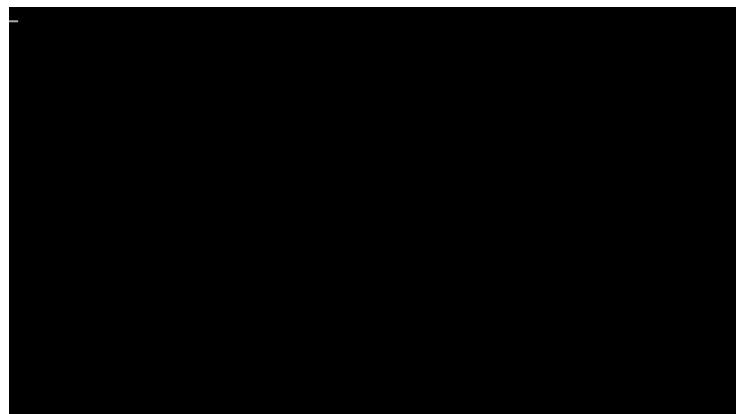


Figure 4: The system begins loading the Ubuntu installer.

2.3 Step 3: Ubuntu Splash Screen

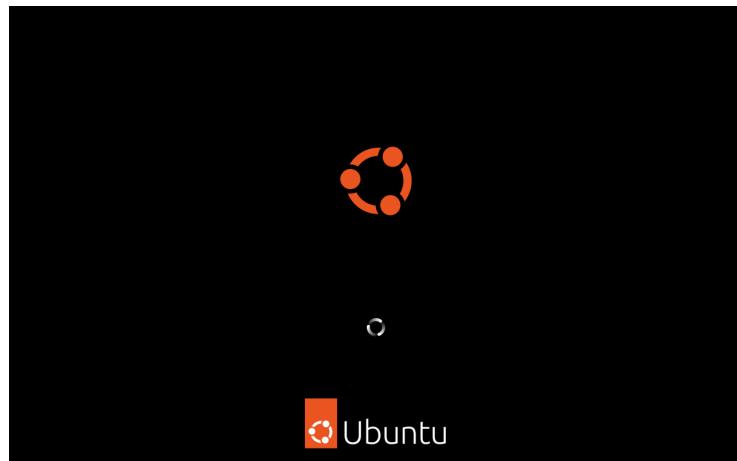


Figure 5: The Ubuntu splash screen with the logo indicates that components are loading.

2.4 Step 4: Verifying Installation Configuration

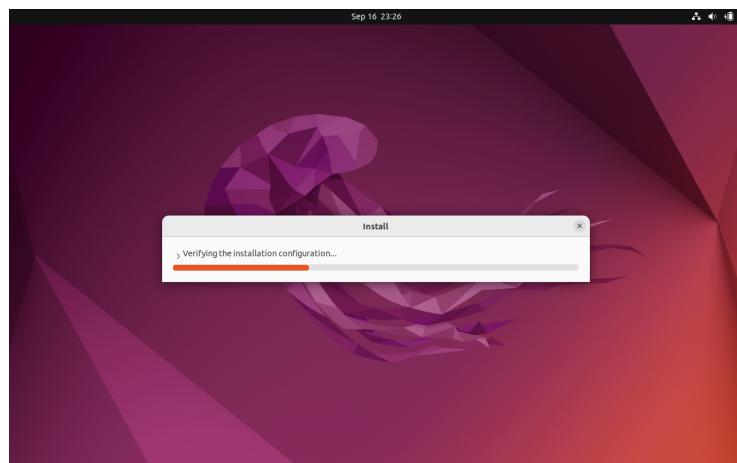


Figure 6: The installer verifies the system configuration to proceed.

2.5 Step 5: Installation Logs

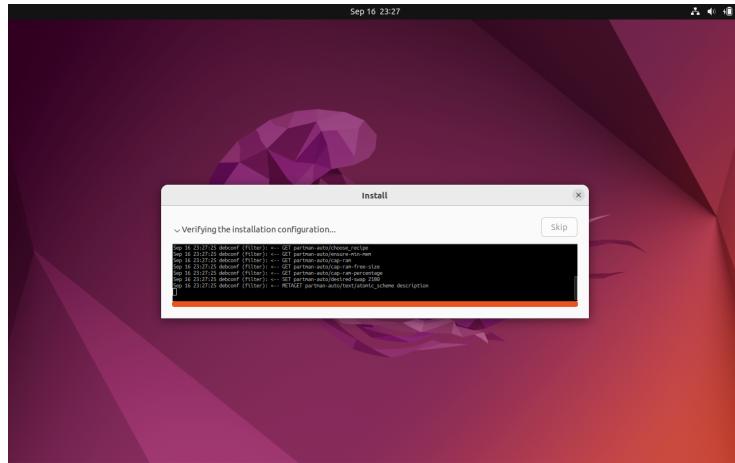


Figure 7: Detailed output logs during the installation process.

2.6 Step 6: User Creation

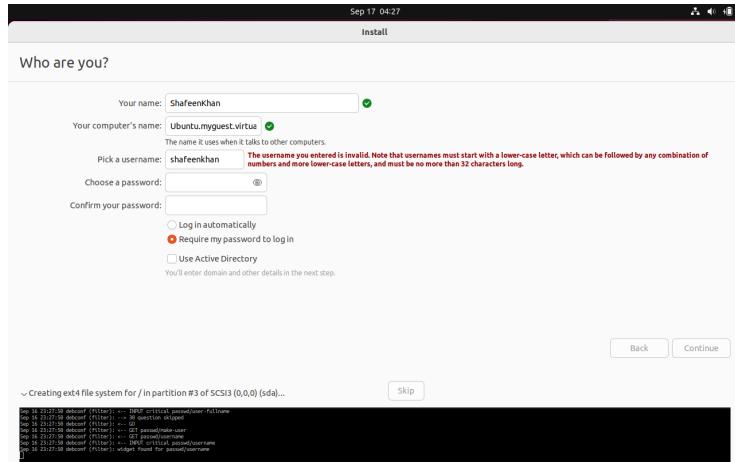


Figure 8: Prompt to create a user account with a username and password.

2.7 Step 7: Copying Files

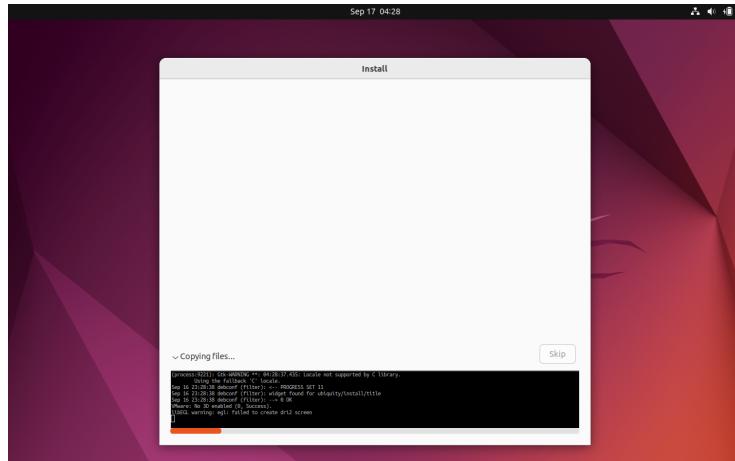


Figure 9: The installer begins copying files to the hard drive.

2.8 Step 8: Installing Additional Software

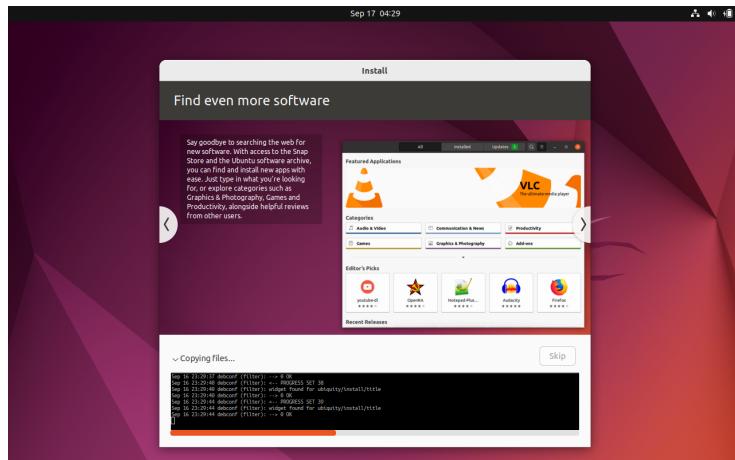


Figure 10: The installer showcases software available in the Ubuntu Software Center.

2.9 Step 9: Application Showcase



Figure 11: Showcase of Shotwell Photo Manager and other applications during installation.

2.10 Step 10: Web Browsing Tools

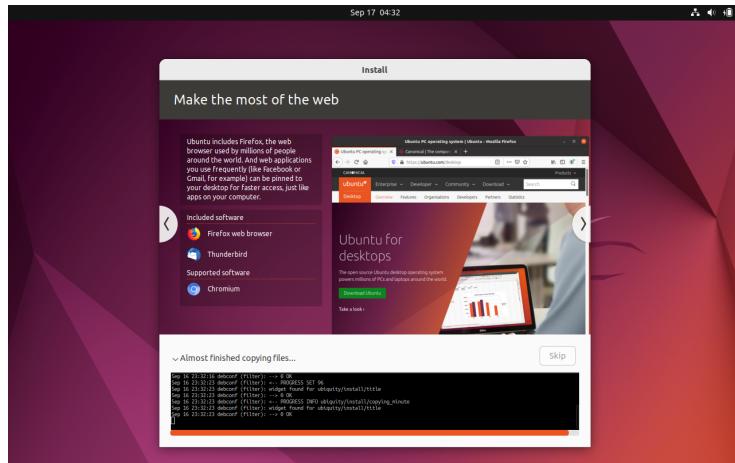


Figure 12: Showcase of web browsers like Firefox and Thunderbird.

2.11 Step 11: Accessibility Options

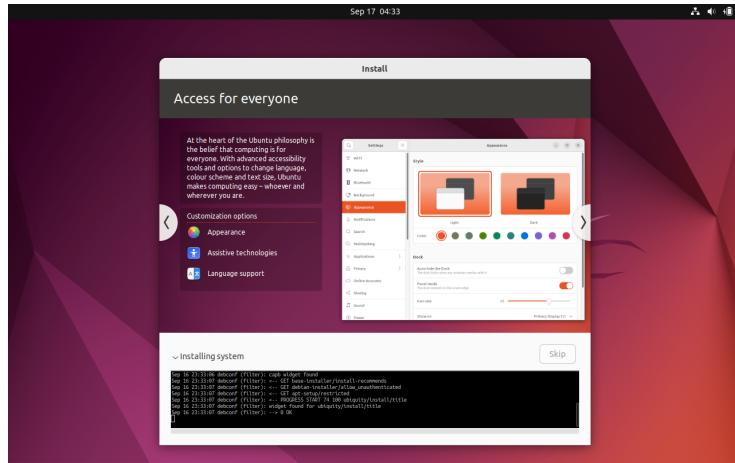


Figure 13: Ubuntu highlights accessibility options such as appearance, assistive technologies, and language support.

2.12 Step 12: Help and Support

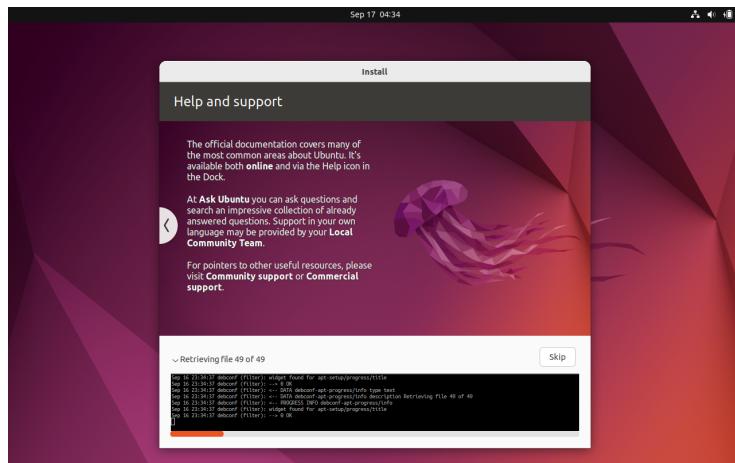


Figure 14: Ubuntu provides help and support channels, including the "Ask Ubuntu" community.

2.13 Step 13: Loading USB Storage Modules

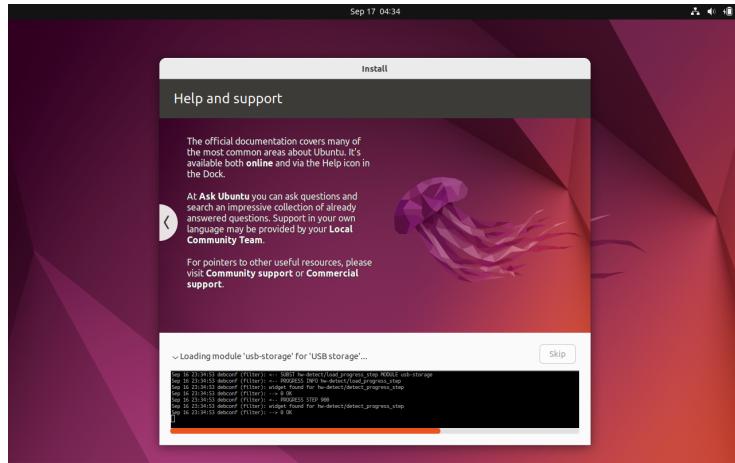


Figure 15: The installer loads modules for USB storage as part of the final installation process.

2.14 Step 14: GRUB Installation

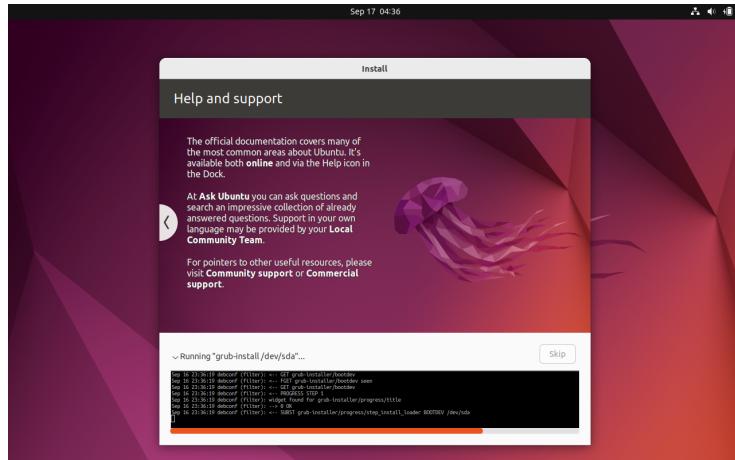


Figure 16: The system installs GRUB, the bootloader, onto the main storage device.

2.15 Step 15: Running dpkg

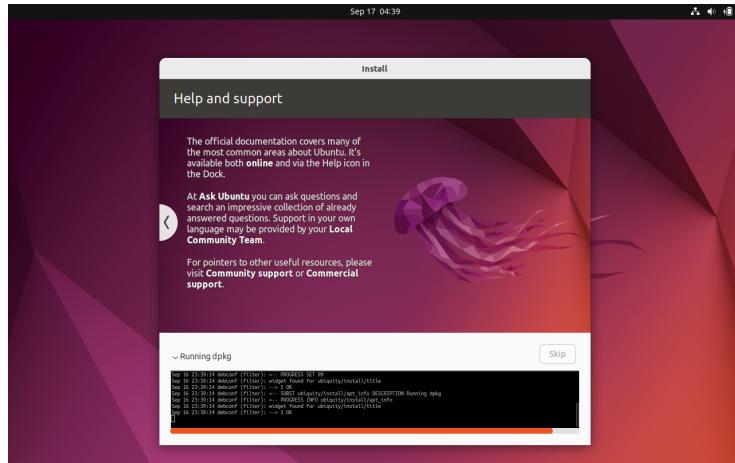


Figure 17: The system runs `dpkg` to manage and configure packages.

2.16 Step 16: Copying Installation Logs

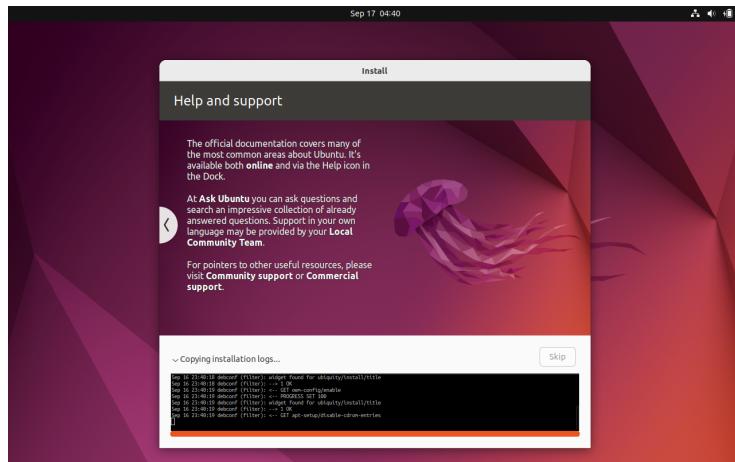


Figure 18: The installer copies logs as the installation process nears completion.

2.17 Step 17: Rebooting

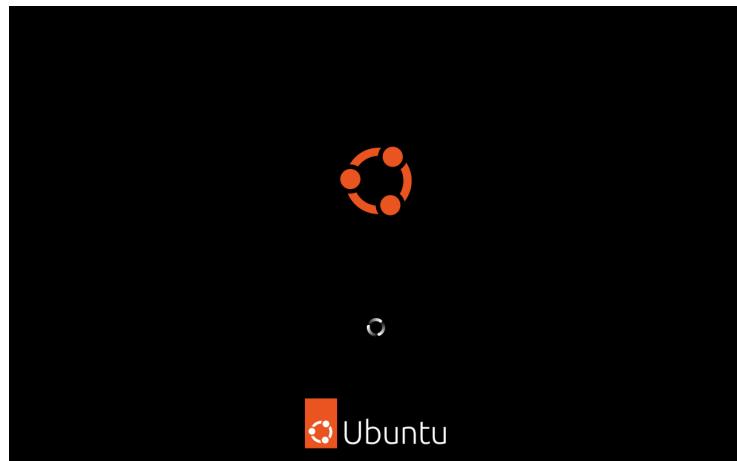


Figure 19: The Ubuntu splash screen reappears as the system reboots after installation.

2.18 Step 18: Final Desktop

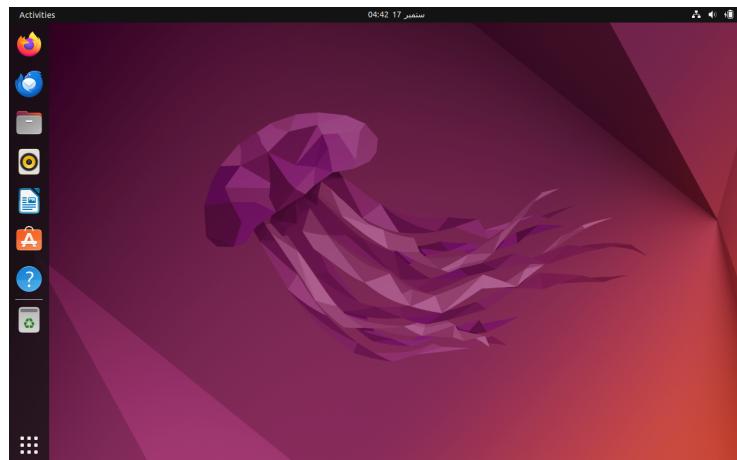


Figure 20: The Ubuntu desktop is displayed after successful installation, with key applications visible in the sidebar.

3 Windows Installation

3.1 Step 1: Booting from CD/DVD



Figure 21: The installation process begins by booting from the CD or DVD.

3.2 Step 2: Setup Initialization

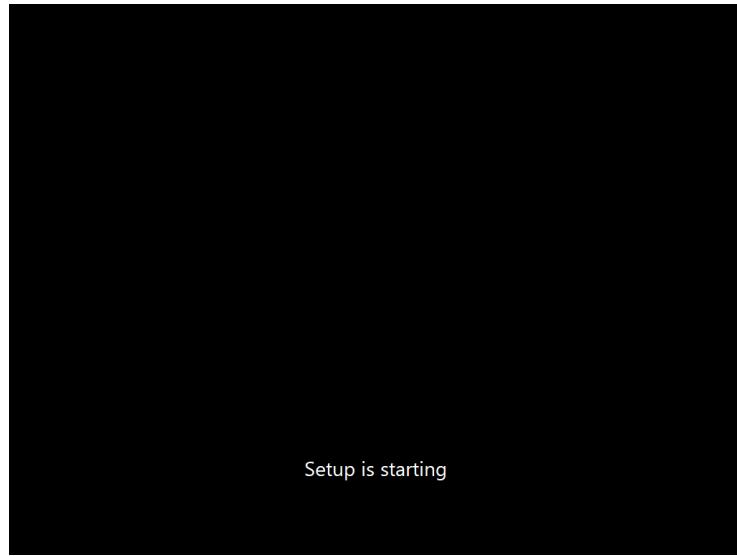


Figure 22: Windows setup is starting.

3.3 Step 3: Language and Preferences Selection

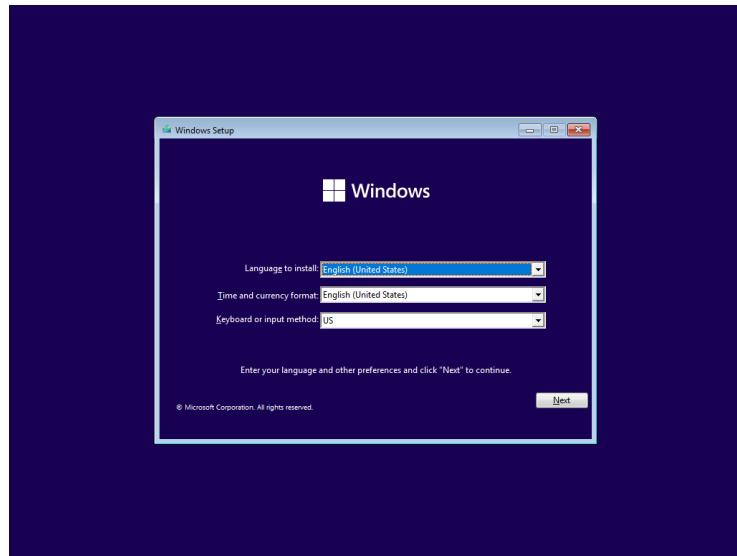


Figure 23: The Windows setup asks for language, time, and keyboard preferences.

3.4 Step 4: Installation or Repair Options

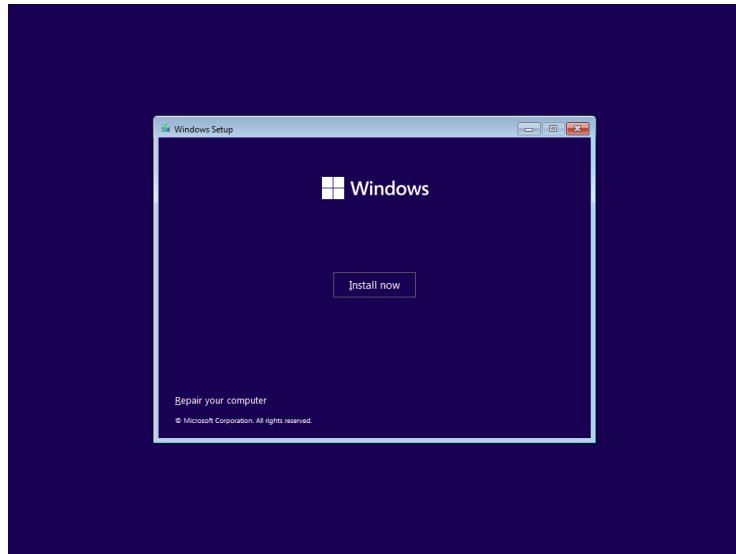


Figure 24: The user can either install Windows or access repair tools.

3.5 Step 5: Product Key Activation

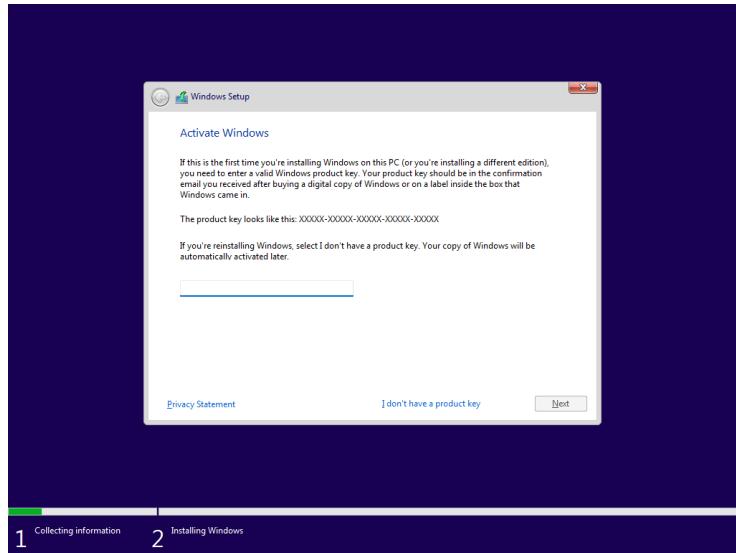


Figure 25: The product key entry screen for activating Windows.

3.6 Step 6: Skipping Product Key Entry

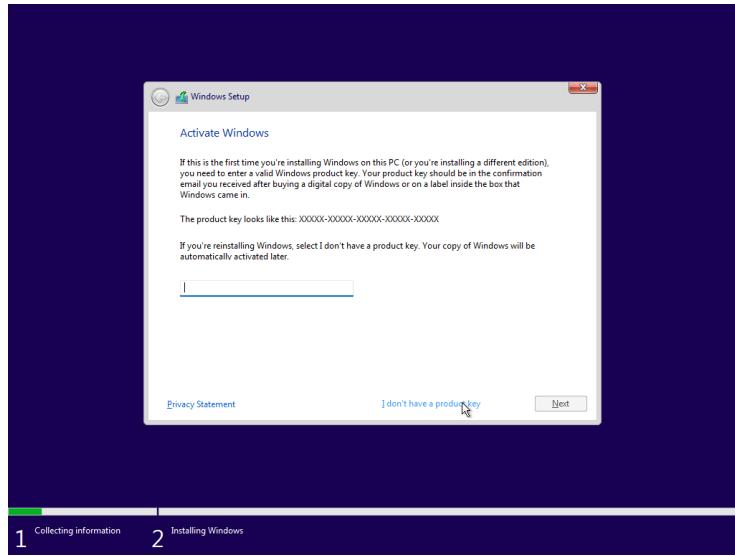


Figure 26: The user opts to continue without entering a product key.

3.7 Step 7: Windows Edition Selection

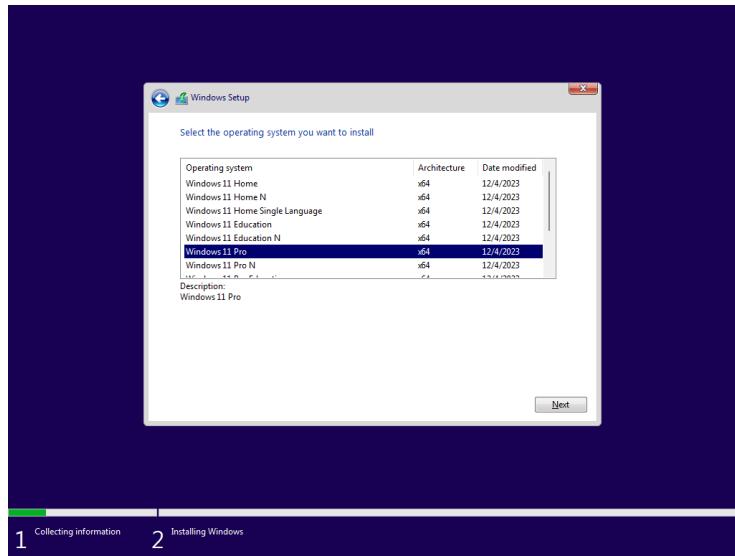


Figure 27: The user selects the edition of Windows to install, such as Windows 11 Pro.

3.8 Step 8: License Agreement

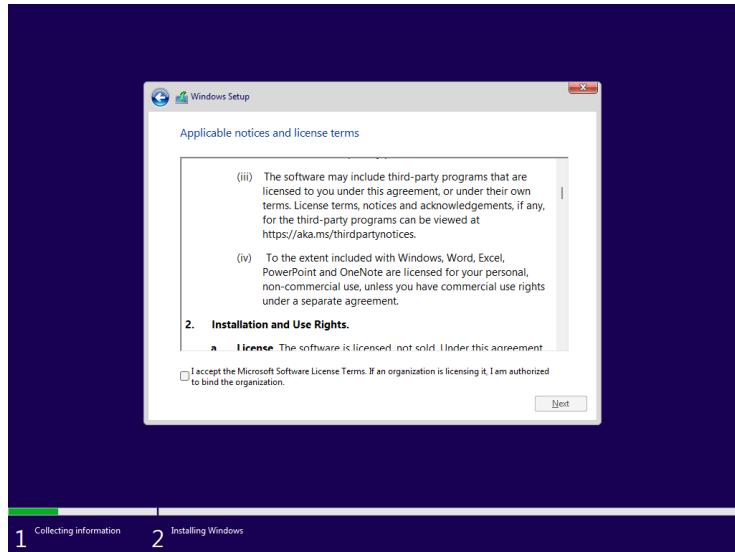


Figure 28: The Windows license terms, which the user must accept to proceed.

3.9 Step 9: Installation Type Selection

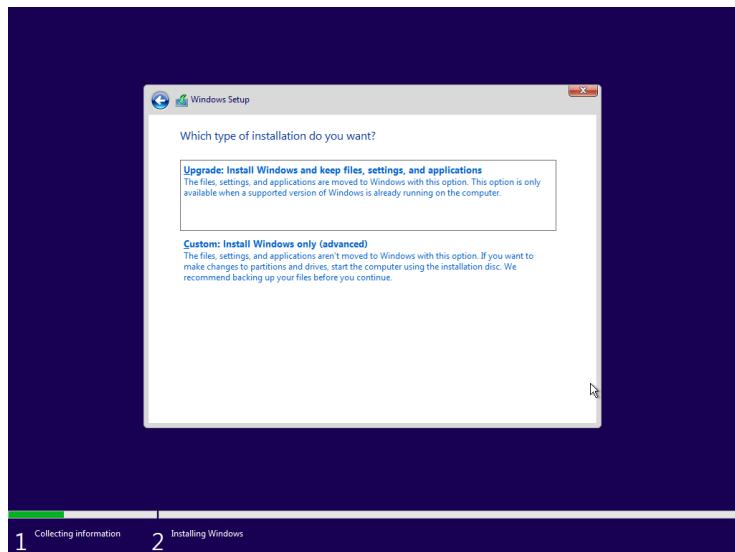


Figure 29: The user is given the choice to upgrade or perform a custom installation.

3.10 Step 10: Disk Selection for Installation

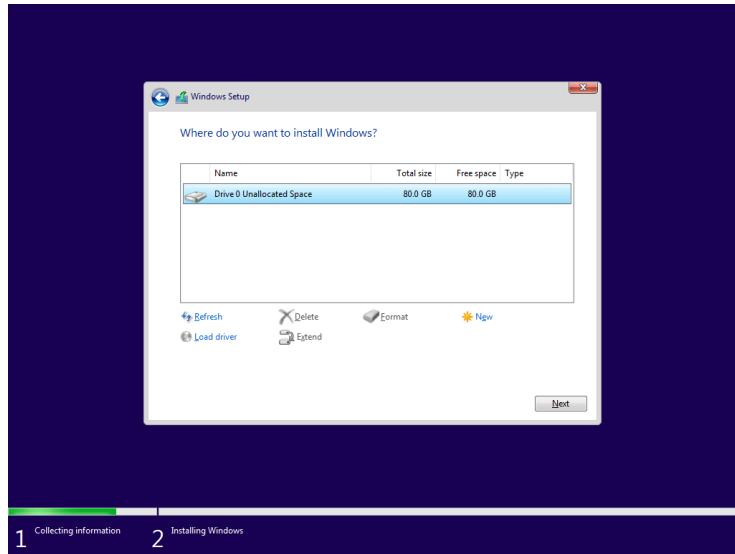


Figure 30: The user selects the disk or partition where Windows will be installed.

3.11 Step 11: Windows Setup Partition Selection

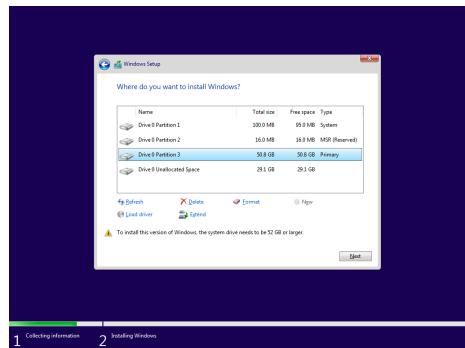


Figure 31: Partition selection screen showing available drives for Windows installation. The user selects a 50.8 GB partition.

3.12 Step 12: Installing Windows - Progress

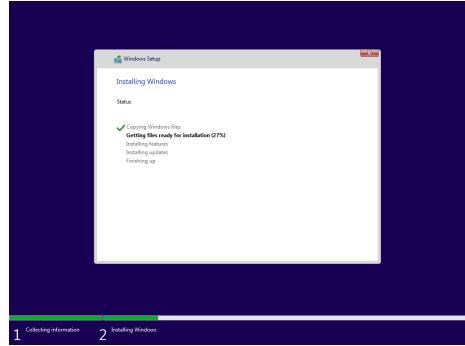


Figure 32: Windows installation progress: Files are being prepared for installation (27% complete).

3.13 Step 13: Windows Setup Restart Screen

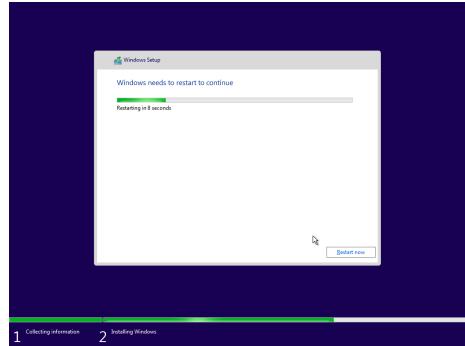


Figure 33: Windows setup requires a restart to continue installation. A countdown to automatic restart is shown.

3.14 Step 14: Windows Regional Settings

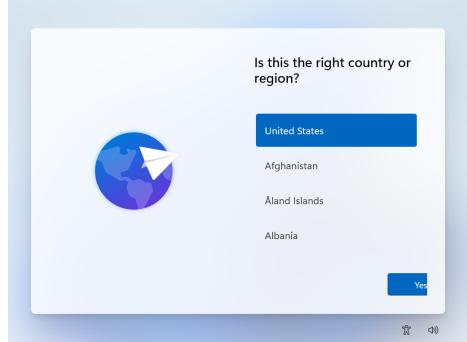


Figure 34: The user is asked to select the country or region. The default option is United States.

3.15 Step 15: Windows Keyboard Layout Selection

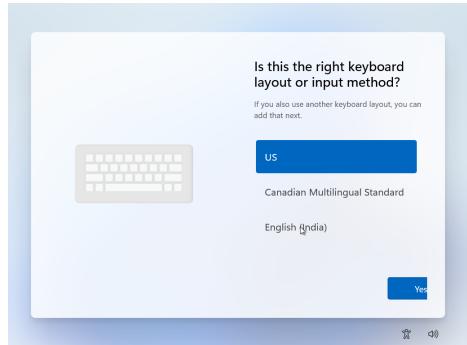


Figure 35: Keyboard layout selection screen with default option set to US. Other layouts like Canadian Multilingual Standard are available.

3.16 Step 16: Windows Update Check

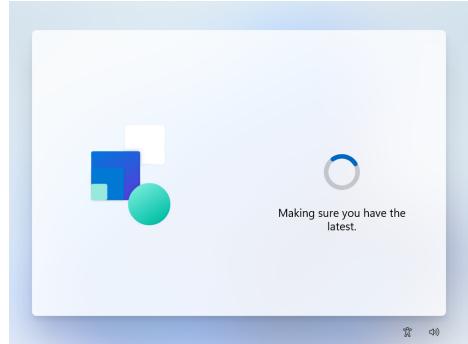


Figure 36: The system is checking for updates to ensure the latest version is installed.

3.17 Step 17: Device Name Input

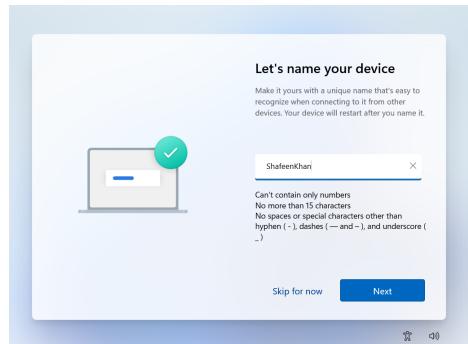


Figure 37: The user is prompted to name their device. The entered name is ShafeenKhan.

3.18 Step 18: Microsoft Account Setup



Figure 38: Option to sign in with a Microsoft account to unlock full features like syncing and security settings.

3.19 Step 19: Microsoft Account Login

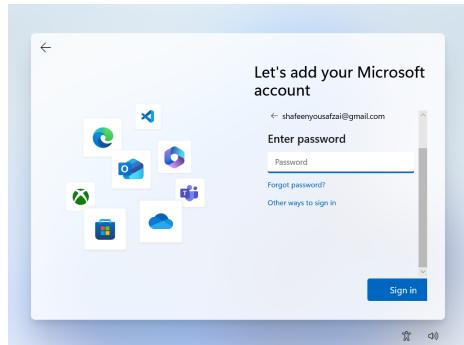


Figure 39: Prompt to enter the password for the Microsoft account (shafeenyousafzai@gmail.com).

3.20 Step 20: Microsoft Account Finalization

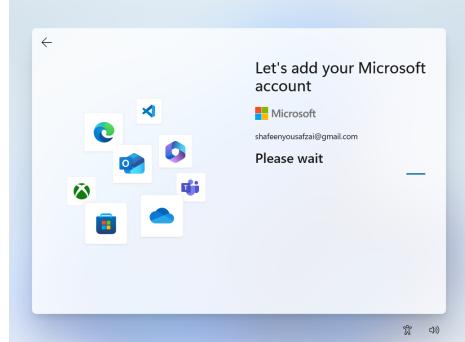


Figure 40: The system is finalizing the login to the Microsoft account.

3.21 Step 21: Welcome Back Screen

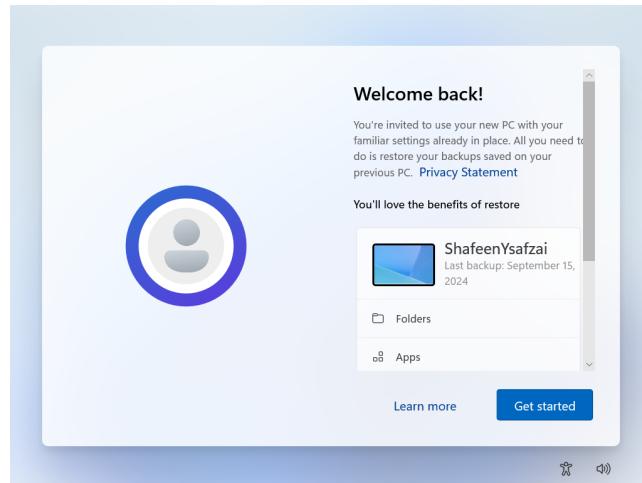


Figure 41: Welcome back screen with the option to restore settings and backups.

3.22 Step 22: Choose Privacy Settings

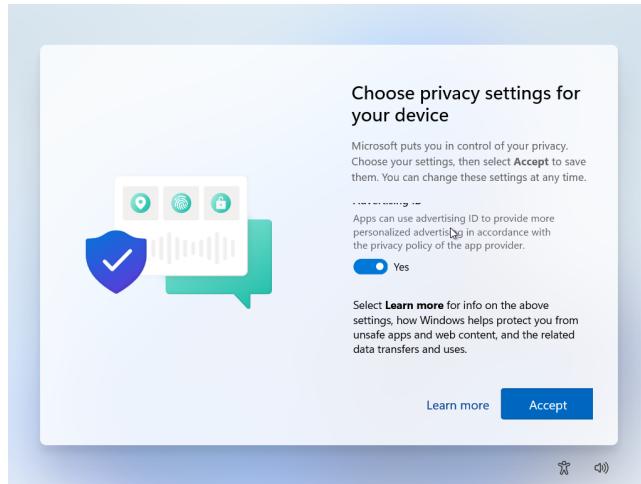


Figure 42: Privacy settings screen for selecting personalized advertising preferences.

3.23 Step 23: Recent Browsing Data Access

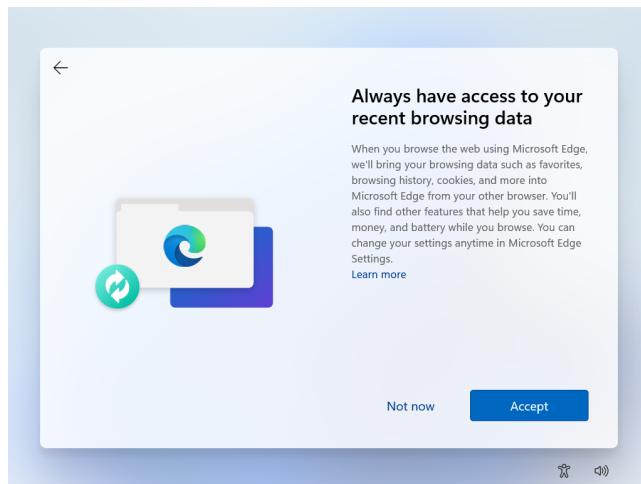


Figure 43: Option to allow access to recent browsing data in Microsoft Edge.

3.24 Step 24: Confirm Subscription

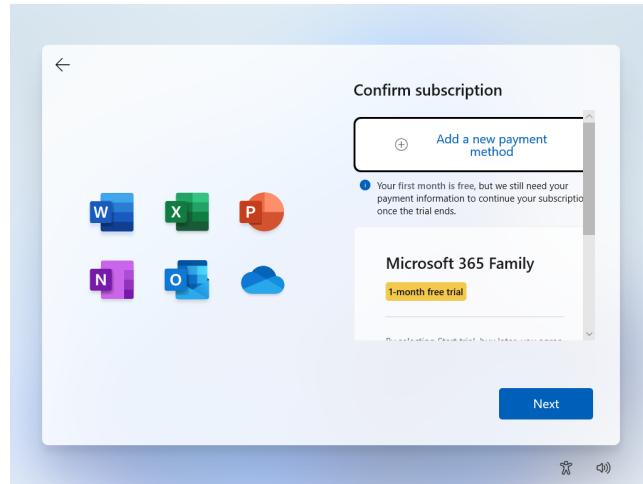


Figure 44: Microsoft 365 Family subscription confirmation screen.

3.25 Step 25: Tools for Focus

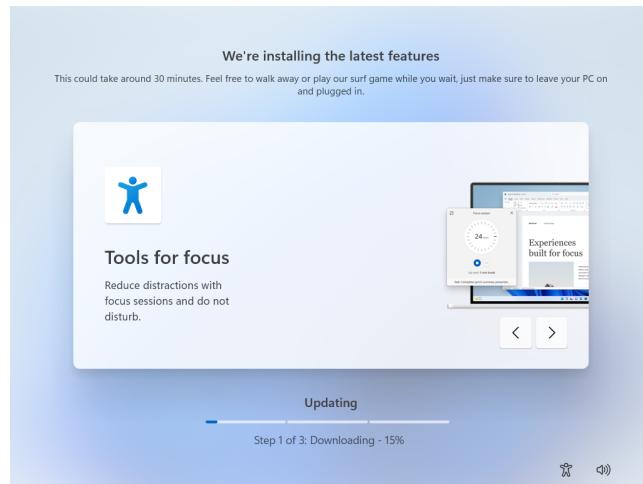


Figure 45: Installing features screen with tools for focus.

3.26 Step 26: Installing Update in Progress

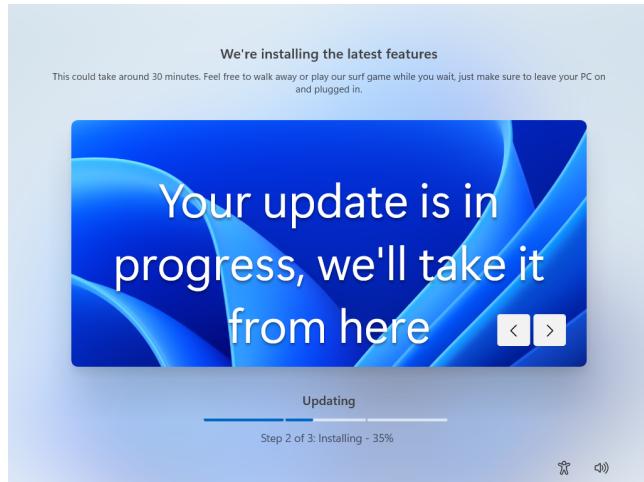


Figure 46: Update installation in progress screen.

4 Step 27: Preparing to Restart

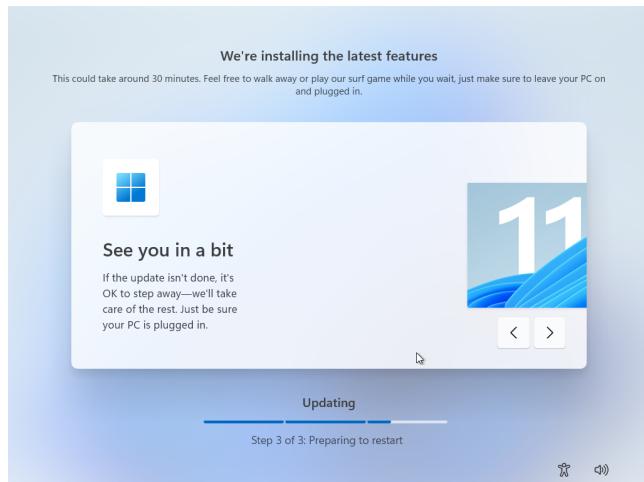


Figure 47: Preparing to restart after update installation.

4.1 Step 28: Updates Underway

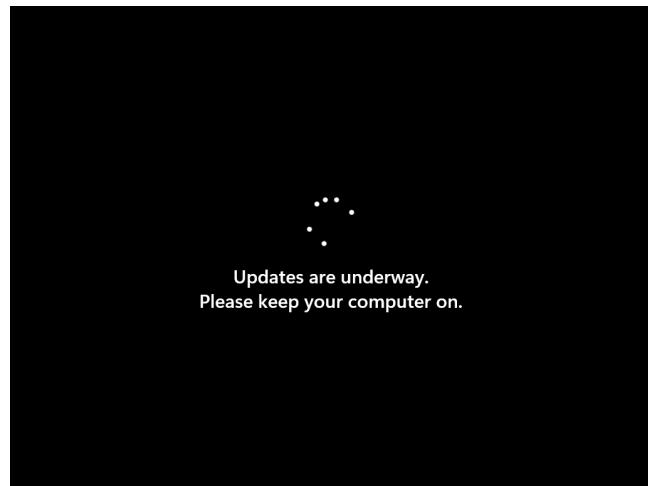


Figure 48: Updates underway screen with instructions to keep the computer on.

5 Step 29: Login Screen

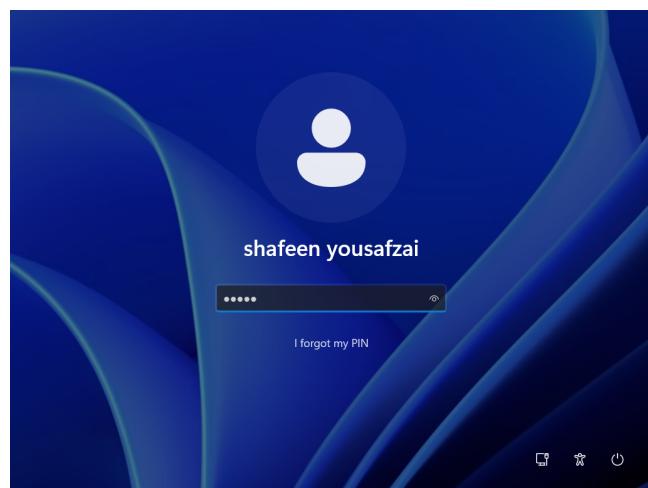


Figure 49: Login screen for user Shafeen Yousafzai.

5.1 Step 30: Desktop Screen

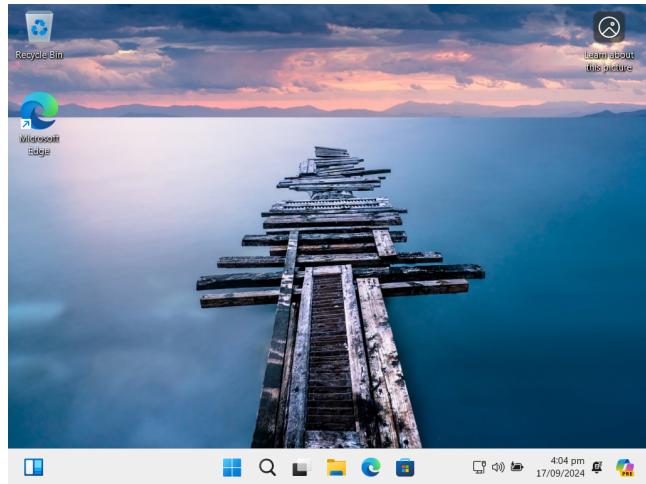


Figure 50: Windows desktop screen with default icons and a scenic wallpaper.

6 Arch Linux Installation

6.1 Step : 01

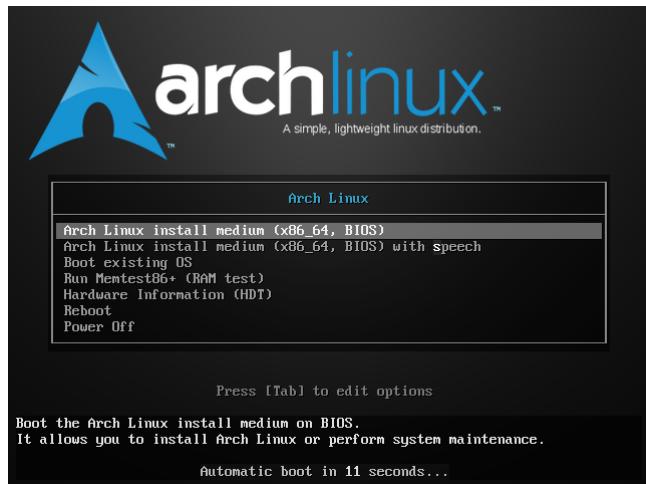


Figure 51: Interface to choose different options. Choose installation

6.2 Step : 02

```
Probing EDID (edid-0) to disable)... ok
Starting aiglxed-drm version 256.6-1-sch
running early hook /archivox/pre.shd
...
Triggering events...
3.146011 umagfx 0000:00:02.0: (drm) +*ERROR* umagfx seems to be running on
an unsupported hypervisor.
3.146011 umagfx 0000:00:02.0: (drm) +*ERROR* This configuration is likely b
e
3.146015 umagfx 0000:00:02.0: (drm) +*ERROR* Please switch to a supported g
raphic card or hypervisor.
running hook (needsdk)
...
running hook (archissh)
running hook (archissh_update_xpop_mnt)
running hook (archissh_xvc_common)
running hook (archissh_xvc_http)
running hook (archissh_xvc_http)
Mounting '/dev/sda1' to '/run/archivox/kboot'
Device '/dev/sda2' mounted successfully
Mounting '/dev/sda3' to '/run/archivox/krootfs'
Mounting '/dev/sda4' to '/run/archivox/airrootfs'
Device '/dev/sda5' mounted successfully
running late hook /archivox/command
running cleanup hook /indexd
```

Figure 52: loading screen

6.3 Step : 03

```
[ 0x ] Finished Create List of Static Device Nodes.
[ 0x ] Started Kernel Module config...
[ 0x ] Finished Load Kernel Module driver...
[ 0x ] Finished Load Kernel Module file...
[ 0x ] Reached target Preparation for Network.
[ 0x ] Reached target Configuration of Network interface...
[ 0x ] Mounting Kernel Configuration File System...
[ 0x ] Starting Create Static Device Nodes...
[ 0x ] Started Create Static Device Nodes successfully...
[ 0x ] Finished Create Static Device Nodes...
[ 0x ] Starting Load-SAS OS Random Seed...
[ 0x ] Started Load-SAS OS Random Seed...
[ 0x ] Finished Load Kernel Modules...
[ 0x ] Started Load Kernel Configuration File System...
[ 0x ] Finished Load user Role: From Credentials...
[ 0x ] Started Load Persistent Storage...
[ 0x ] Started Apply Kernel Variables...
[ 0x ] Started Load-SAS OS Random Seed...
[ 0x ] Finished Load-SAS OS Random Seed...
[ 0x ] Finished Flash Journal to Persistent Storage...
[ 0x ] Started Load-SAS OS Random Seed...
[ 0x ] Finished Monitoring of LVM mirrors, snapshots etc. using deconfigd or progress polling...
[ 0x ] Started Network Configuration...
[ 0x ] Starting User Database Manager...
[ 0x ] Started Network Configuration...
[ 0x ] Finished Create STATIC Device Nodes in /dev/gracefully...
[ 0x ] Finished Create System Users...
[ 0x ] Starting Create STATIC Device Nodes in /dev...
[ 0x ] Finished Create STATIC Device Nodes in /dev...
[ 0x ] Reached target Preparation for Local File Systems...
[ 0x ] Reached target Mounting Local File Systems...
[ 0x ] Reached target Containers...
[ 0x ] Starting File-based Manager for Device Events and Files...
[ 0x ] Finished File-based Manager for Device Events and Files...
[ 0x ] Reached target Local File Systems...
[ 0x ] Listening on /tmp/.X11-unix/X0 socket...
[ 0x ] Listening on System Extension Image Management...
[ 0x ] Starting Automatic Boot Loader Update...
[ 0x ] Starting Create System Files and Directories...
[ 0x ] Finished Create System Files and Directories...
[ 0x ] Started Rule-based Manager for Device Events and Files...
[ 0x ] Starting Network configuration...
```

Figure 53: loading screen

6.4 Step : 04



Figure 54: Command to start simple installation

6.5 Step : 05

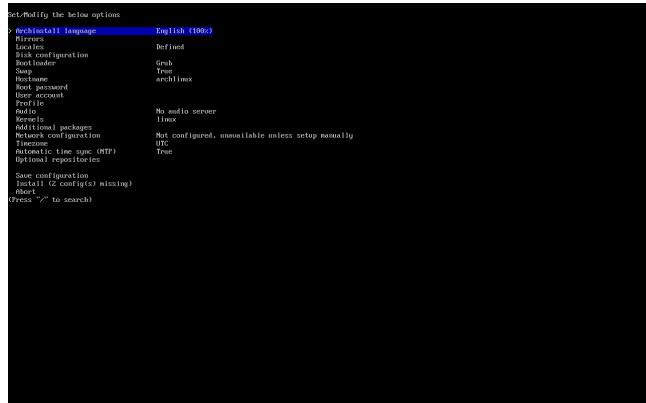


Figure 55: Configure disk , network , profile etc partitions

6.6 Step : 06

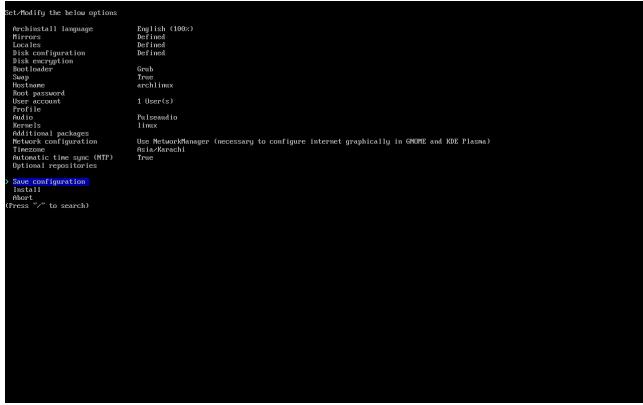


Figure 56: Configuration Done

6.7 Step : 07

Figure 57: Installation in progress , packages being installed

6.8 Step : 08



Figure 58: Restarting after installation

6.9 Step : 09

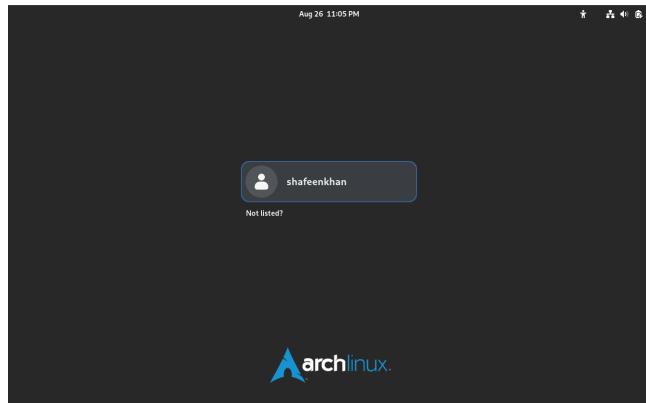


Figure 59: Arch Linux Profile

6.10 Step : 10

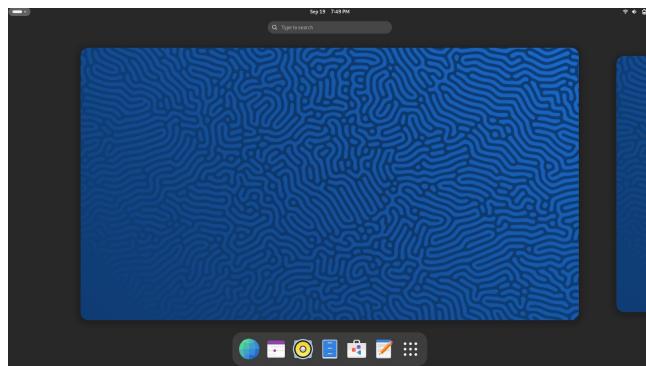


Figure 60: Arch Linux Desktop