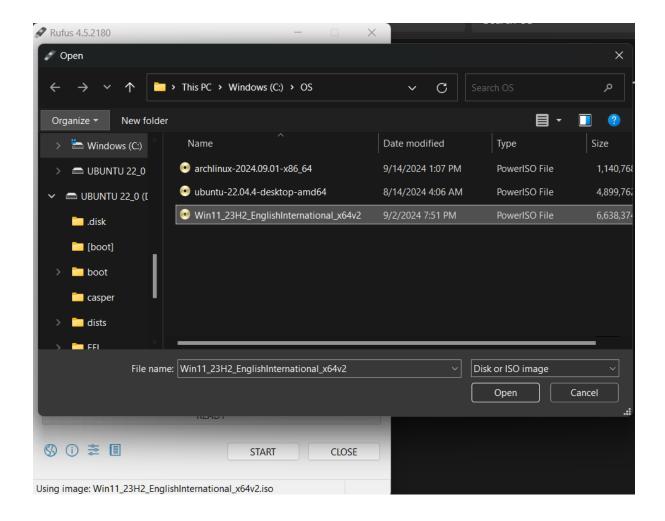
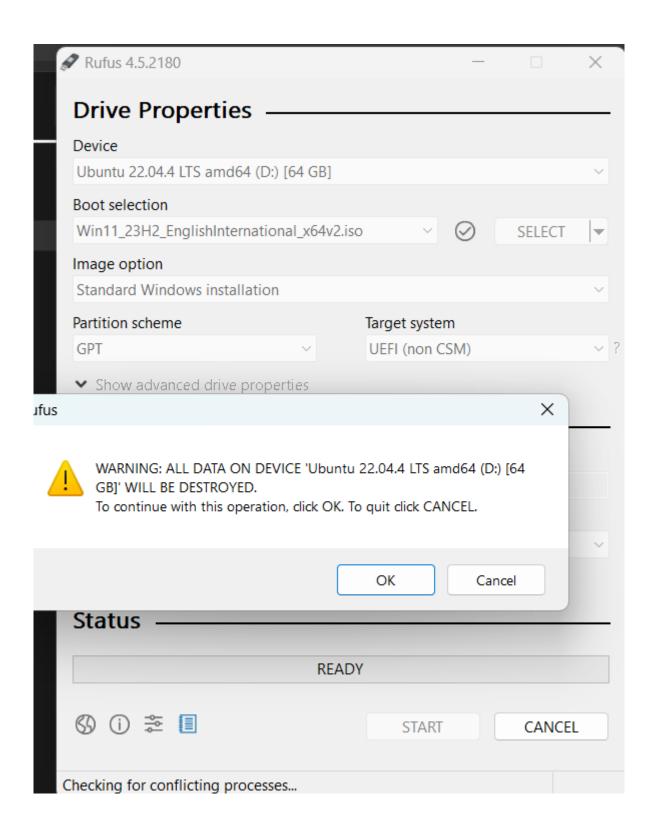
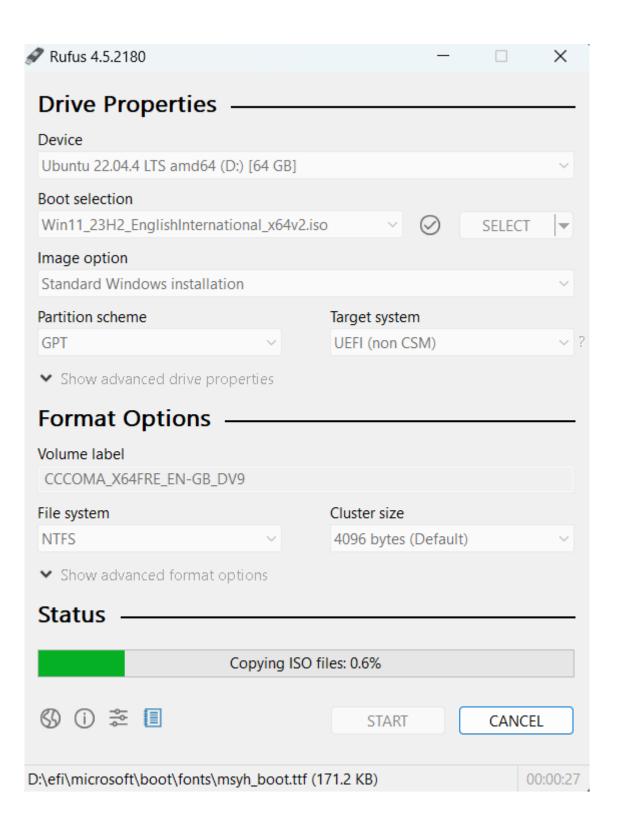


Widows Installation

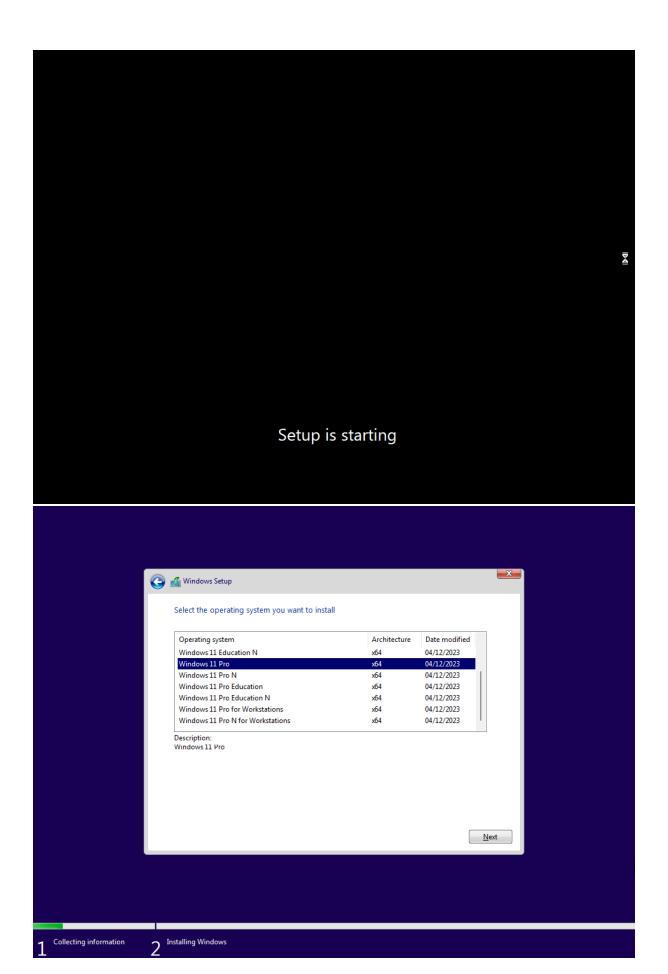


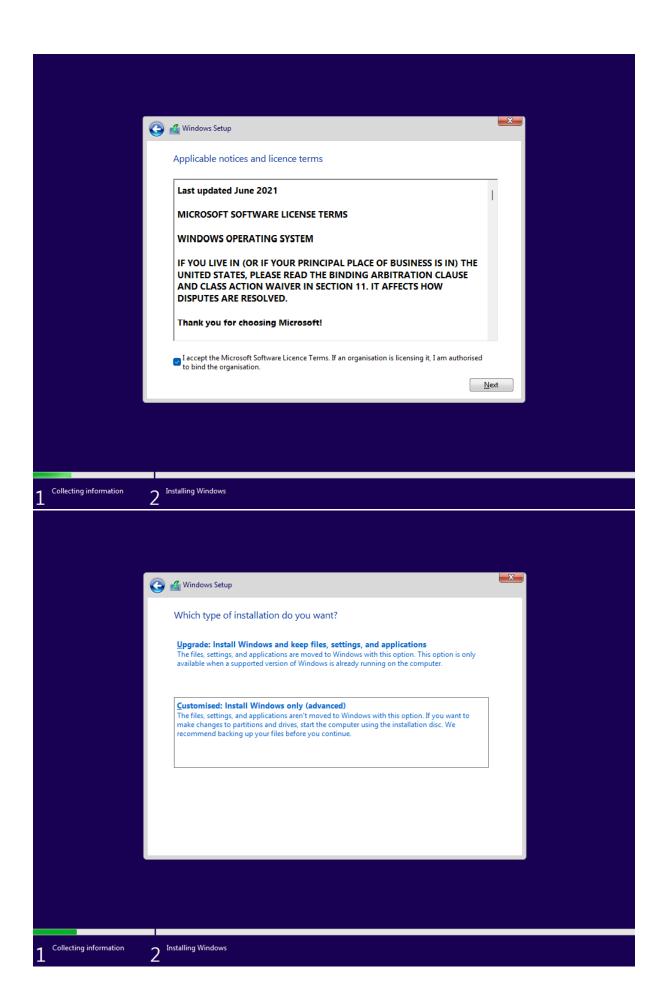


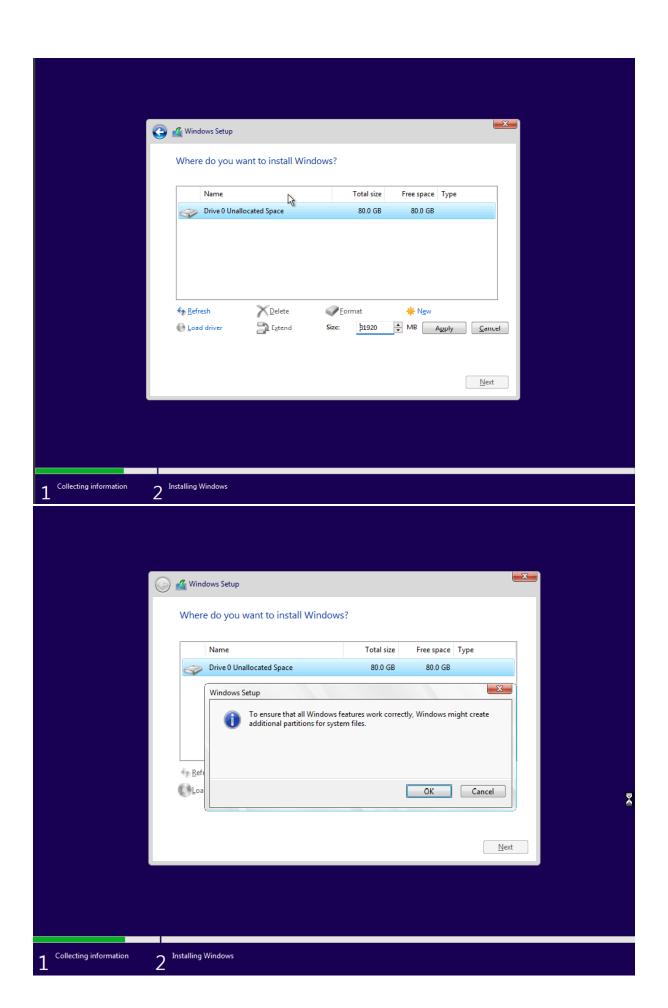


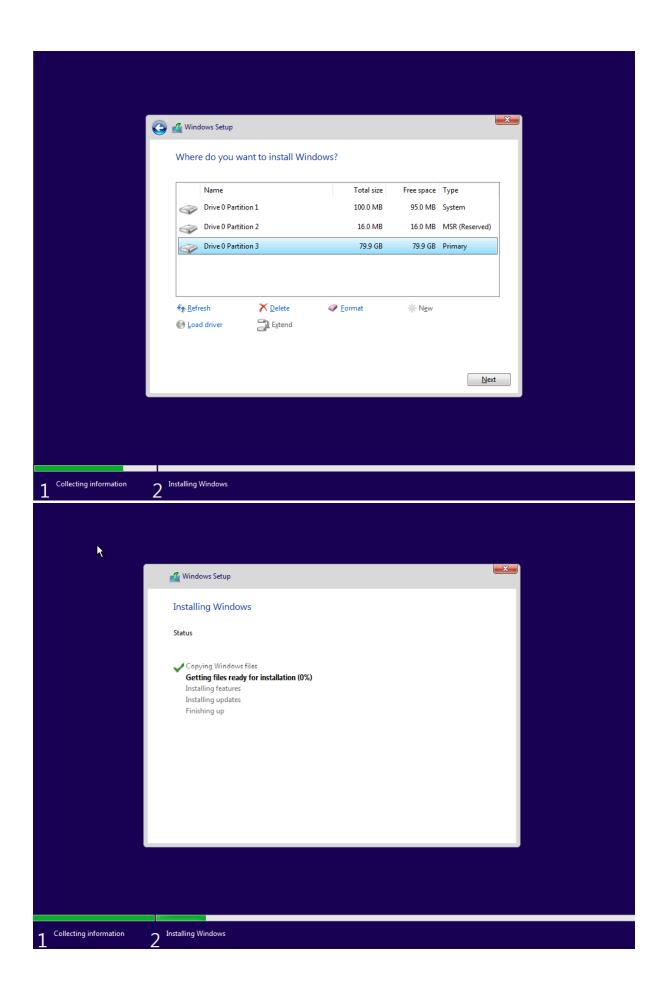


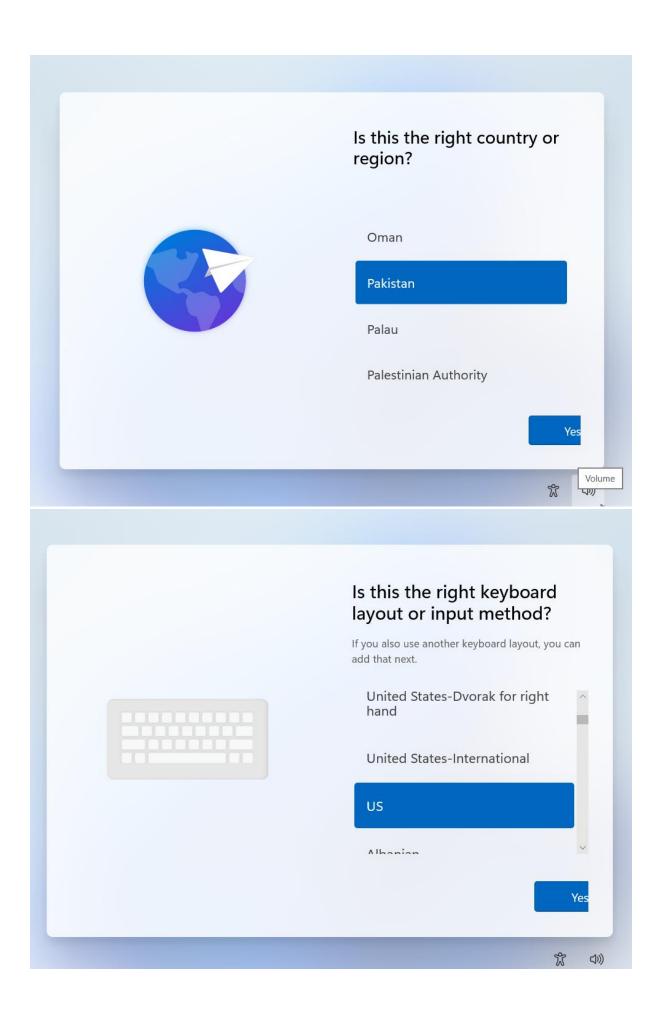


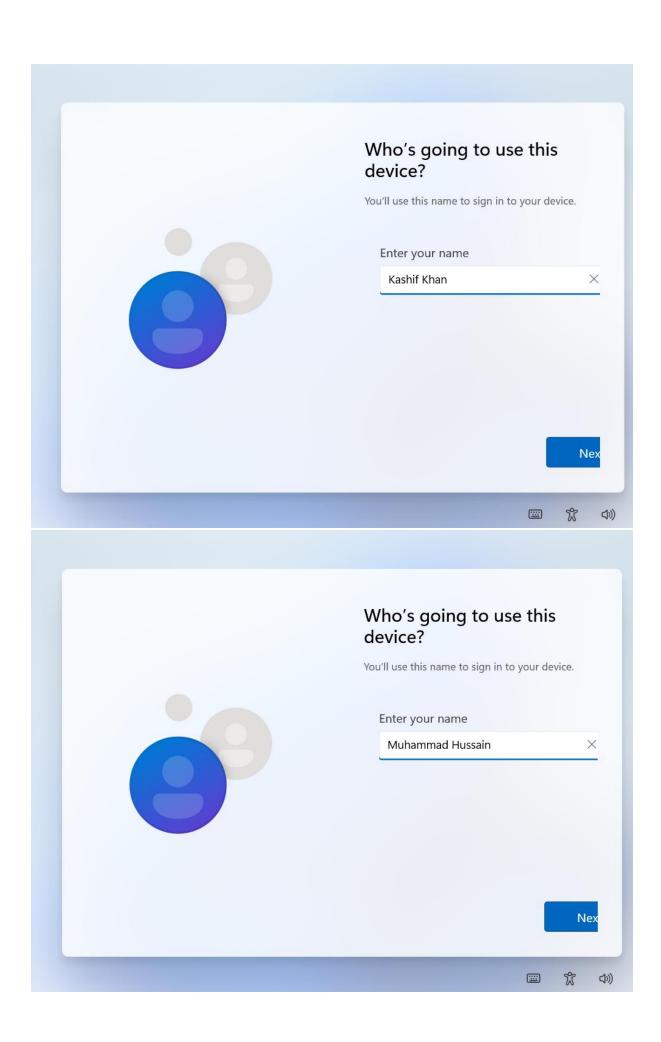


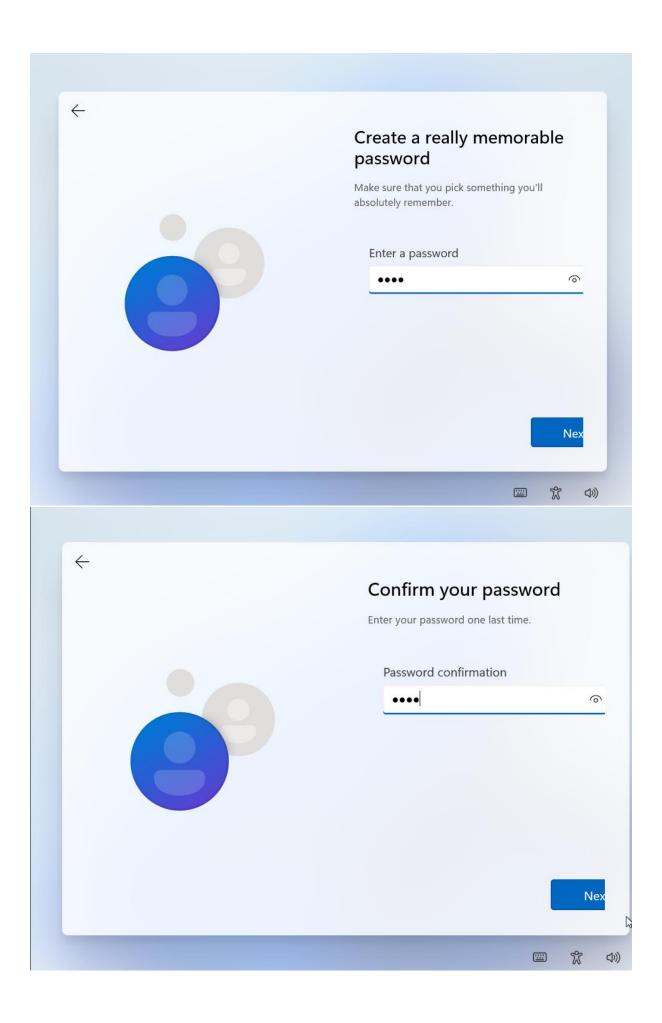


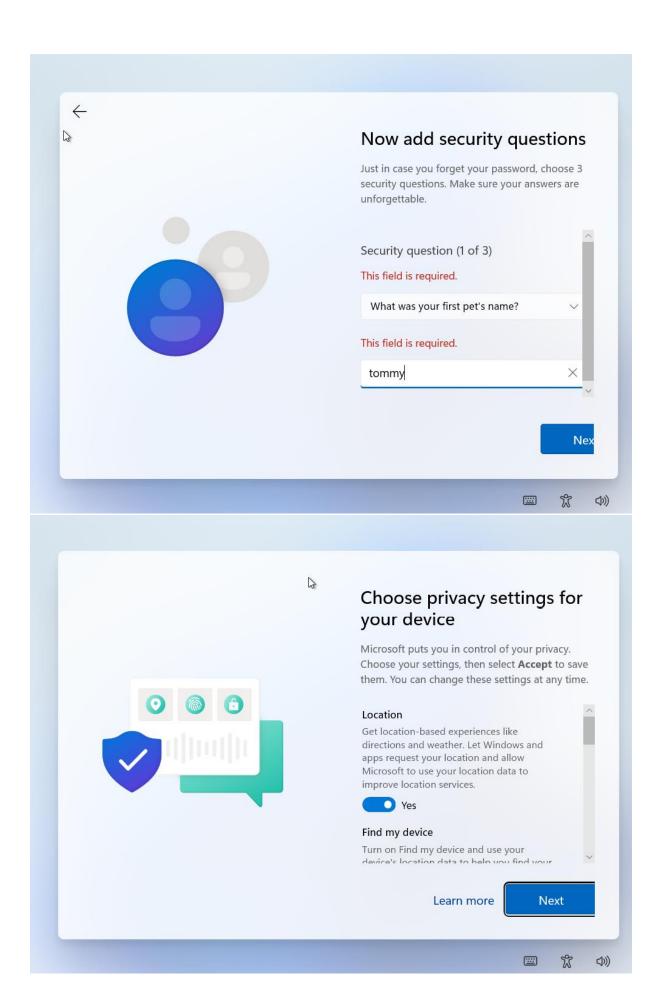


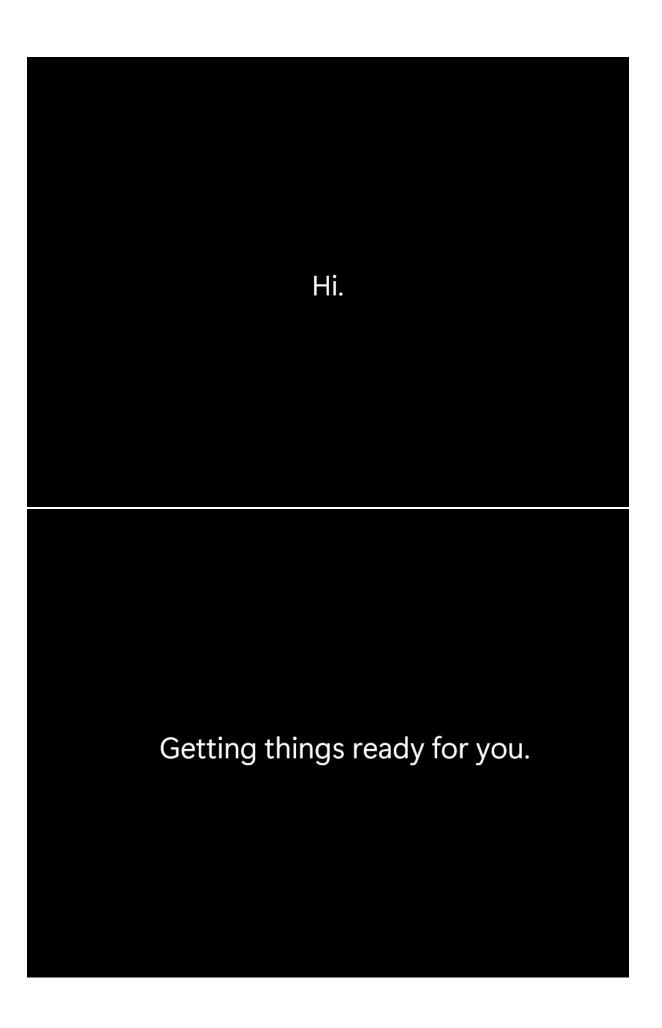










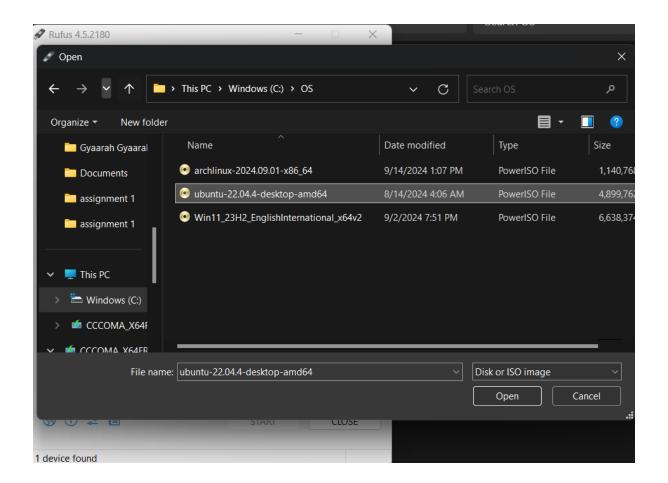


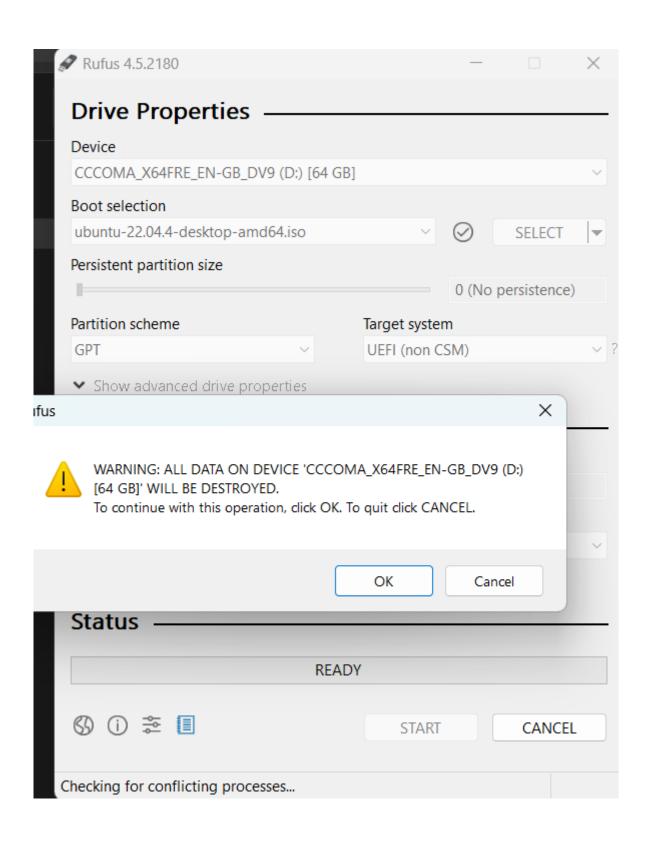
This might take a few minutes.

Don't turn off your PC



Ubuntu Installation





GNU GRUB version 2.06

*Try or Install Ubuntu
Ubuntu (safe graphics)
OEM install (for manufacturers)
Test memory

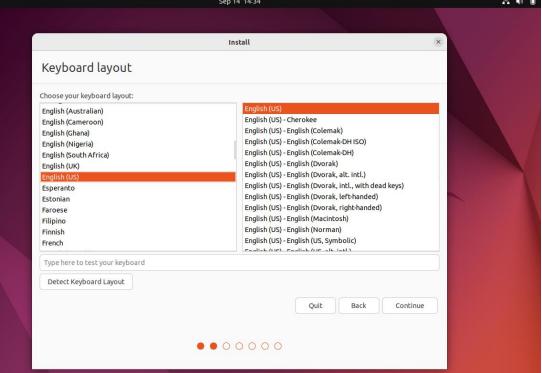
Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, `e' to edit the commands
before booting or `c' for a command-line.
The highlighted entry will be executed automatically in 3s.

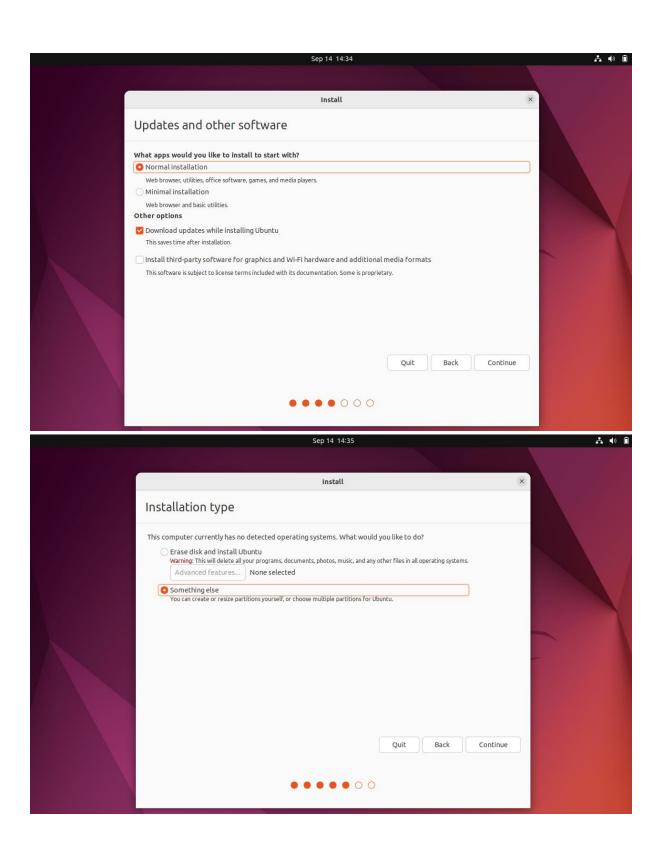


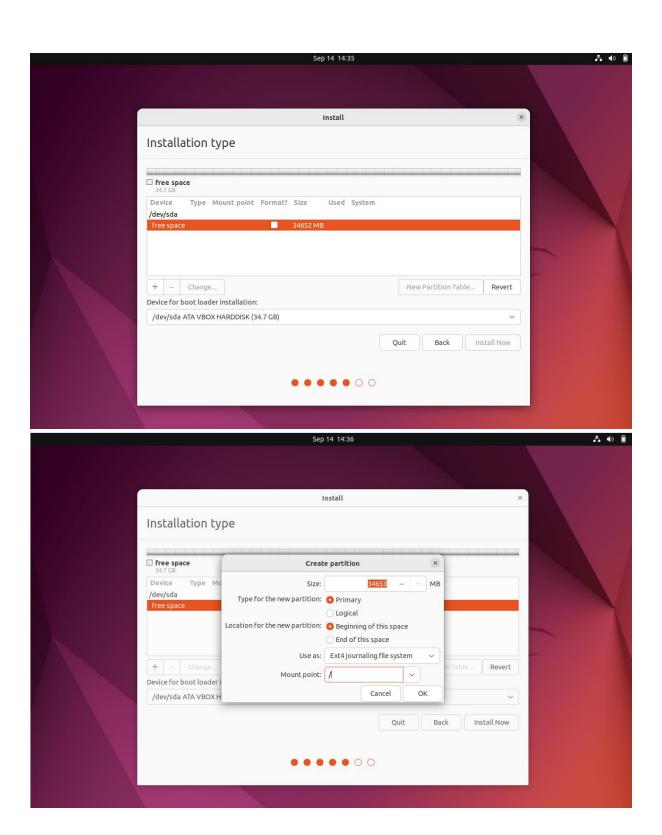


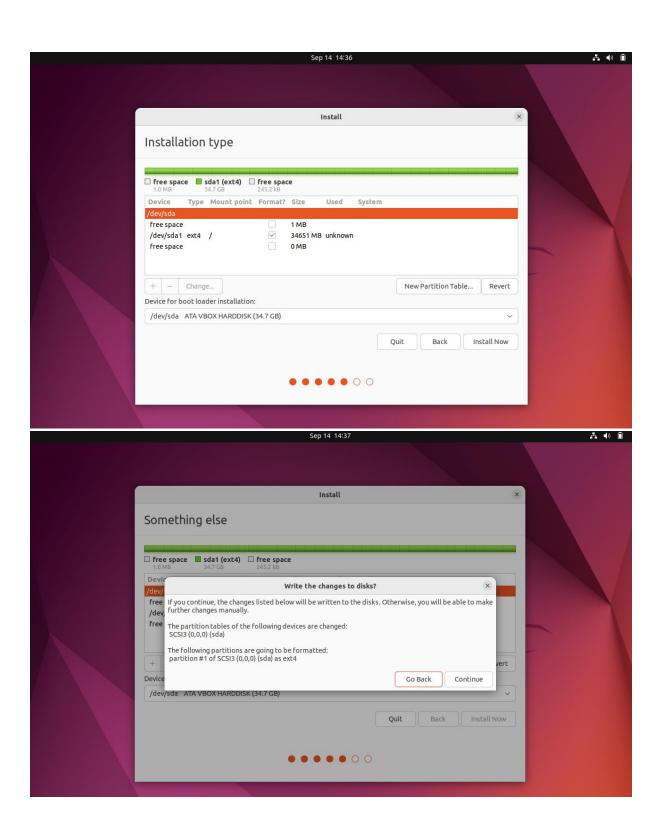


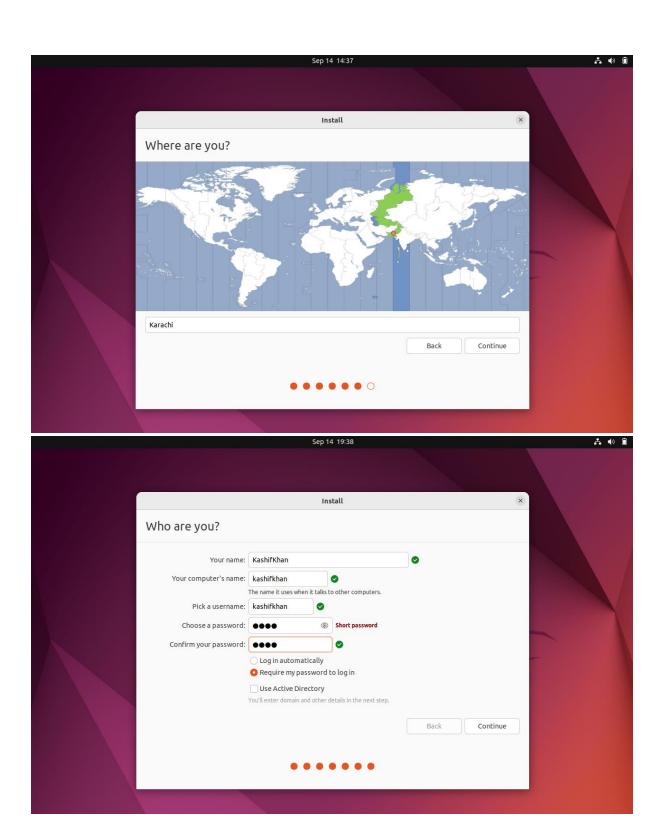


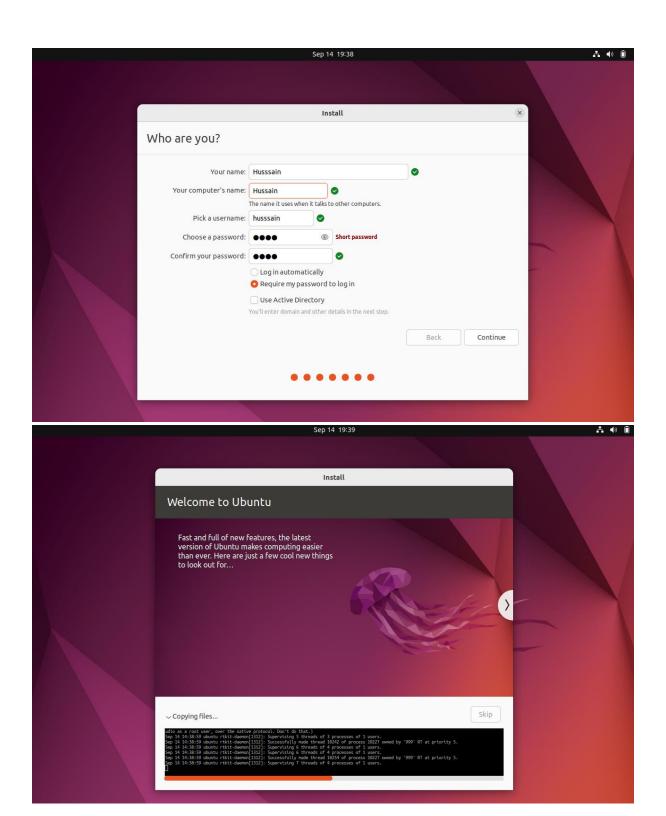


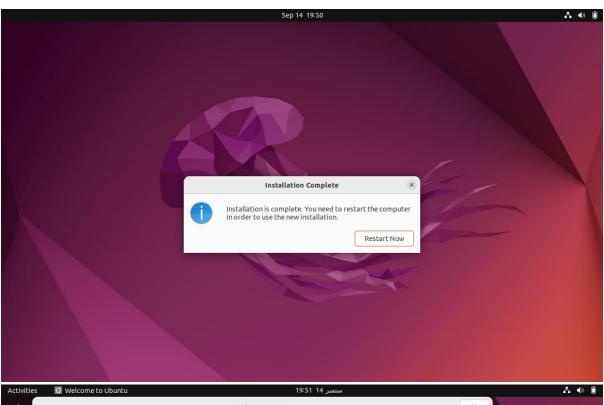


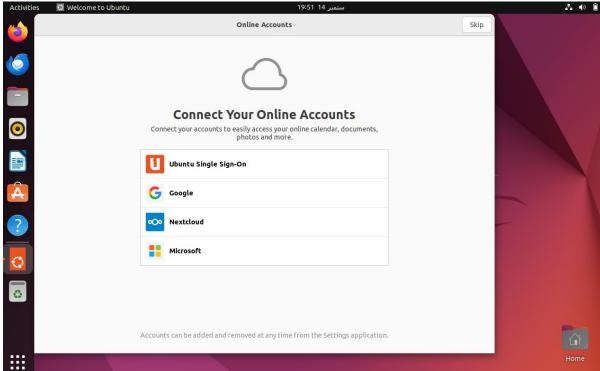




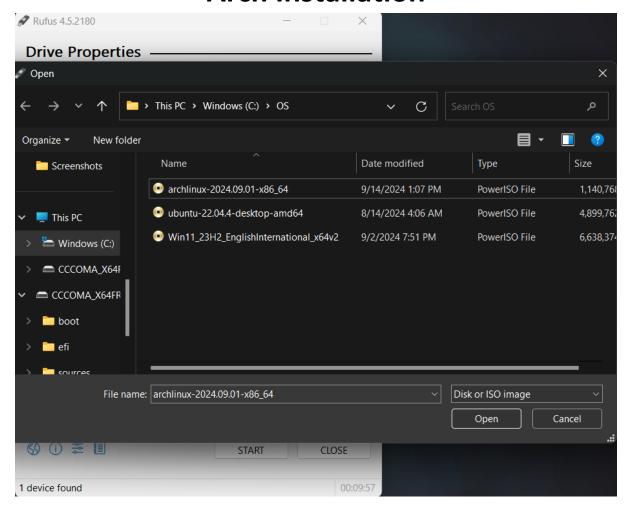


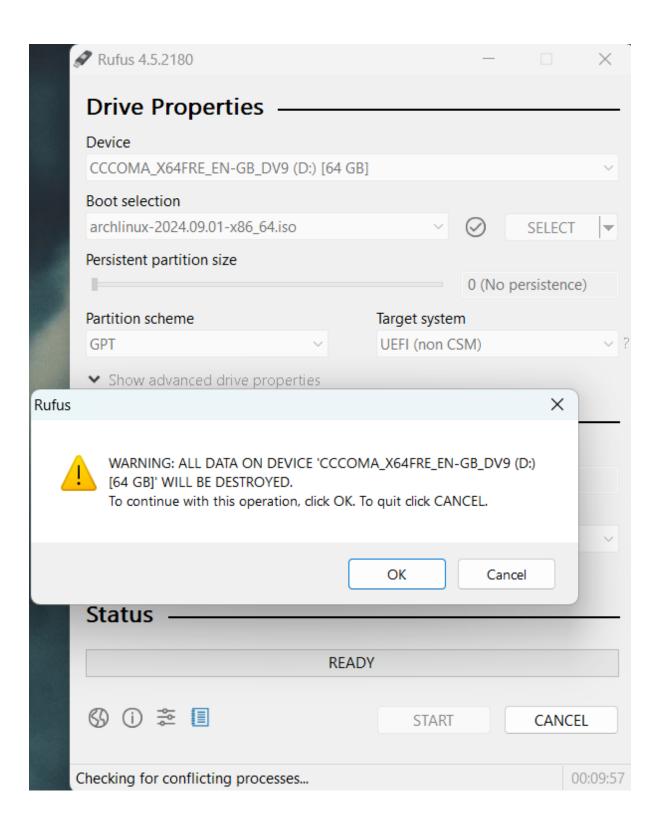






Arch Installation







Arch Linux

Arch Linux install medium (x86_64, BIOS) Arch Linux install medium (x86_64, BIOS) with speech Boot existing OS Run Memtest86+ (RAM test) Hardware Information (HDT) Reboot Power Off

Press [Tab] to edit options

Boot the Arch Linux install medium on BIOS. It allows you to install Arch Linux or perform system maintenance.

Automatic boot in 13 seconds...

rch Linux 6.10.7-arch1-1 (tty1) rchiso login: root (automatic login)

To install Arch Linux follow the installation guide: https://wiki.archlinux.org/title/Installation_guide

For Wi-Fi, authenticate to the wireless network using the iwetl utility. For mobile broadband (WWAN) modens, commect with the macli utility. Ethernet, WLAN and WWAN interfaces using DHCP should work automatically.

fter connecting to the internet, the installation guide can be accessed in the convenience script ${\it Installation_guide}$.



Arch Linux 6.10.7-arch1-1 (tty1) archiso login: root (automatic login) To install Arch Linux follow the installation guide: https://wiki.archlinux.org/title/Installation_guide For Wi-Fi, authenticate to the wireless network using the iwctl utility. For mobile broadband (WWAN) modems, connect with the mmcli utility. Ethernet, WLAN and WWAN interfaces using DHCP should work automatically. After connecting to the internet, the installation guide can be accessed via the convenience script Installation_guide. root@archiso ~ # archinstall Set/Modify the below options English (100%) Archinstall language Mirrors Locales Defined Disk configuration Boot loader Grub True Swap Hostname archlinux Root password User account Profile Audio No audio server Kernels linux Additional packages Network configuration Not configured, unavailable unless setup manually Timezone Automatic time sync (NTP) True Optional repositories Save configuration Install (2 config(s) missing) Abort (Press "/" to search)

CTRL+C to reset

Set/Modify the below options

> Mirror region

Custom mirrors

← Back

(Press "/" to search)

```
ESC to skip, CTRL+C to reset, TAB to select
Select one of the regions to download packages from
  [ ] Hungary
  [ ] Iceland
  [ ] India
  [ ] Indonesia
  [ ] Iran
 [ ] Israel
 [ ] Italy
 [ ] Japan
 [ ] Kazakhstan
 [ ] Kenya
  [ ] Latvia
  [ ] Lithuania
   1 Mauritius
  [ ] Mexico
  [ ] Moldova
  [ ] Netherlands
  [ ] New Caledonia
  [ ] New Zealand
  [ ] North Macedonia
   1 Norway
 [ ] Poland
 [ ] Portugal
 [ ] Romania
 [ ] Russia
 [ ] Réunion
 [*] Saudi Arabia
 [ ] Serbia
  [ ] Singapore
  [ ] Slovakia
  [ ] Slovenia
  [ ] South Africa
  [ ] South Korea
  [ ] Spain
  [ ] Sweden
  [ ] Switzerland
  [ ] Taiwan
 [ ] Thailand
 [ ] Türkiye
 [ ] Ukraine
 [ ] United Kingdom
  [ ] United States
  [ ] Uzbekistan
  [ ] Vietnam
  [ ] Worldwide
(Press "/" to search)
```

Set/Modify the below options Archinstall language English (100%) Defined Mirrors Defined Locales Disk configuration Bootloader Grub True Swap archlinux Hostname Root password User account Profile Audio No audio server Kernels linux Additional packages Network configuration Not configured, unavailable unless setup manually UTC Timezone Automatic time sync (NTP) True Optional repositories Save configuration Install (2 config(s) missing) Abort (Press "/" to search)

CTRL+C to reset

Set/Modify the below options

> Partitioning

+ Back
(Press "/" to search)

ESC to skip, CTRL+C to reset

Select a partitioning option

> Use a best-effort default partition layout

Manual Partitioning

Pre-mounted configuration

(Press "/" to search)

```
ESC to skip, CTRL+C to reset, TAB to select
Select one or more devices to use and configure
      Model
                       I Path
                                   | Type | Size
                                                  | Free space | Sector size | Read only
 [*] ATA VBOX HARDDISK | /dev/sda
                                   I scsi I 34 GB I
                                                        33047 I
                                                                       512 I
                                                                                False
  [ ] Loopback device
                      790 I
                                                                       512 I
                                                                                False
          Select which filesystem your main partition should use
            btrfs
            ext4
            xfs
            fZfs
          (Press "/" to search)
CTRL+C to reset
Set/Modify the below options
 Partitioning
                                             Use a best-effort default partition layout
 LVM - Logical Volume Management (BETA)
> <mark>← Back</mark>
(Press "/" to search)
Set/Modify the below options
 Archinstall language
                                     English (100%)
 Mirrors
                                     Defined
                                     Defined
 Locales
 Disk configuration
                                     Defined
 Disk encryption
 Bootloader
                                     Grub
 Swap
                                     True
 Hostname
                                     archlinux
 Root password
 User account
Profile
 Audio
                                     No audio server
                                     linux
 Kernels
 Additional packages
 Network configuration
                                     Not configured, unavailable unless setup manually
 Timezone
 Automatic time sync (NTP)
                                     True
 Optional repositories
 Save configuration
 Install (1 config(s) missing)
Abort
(Press "/" to search)
   Enter root password (leave blank to disable root):
   And one more time for verification: _
```

```
Set/Modify the below options
                                      English (100%)
  Archinstall language
                                      Defined
  Mirrors
  Locales
                                       Defined
                                      Defined
  Disk configuration
  Disk encryption
  Boot loader
                                      Grub
  Swap
Hostname
                                       True
                                      archlinux
  Root password
                                       ***
  User account
  Profile
  Audio
                                      No audio server
                                       linux
  Kernels
  Additional packages
  Network configuration
                                      Not configured, unavailable unless setup manually
  Timezone
  Automatic time sync (NTP)
                                       True
  Optional repositories
  Save configuration
  Install
  Abort
 Press "/" to search)
 Choose an object from the list, and select one of the available actions for it to execute
 Add a user
Confirm and exit
 Cancel
 Choose an object from the list, and select one of the available actions for it to execute
  Add a user
  Confirm and exit
  Cancel
Enter username (leave blank to skip): TestUser
The username you entered is invalid. Try again
Enter username (leave blank to skip): test
Password for user "test":
And one more time for verification:
 Choose an object from the list, and select one of the available actions for it to execute
 Add a user
  Confirm and exit
 Cancel
Enter username (leave blank to skip): TestUser
The username you entered is invalid. Try again
Enter username (leave blank to skip): test
Password for user "test":
And one more time for verification:
Should "test" be a superuser (sudo)?
 yes (default)
```

```
Set/Modify the below options
 Archinstall language
                                  English (100%)
                                  Defined
 Mirrors
 Locales
                                  Defined
                                  Defined
 Disk configuration
 Disk encryption
 Bootloader
                                  Grub
 Swap
                                  True
                                  archlinux
 Hostname
 Root password
 User account
Profile
                                  1 User(s)
 Audio
                                  No audio server
 Kernels
                                  linux
 Additional packages
 Network configuration
                                  Not configured, unavailable unless setup manually
  Timezone
                                  UTC
                                  True
 Automatic time sync (NTP)
 Optional repositories
 Save configuration
  Install
Abort
(Press "/" to search)
```

```
ESC to skip
Choose an audio server
No audio server
Pipewire
Pulseaudio
(Press "/" to search)
```

```
Set/Modify the below options
                                             English (100%)
  Archinstall language
  Mirrors
                                             Defined
                                             Defined
  Locales
                                            Defined
  Disk configuration
  Disk encryption
  Bootloader
                                            Grub
  Swap
                                             True
  Hostname
                                            archlinux
  Root password
  User account
                                             1 User(s)
  Profile
  Audio
                                            Pipewire
  Kernels
                                             linux
  Additional packages
  Network configuration
                                            Not configured, unavailable unless setup manually
  Timezone
                                            UTC
                                             True
  Automatic time sync (NTP)
  Optional repositories
  Save configuration
  Install
  Abort
(Press "/" to search)
ESC to skip, CTRL+C to reset
Select one network interface to configure
  Copy ISO network configuration to installation
  Use NetworkManager (necessary to configure internet graphically in GNOME and KDE Plasma)
Manual configuration
(Press "/" to search)
Set/Modify the below options
                               English (100%)
Defined
Defined
 Archinstall language
 Mirrors
Locales
 Locales
Disk configuration
Disk encryption
Bootloader
Swap
Hostname
Root password
User account
Profile
                               Defined
                               Grub
                               True
archlinux
                               1 User(s)
 Audio
Kernels
                              Pipewire
linux
 Additional packages
Network configuration
                               Use NetworkManager (necessary to configure internet graphically in GNOME and KDE Plasma)
 Automatic time sync (NTP)
Optional repositories
                               True
 Save configuration Install
 Abort
Press "/" to search)
```

```
ESC to skip
Select a timezone
> Asia∕Kara<mark>chi</mark>
/Kara
```

```
Archinstall language
Mirrors
Locales
                                       English (100%)
Defined
                                       Defined
Defined
  Disk configuration
Disk encryption
  Bootloader
                                       Grub
  Swap
Hostname
                                       True
archlinux
  Root password
User account
Profile
                                       1 User(s)
  Audio
Kernels
                                       Pipewire
linux
  Additional packages
Network configuration
                                       Use NetworkManager (necessary to configure internet graphically in GNOME and KDE Plasma) \mbox{\bf Asia/Karachi}
  Automatic time sync (NTP)
Optional repositories
                                        True
  Save configuration Install
Abort
(Press "/" to search)
Set/Modify the below options
                                      English (100%)
Defined
Defined
Defined
  Archinstall language
  Mirrors
Locales
  Disk configuration
Disk encryption
Bootloader
                                      Grub
  Swap
Hostname
                                      True
archlinux
  Root password
User account
Profile
Audio
                                      1 User(s)
                                      Pipewire
  Kernels
Additional packages
Network configuration
                                      Use NetworkManager (necessary to configure internet graphically in GNOME and KDE Plasma)
                                      Asia/Karachi
True
  Timezone
Automatic time sync (NTP)
Optional repositories
  Save configuration Install
 Abort
(Press "/" to search)
                                         CTRL+C to reset
                                         Set/Modify the below options
                                            Type
                                             ← Back
                                         (Press "/" to search)
ESC to skip, CTRL+C to reset
This is a list of pre-programmed default_profiles
   Desktop
   Minimal
   Server
  Xorg
(Press "/" to search)
      Info ·
   Installed packages:
  htop
                                                        iwd
                                                                                                              nano
                                                        smartmontools
                                                                                                             vim
   openssh
  wget
                                                        wireless_tools
                                                                                                              wpa_supplicant
   xdg-utils
```

Set/Modify the below options

```
ESC to skip, CTRL+C to reset, TAB to select
Select your desired desktop environment
  [ ] Awesome
  [ ] Bspwm
  [ ] Budgie
  [ ] Cinnamon
    1 Cutefish
  [ ] Deepin
  [ ] Enlightenment
 [*] Gnome
  [ ] Hyprland
  [ ] i3-wm
  [ ] KDE Plasma
  [ ] Lxqt
  [ ] Mate
  [ ] Qtile
  [ ] Sway
  [ ] Xfce4
(Press "/" to search)
  Environment type: Desktop Environment
  Installed packages:
  gnome
  gnome-tweaks
   CTRL+C to reset
   Set/Modify the below options
                          Desktop
     Type
     Graphics driver
                          All open-source
     Greeter
                          gdm
     ← Back
   (Press "/" to search)
```

```
et/Modify the below options
                                                  English (100%)
Defined
 Archinstall language
 Mirrors
 Locales
Disk configuration
Disk encryption
Bootloader
                                                  Defined
Defined
                                                  Grub
 Bootloader
Swap
Hostname
Root password
User account
Profile
Audio
                                                  archlinux
                                                  1 User(s)
                                                  Desktop
Pipewire
 Kernels
Additional packages
Network configuration
                                                  Use NetworkManager (necessary to configure internet graphically in GNOME and KDE Plasma)
 Timezone
Automatic time sync (NTP)
Optional repositories
                                                  Asia/Karachi
True
 Save configuration
Install
Abort
(Press "/" to search)
```

```
'kernels": [
          "linux"
    "locale_config": {
    "kb_layout": "us",
    "sys_enc": "UTF-8",
    "sys_lang": "en_US"
     "mirror_config": {
          "custom_mirrors": [],
          "mirror_regions": {
                "Saudi Arabia": [
                     "http://sa.mirrors.cicku.me/archlinux/$repo/os/$arch",
                     "https://sa.mirrors.cicku.me/archlinux/$repo/os/$arch"
          }
     "network_config": {
          "type": "nm"
     "no_pkg_lookups": false,
    "ntp": true,
"offline": false,
"packages": [],
"parallel downloads": 0,
     "profile_config": {
    "gfx_driver": "All open-source",
          "greeter": "gdm",
"profile": {
               "custom_settings": {
                     "Gnome": {}
               },
"details": [
"Chome"
                "main": "Desktop"
     "save_config": null,
     "script": "guided",
"silent": false,
     "skip_ntp": false,
     "skip_version_check": false,
     "swap": true,
"timezone": "Asia/Karachi",
     "uki": false,
     "version": "2.8.6"
Press Enter to continue.
```

```
diffutils-3.10-1 e2fsprogs-1.47.1-4 expat-2.6.3-2 fakeroot-1.36-1 file-5.45-1 filesystem-2024.04.07-1 findutils-4.10.0-2 flex-2.6.4-5 gawk-5.3.0-2 gc-8.2.8-2
                                    gcc-14.2.1+r134+gab884fffe3fc-1
                                    gcc-libs-14.2.1+r134+gab884fffe3fc-1 gdbm-1.24-1 gettext-0.22.5-2 glib2-2.80.5-1 glibc-2.40+r16+gaa533d58ff-2 gmp-6.3.0-2 gnupg-2.4.5-4 gnutls-3.8.7-1 gpgme-1.23.2-6 grep-3.11-1 groff-1.23.0-7 guile-3.0.10-1 gzip-1.13-4
                                    grep-3.11-1 groff-1.23.0-7 guile-3.0.10-1 gzip-1.13-4 hwdata-0.387-1 iana-etc-20240814-1 icu-75.1-1 iproute2-6.10.0-2 iptables-1:1.8.10-2 iputils-20240905-1 jansson-2.14-4 json-c-0.17-2 kbd-2.6.4-2 keyutils-1.6.3-3 kmod-33-3 krb5-1.21.3-1 libarchive-3.7.5-1 libassuan-3.0.0-1 libbpf-1.4.3-1 libcap-2.70-1 libcap-g-0.8.5-2 libelf-0.191-4 libevent-2.1.12-4 libffi-3.4.6-1 libgcrypt-1.11.0-2 libgpg-error-1.50-1 libidn2-2.3.7-1 libisl-0.27-1 libkpa-1.6.2-1 libidn2-2.3.7-1 libisl-0.27-1
                                    libksba-1.6.7-1 libldap-2.6.8-2 libmnl-1.0.5-2 libmpc-1.3.1-2 libnetfilter_countrack-1.0.9-2 libnftnetlink-1.0.2-2 libnftnl-1.2.7-1 libnghttp2-1.63.0-1 libnghttp3-1.5.0-1
                                    libnl-3.10.0-1 libnsl-2.0.1-1 libp11-kit-0.25.5-1 libpcap-1.10.5-2 libpsl-0.21.5-2 libsasl-2.1.28-5 libseccomp-2.5.5-3 libsecret-0.21.4-1 libssh2-1.11.0-1
                                     libsysprof-capture-46.0-4 libtasn1-4.19.0-2 libtirpc-1.3.5-1
                                    libtool-2.5.2+r1+g2fe3a3e2-1 libunistring-1.2-1 libusb-1.0.27-1 libuerto-0.3.2-5 libxcrypt-4.4.36-2 libxm12-2.13.3-1 licenses-20240728-1 linux-api-headers-6.10-1
                                    linux-firmware-whence-20240909.552ed9b8-1 lmdb-0.9.33-1 lz4-1:1.10.0-2 m4-1.4.19-3 make-4.4.1-2 mkinitcpio-39.2-2 mkinitcpio-busybox-1.36.1-1 mpfr-4.2.1-4 ncurses-6.5-3 nettle-3.10-1 npth-1.7-1 openss1-3.3.2-1 p11-kit-0.25.5-1
                                     pacman-7.0.0.r3.g7736133-1 pacman-mirrorlist-20240717-1
                                    pam-1.6.1-3 pambase-20230918-2 patch-2.7.6-10 pciutils-3.13.0-2 pcre2-10.44-1 perl-5.40.0-1 pinentry-1.3.1-5 pkgconf-2.1.1-1 popt-1.19-2
                                    procps-ng-4.0.4-3 psmisc-23.7-1 readline-8.2.013-1 sed-4.9-3 shadow-4.16.0-1 sqlite-3.46.1-1 sudo-1.9.16-1 systemd-256.6-1 systemd-libs-256.6-1 systemd-sysvcompat-256.6-1 tar-1.35-2
                                    systemu-110s-250.6-1 systemd-sysUcompat-256.6-1 tar-1.35-2 texinfo-7.1.1-1 tpm2-tss-4.0.1-1 tzdata-2024b-2 util-linux-2.40.2-1 util-linux-libs-2.40.2-1 which-2.21-6 xz-5.6.2-1 zlib-1:1.3.1-2 zstd-1.5.6-1 base-3-2 base-devel-1-2 grub-2:2.12-3 linux-6.10.10.arch1-1 linux-firmusas-20240909 EF2-1010.4
                                     linux-firmware-20240909.552ed9b8-1
Total Download Size:
                                                           610.42 MiB
Total Installed Size: 1366.99 MiB
:: Proceed with installation? [Y/n]
 :: Retrieving packages...
                                                           13.2 MiB 1720 KiB/s 02:13 [#---
13.2 MiB 1712 KiB/s 05:57 [----
 linux-firmware-2...
 Total ( 0/151)
Would you like to chroot into the newly created installation and perform post-installation configuration?
   yes (default)
```

(Press "/" to search)

Arch Linux 6.10.7-arch1-1 (tty1) archiso login: root (automatic login)

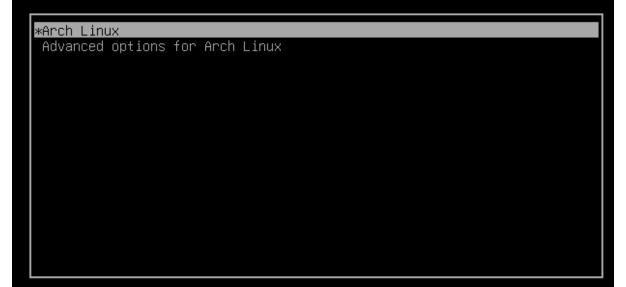
To install Arch Linux follow the installation guide: https://wiki.archlinux.org/title/Installation_guide

For Wi-Fi, authenticate to the wireless network using the iwctl utility. For mobile broadband (WWAN) modems, connect with the mmcli utility. Ethernet, WLAN and WWAN interfaces using DHCP should work automatically.

After connecting to the internet, the installation guide can be accessed via the convenience script Installation_quide.

Last login: Sun Sep 15 06:21:37 on tty1 root@archiso ~ # shutdown -h now_

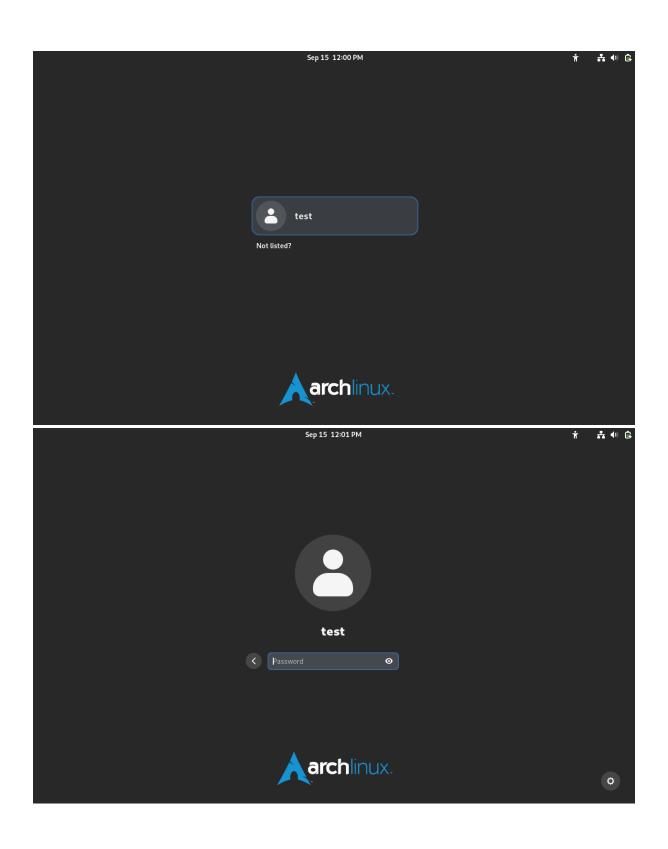
GNU GRUB version 2:2.12-3

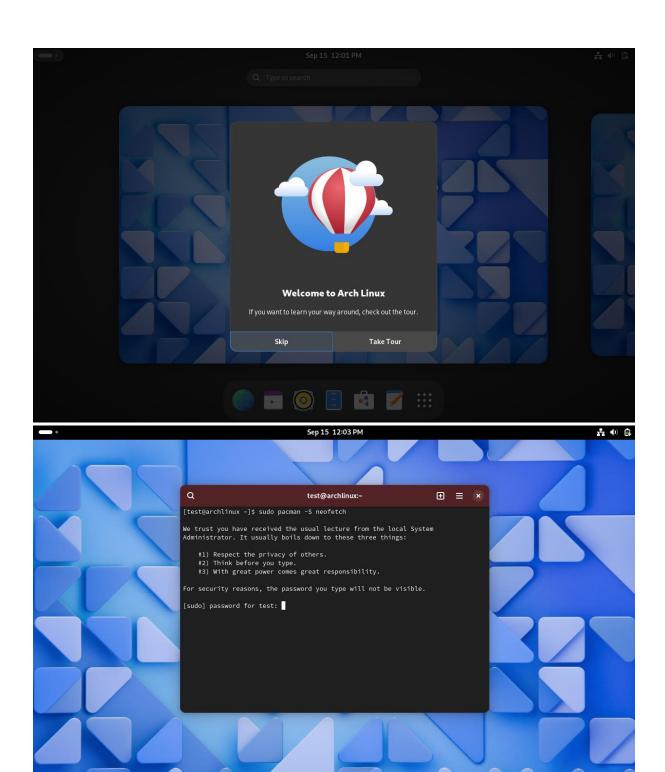


Use the ↑ and ↓ keys to select which entry is highlighted.

Press enter to boot the selected OS, `e' to edit the commands before booting or `c' for a command-line.

The highlighted entry will be executed automatically in 3s.

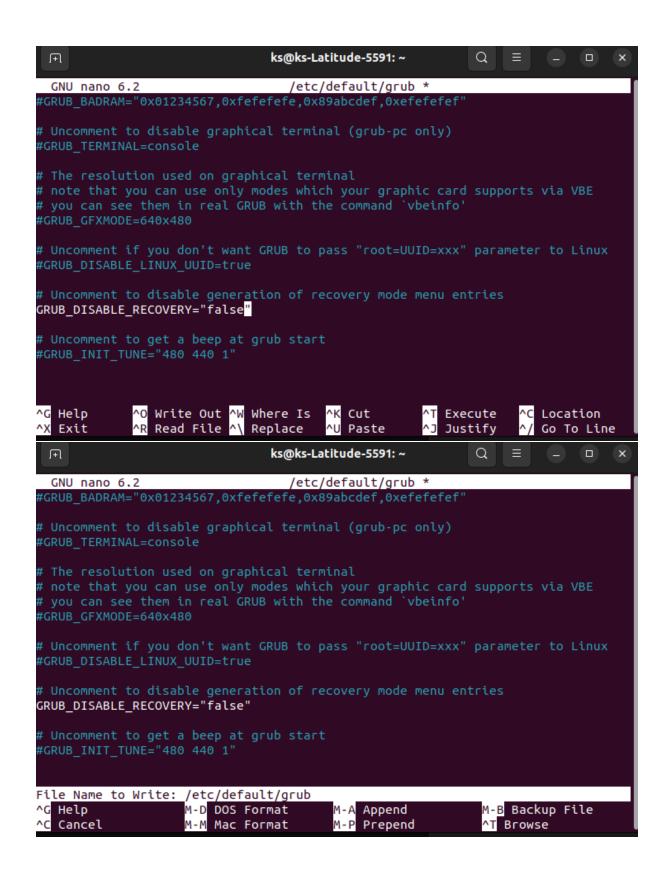




```
[test@archlinux ~]$ neofetch
                                              test@archlinux
                                              OS: Arch Linux x86_64
                                              Host: VirtualBox 1.2
                                              Kernel: 6.10.10-arch1-1
                                              Uptime: 5 mins
                 -+000000+:
                                            Packages: 727 (pacman)
                                            Shell: bash 5.2.32
                                            Resolution: 1280x800
           `/+++0000000000000/`
                                            DE: GNOME 46.5
                                            WM: Mutter
  .,00033350++05555550+
.00555550-```'/0555555+`
-05555550.
:05555555/
/05555555/
-:/+055550+/:-
-:/+0555550+
                                            WM Theme: Adwaita
                                              Theme: Adwaita [GTK2/3]
                                              Icons: Adwaita [GTK2/3]
                                              Terminal: kgx
                                              CPU: 12th Gen Intel i7-12650H (4) @ 2.
                               `.-/+oso:
                                              GPU: 00:02.0 VMware SVGA II Adapter
                                              Memory: 1122MiB / 1968MiB
```

Assembling Triple Boot

```
(base) ks@ks-Latitude-5591:~$ sudo apt install os-prober
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
os-prober is already the newest version (1.79ubuntu2).
The following packages were automatically installed and are no longer required:
  libwpe-1.0-1 libwpebackend-fdo-1.0-1
Use 'sudo apt autoremove' to remove them.
O upgraded, O newly installed, O to remove and 55 not upgraded.
(base) ks@ks-Latitude-5591:~$
(base) ks@ks-Latitude-5591:~$ sudo nano /etc/default/grub
                               ks@ks-Latitude-5591: ~
                                                          Q
 GNU nano 6.2
                                  /etc/default/grub *
                                                                         М
#GRUB_BADRAM="0x01234567,0xfefefefe,0x89abcdef,0xefefefef
# Uncomment to disable graphical terminal (grub-pc only)
#GRUB TERMINAL=console
# note that you can use only modes which your graphic card supports via VBE
#GRUB GFXMODE=640x480
#GRUB DISABLE LINUX UUID=true
# Uncomment to disable generation of recovery mode menu entries
#GRUB DISABLE RECOVERY="true"
# Uncomment to get a beep at grub start
#GRUB INIT TUNE="480 440 1"
^G Help
             ^O Write Out ^W Where Is
                                         Cut
                                                      Execute
                                                                   Location
               Read File
                                         Paste
                                                      Justify
                                                                   Go To Line
  Exit
                            Replace
```



```
(base) ks@ks-Latitude-5591:~$ sudo os-prober
/dev/sda5:Arch Linux:Arch:linux
/dev/sdb1@/EFI/Microsoft/Boot/bootmgfw.efi:Windows Boot Manager:Windows:efi
(base) ks@ks-Latitude-5591:~$ sudo update-grub
Sourcing file `/etc/default/grub'
Sourcing file `/etc/default/grub.d/init-select.cfg'
Generating grub configuration file ...
Found linux image: /boot/vmlinuz-6.8.0-40-generic
Found initrd image: /boot/initrd.img-6.8.0-40-generic
Found linux image: /boot/vmlinuz-6.5.0-18-generic
Found initrd image: /boot/initrd.img-6.5.0-18-generic
Memtest86+ needs a 16-bit boot, that is not available on EFI, exiting
Warning: os-prober will be executed to detect other bootable partitions.
Its output will be used to detect bootable binaries on them and create new boot entries.
/usr/sbin/grub-probe: error: unknown filesystem.
Found Arch Linux on /dev/sda5
Found Windows Boot Manager on /dev/sdb1@/EFI/Microsoft/Boot/bootmgfw.efi
Adding boot menu entry for UEFI Firmware Settings ...
```

done