

UNIX & LINUX ESSENTIALS ENVIRONMENT SET UP

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1. Local Unix/Linux Development Environment Setup

1.1. Installing Virtual Box

Overview

The steps will walk you through the process for installing Virtual Box

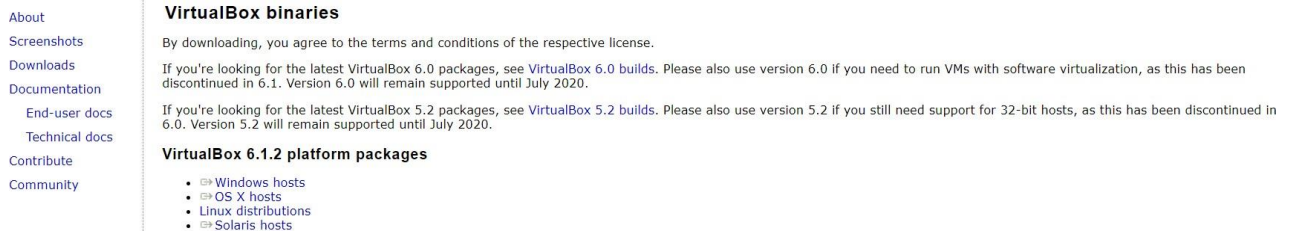
Prerequisites

- Should be connected to the internet

Tasks

1. To download VirtualBox, go to the official site

[virtualbox.org](https://www.virtualbox.org) and download the latest version for windows.



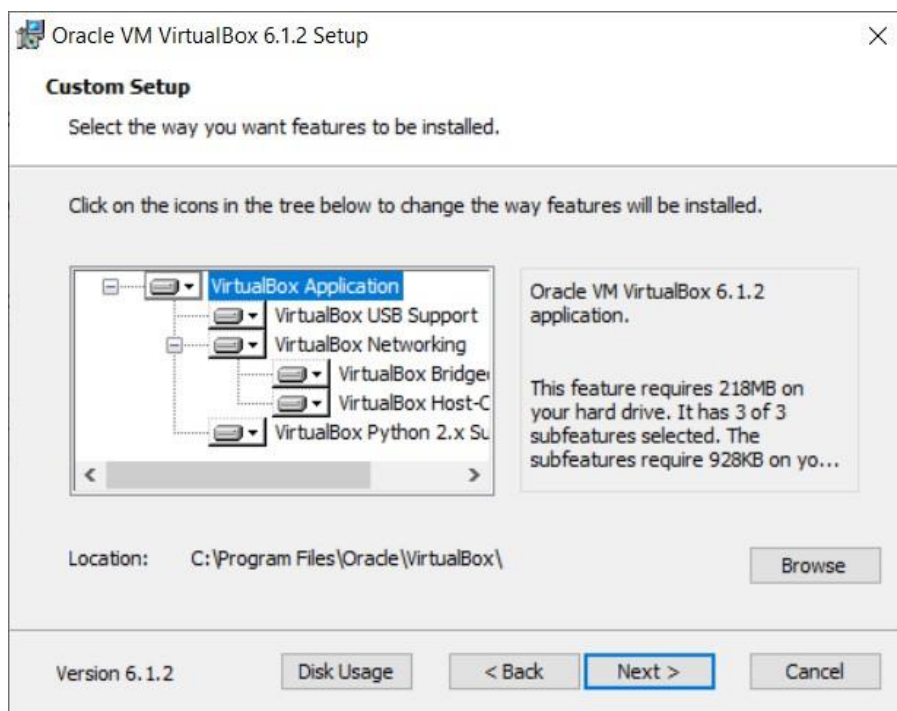
The screenshot shows the VirtualBox website's download section. On the left is a navigation menu with links: About, Screenshots, Downloads, Documentation, End-user docs, Technical docs, Contribute, and Community. The main content area is titled 'VirtualBox binaries'. It contains a disclaimer: 'By downloading, you agree to the terms and conditions of the respective license.' Below this, it provides information about the latest VirtualBox 6.0 packages, stating that version 6.0 will remain supported until July 2020. It also mentions that version 5.2 will remain supported until July 2020. At the bottom, there is a section for 'VirtualBox 6.1.2 platform packages' with a list of links: Windows hosts, OS X hosts, Linux distributions, and Solaris hosts.

2. Install a particular package based on your system configuration.

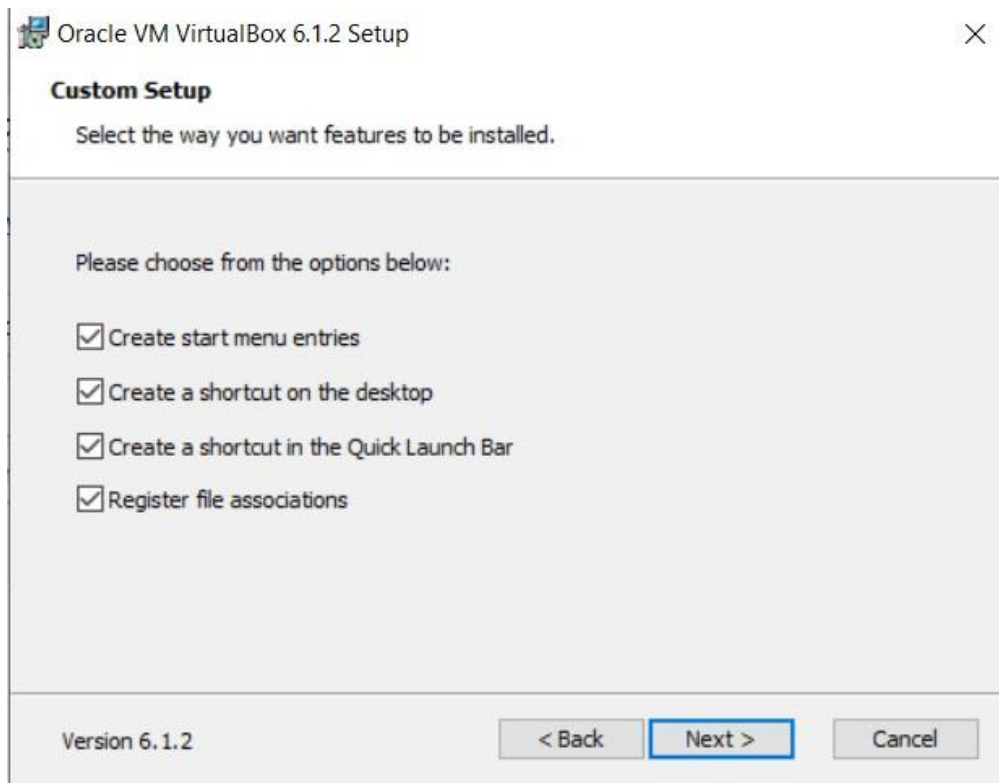
1. Getting Started:



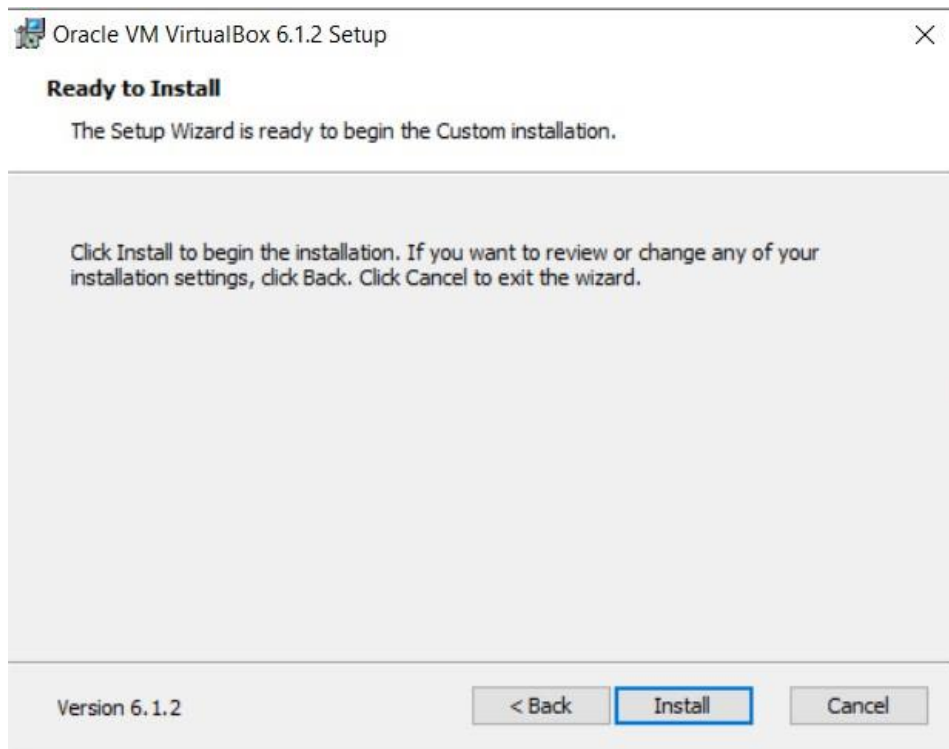
2. Select Installation Location:



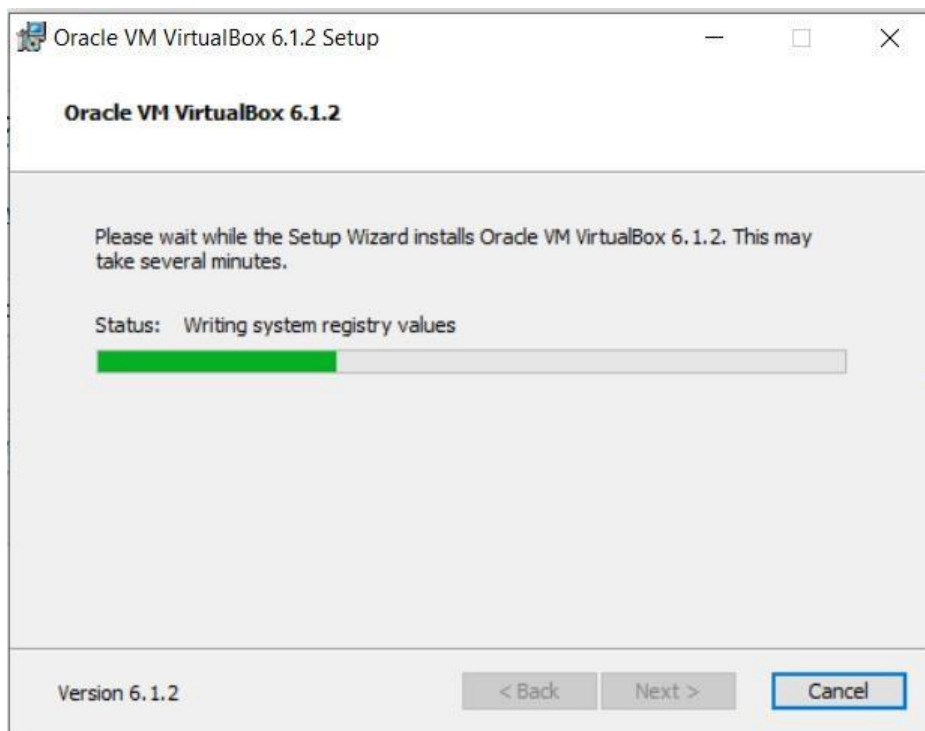
3. Creating Entries and Shortcuts:



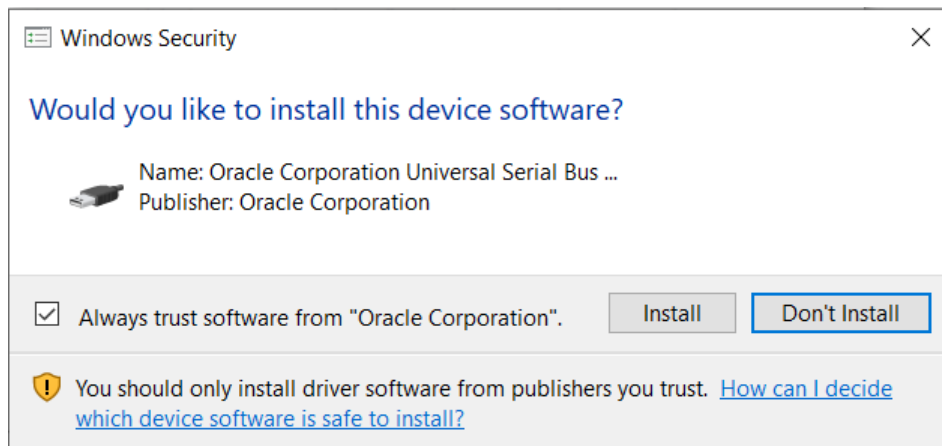
4. Ready to Install:



5. Installing Files and packages:



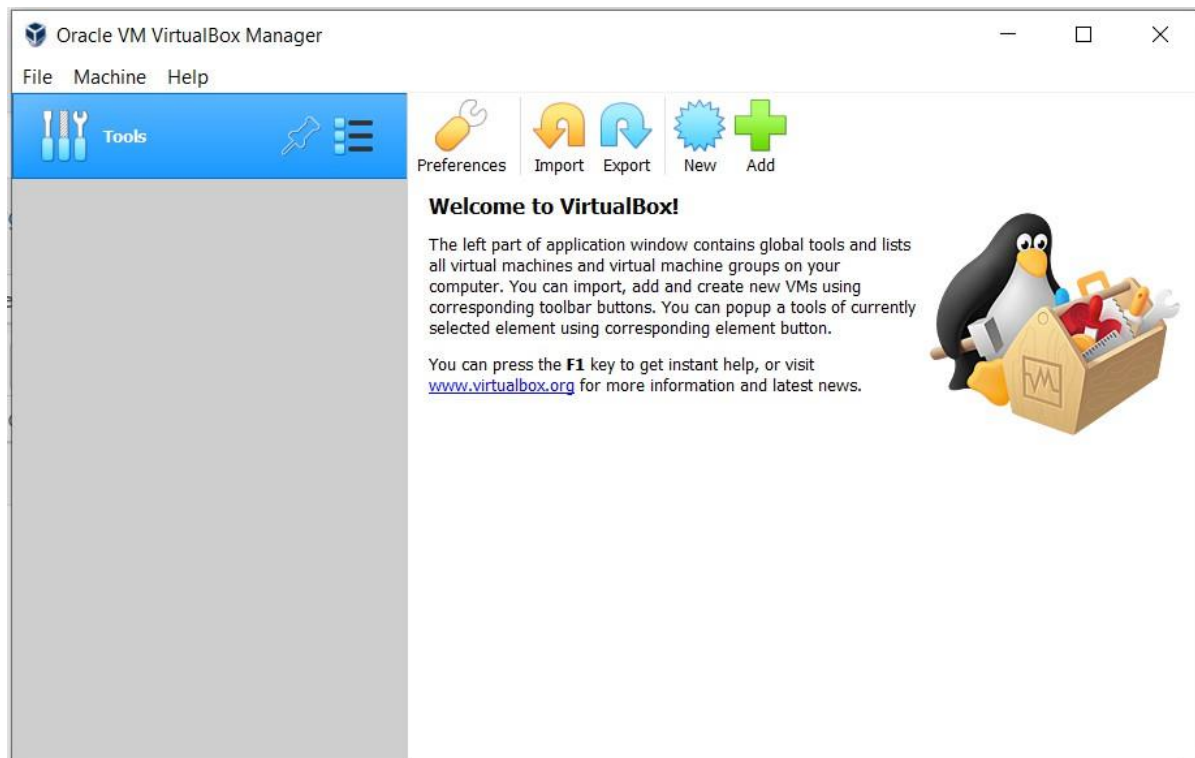
6. Installing Certificates:



7. Finished Installation:



8. When you will open Virtualbox it will look like as shown below:



1.2. Installing Oracle Linux

Overview

The steps will walk you through the process for installing Oracle Linux

Prerequisites

- 1.3. Should be connected to the internet

Tasks

1. Open a browser and navigate to the link <https://yum.oracle.com/oracle-linux-isos.html>
2. Scroll Down and install a Full ISO image

The screenshot shows a web browser window with the Oracle Linux ISO download page. The page title is "Oracle Linux ISO images available to download". Below the title is a table with columns for Release, Full ISO, and Boot ISO. The table lists releases from 9.2 down to 8.6. To the right of the table, there is a download progress bar for "OracleLinux-R8-U8-x86_64-dvd.iso" showing 2h 16m left and 7.6 MB of 11.6 GB (1.8 MB/sec). Below the progress bar, there is a failed download for "ubuntu-22.04.2-desktop-amd64.iso".

Release	Full ISO	Boot ISO
9.2	OracleLinux-R9-U2-x86_64-dvd.iso	OL9U2 x86_64-boot.iso
9.1	OracleLinux-R9-U1-x86_64-dvd.iso	OL9U1 x86_64-boot.iso
9.0	OracleLinux-R9-U0-x86_64-dvd.iso	OL9U0 x86_64-boot.iso
8.8	OracleLinux-R8-U8-x86_64-dvd.iso	OL8U8 x86_64-boot.iso
8.7	OracleLinux-R8-U7-x86_64-dvd.iso	OL8U7 x86_64-boot.iso
8.6	OracleLinux-R8-U6-x86_64-dvd.iso	OL8U6 x86_64-boot.iso

Download progress bar: OracleLinux-R8-U8-x86_64-dvd.iso (2h 16m left — 7.6 MB of 11.6 GB (1.8 MB/sec))

Failed download: ubuntu-22.04.2-desktop-amd64.iso

3. Once the installation is complete, open the virtual box and click on “New”



4. Give a name for your machine, and also add the ISO image which you have just downloaded in the type it will be Linux, and select the version based on your system

?

✓ Name and Operating System !

Name:

Folder:

ISO Image:

Edition:

Type:

Version:

☐ Skip Unattended Installation

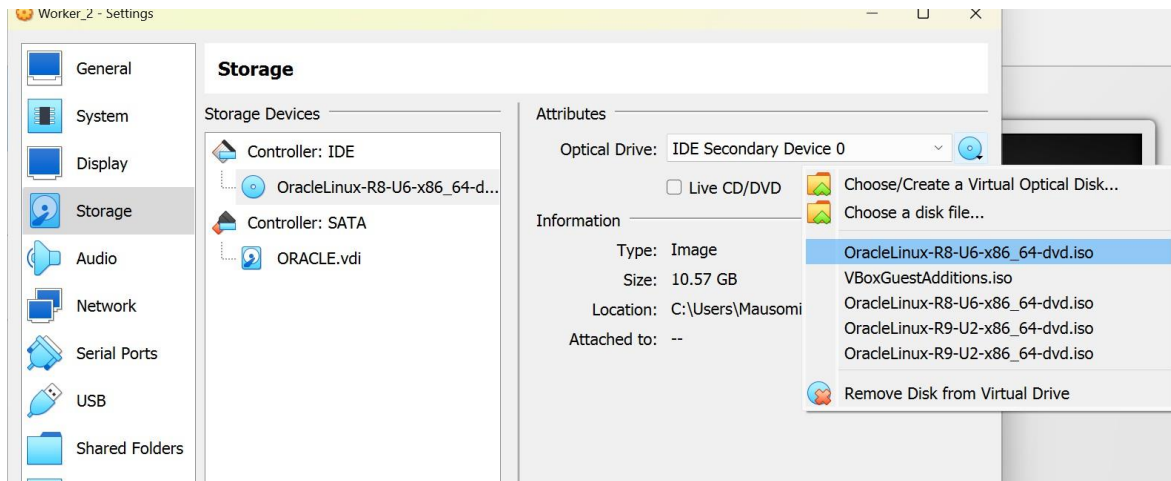
> Unattended Install

> Hardware

> Hard Disk

5. Select Unattended install and provide your username and password.
6. In the Hardware Section select the Base memory and Processor size.
7. In the Hard Disk section, select "Create a Virtual Hard Disk Now" and click on "Finish".

8. Power off your machine and select the machine which you have created go to settings.
9. Go to the Storage section, select controller IDE, and add the image.



10. Now power on your machine and follow the steps.
11. Boot from the DVD or ISO image. Use the up arrow to pick the "Install Oracle Linux 8.0" option and hit the return key.

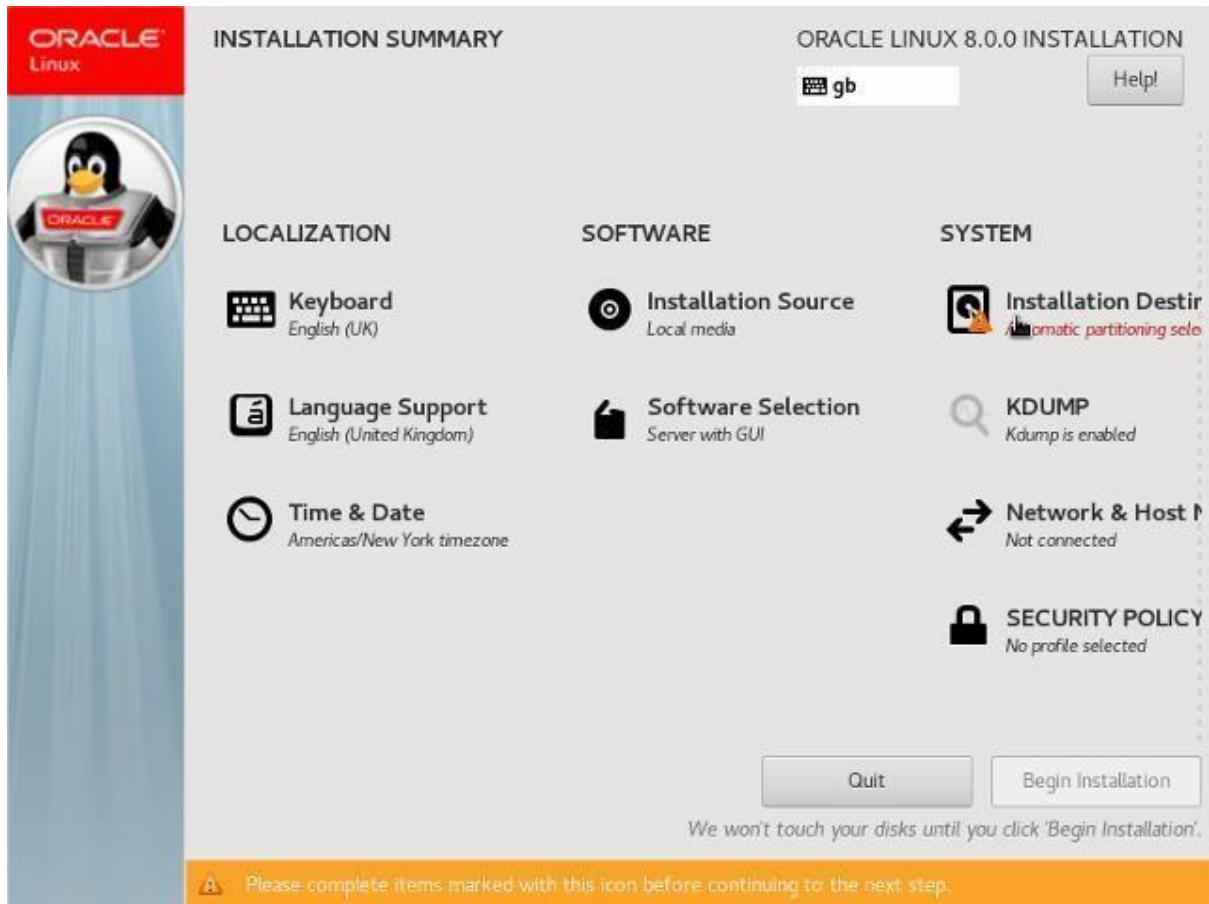


12. Select the appropriate language and click the "Continue" button.



Click the "I want to proceed." button on the pre-release software warning screen.

13. You are presented with the "Installation Summary" screen. You must complete any marked items before you can continue with the installation. Depending on your requirements, you may also want to alter the default settings by clicking on the relevant links.



Click the "Installation Destination" link.

14. If you are happy to use automatic partitioning of the whole disk, click the "Done" button to return to the previous screen.

INSTALLATION DESTINATION

ORACLE LINUX 8.0.0 INSTALLATION

Done

gb


Help!

Device Selection

Select the device(s) you'd like to install to. They will be left untouched until you click on the main menu's "Begin Installation" button.

Local Standard Disks

60 GiB



ATA VBOX HARDDISK

sda / 60 GiB free

Disks left unselected here will not be touched.

Specialized & Network Disks

Add a disk...

Disks left unselected here will not be touched.

Storage Configuration

☒ Automatic

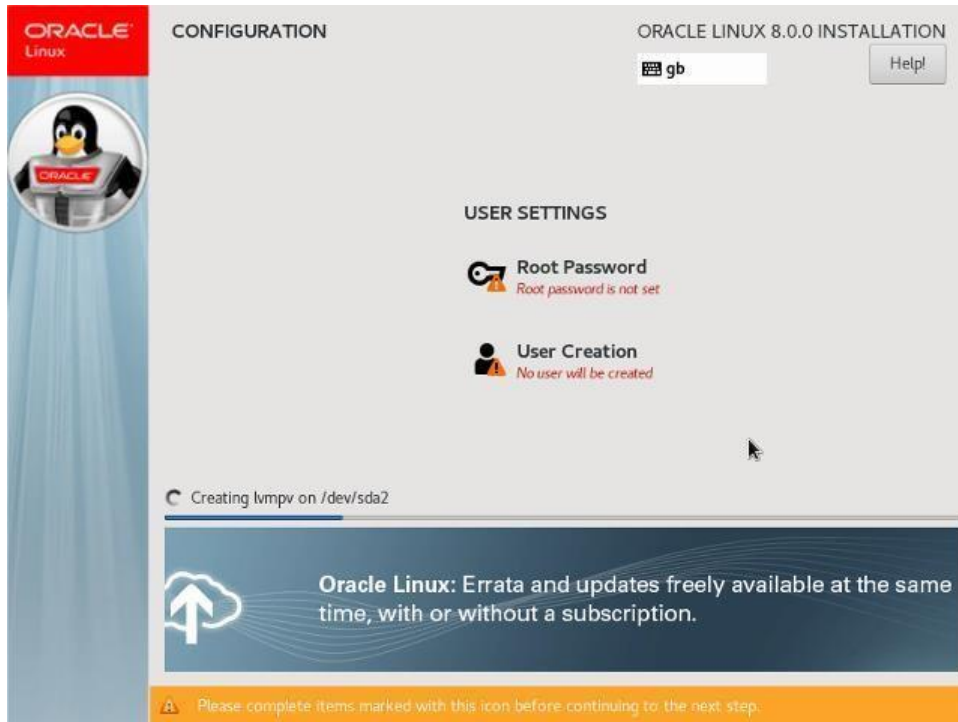
☐ Custom

☐ I would like to make additional space available.

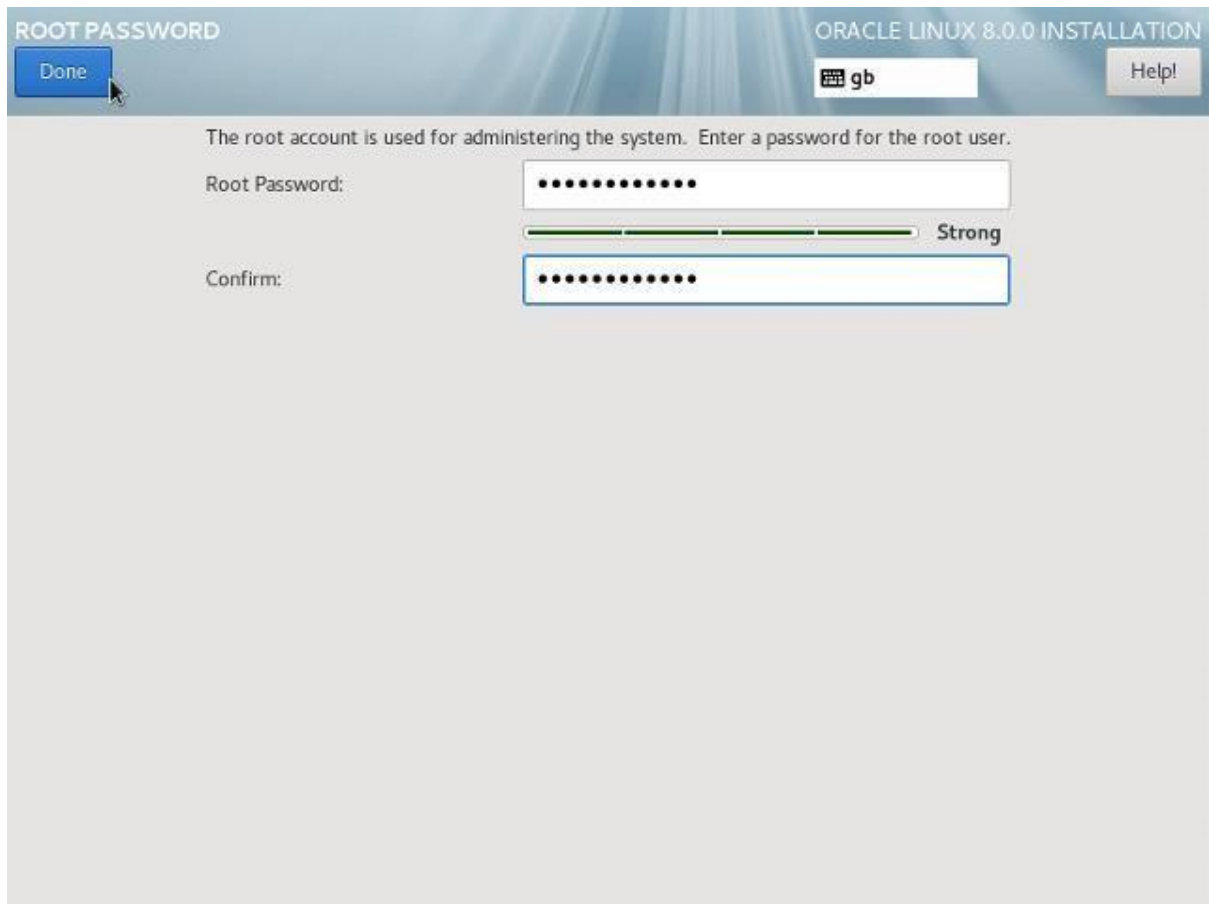
[Full disk summary and boot loader...](#)

1 disk selected; 60 GiB capacity; 60 GiB free [Refresh...](#)

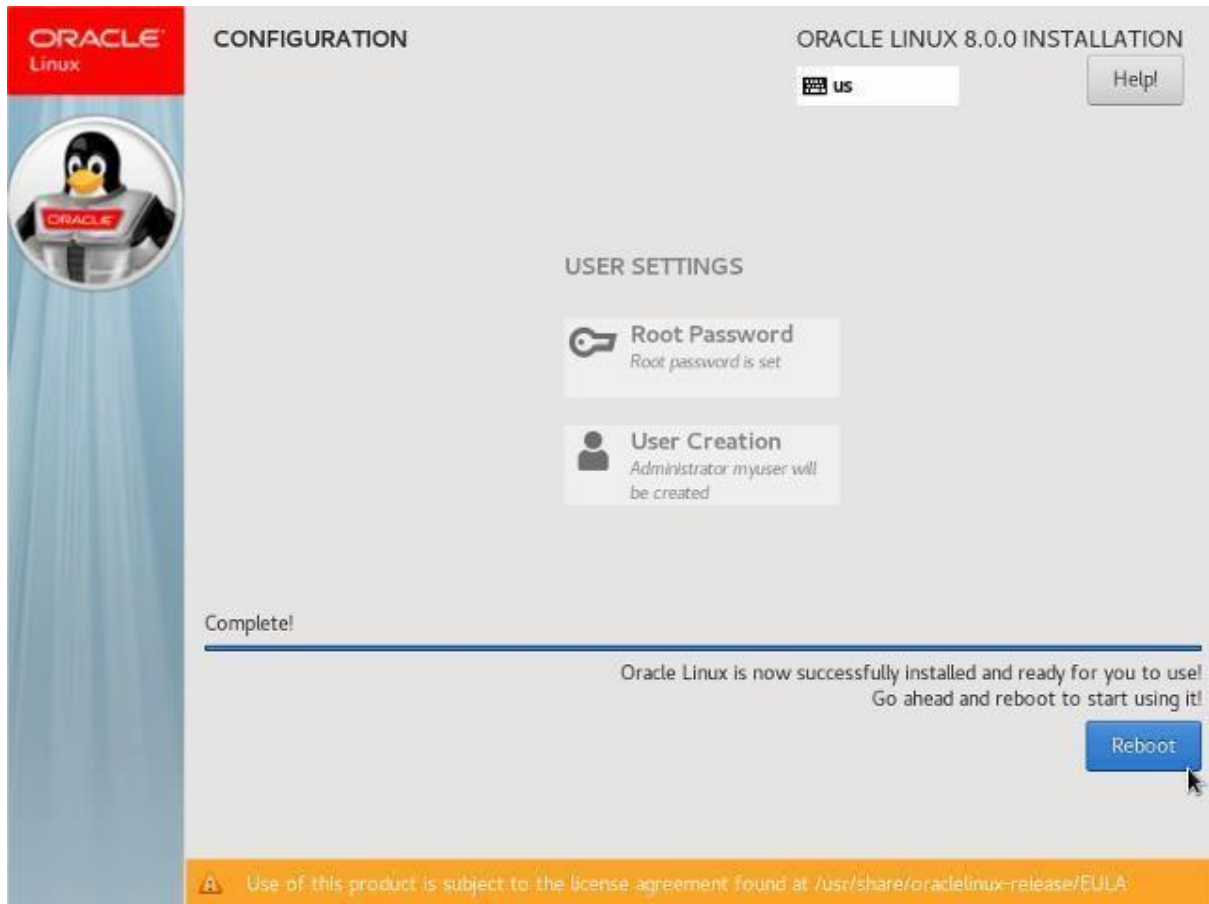
15. Click the "Root Password" link.



16. Enter the root password and click the "Done" button.



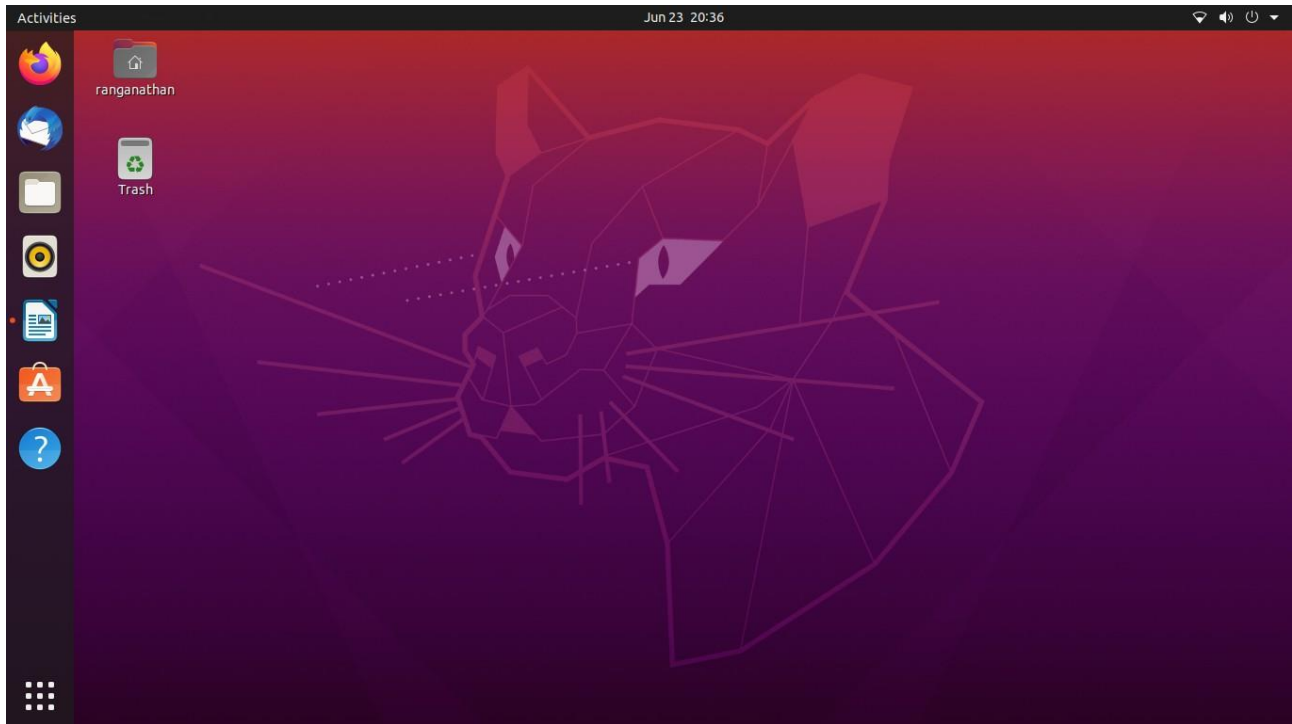
19. Wait for the installation to complete. When prompted, click the "Reboot" button.



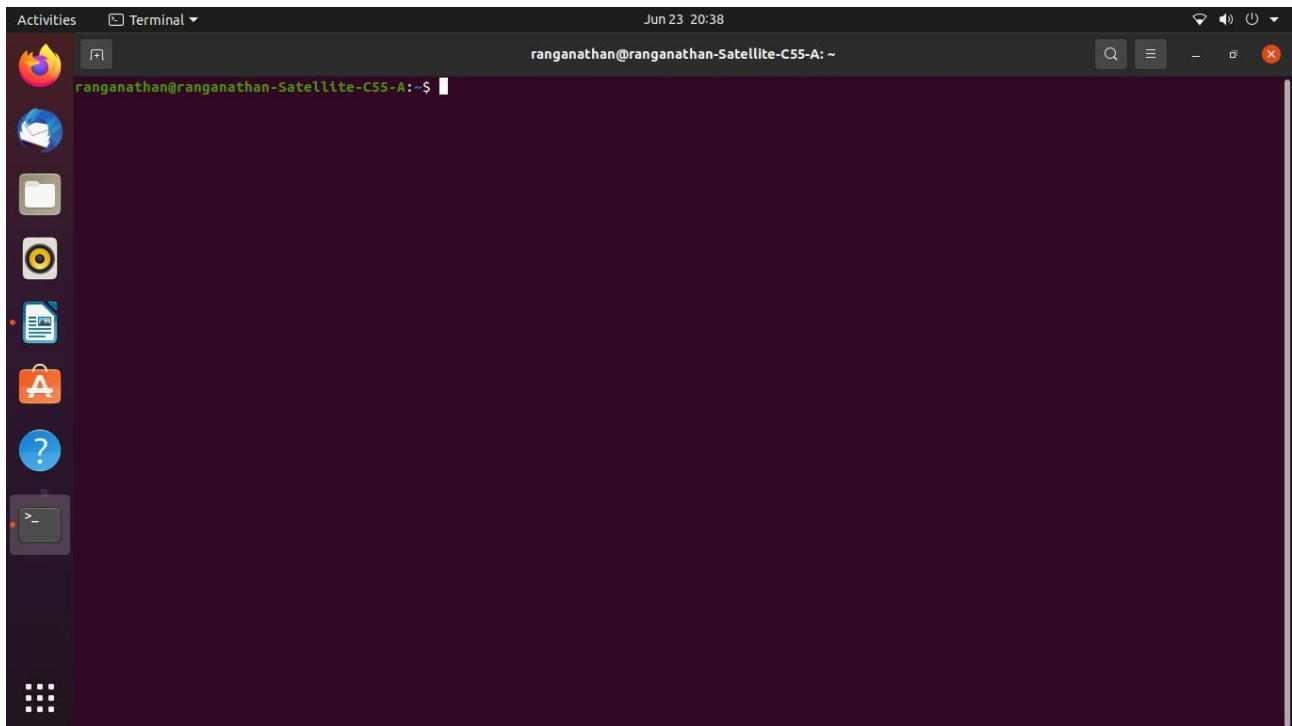
20. Click on Reboot and your system is ready.

1.3. Running Linux OS

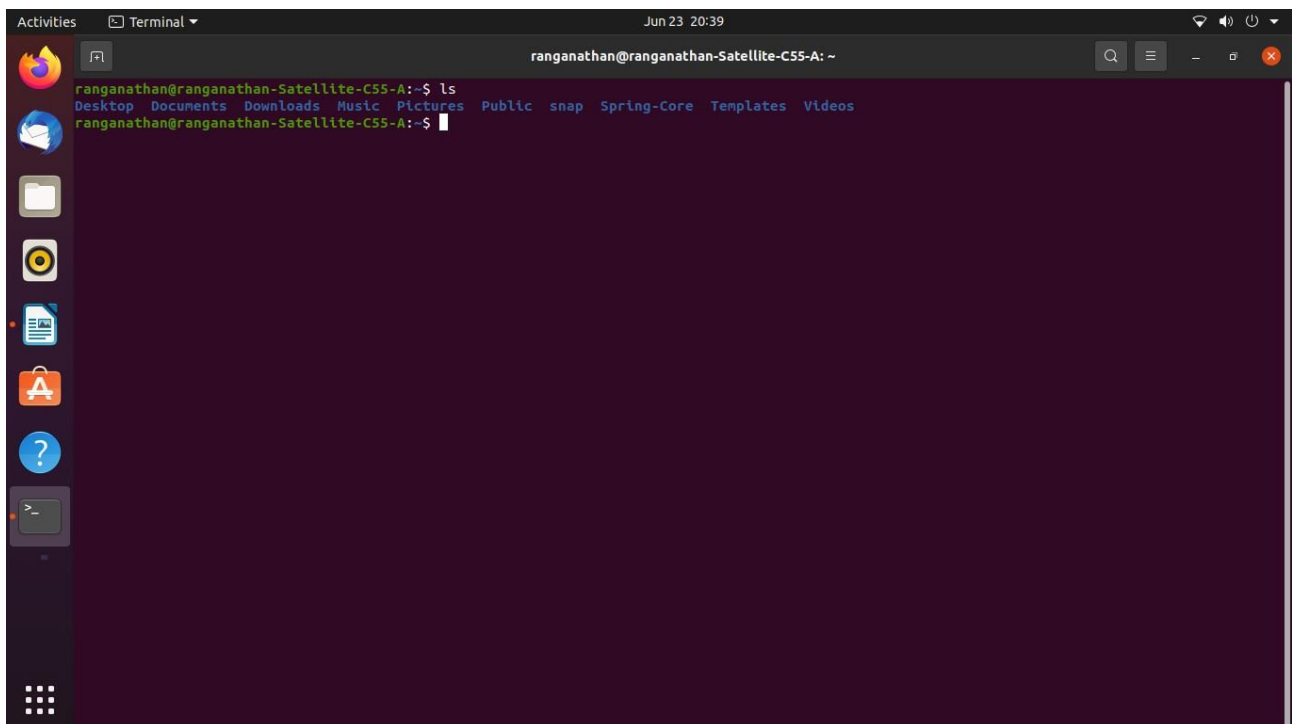
Startup your Linux system



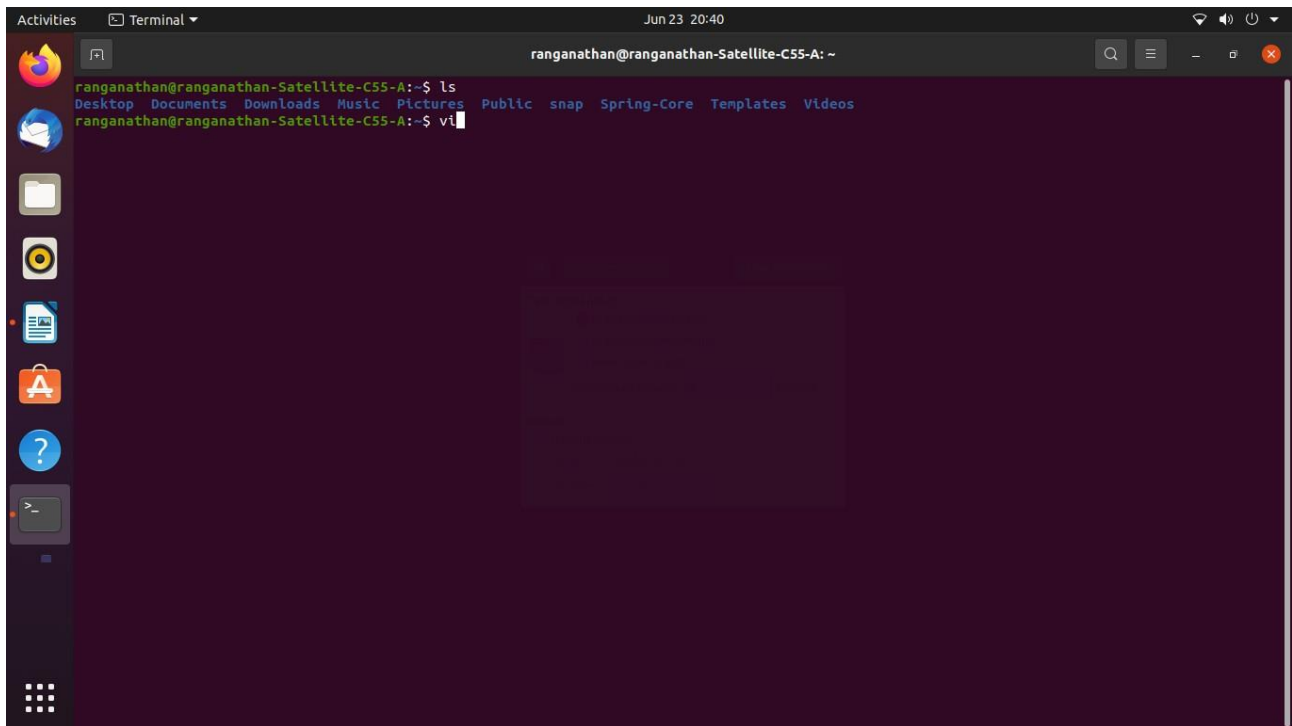
Press `Ctrl + Alt + t` to open the terminal



Type the Unix or Linux command such as `ls` and click Enter

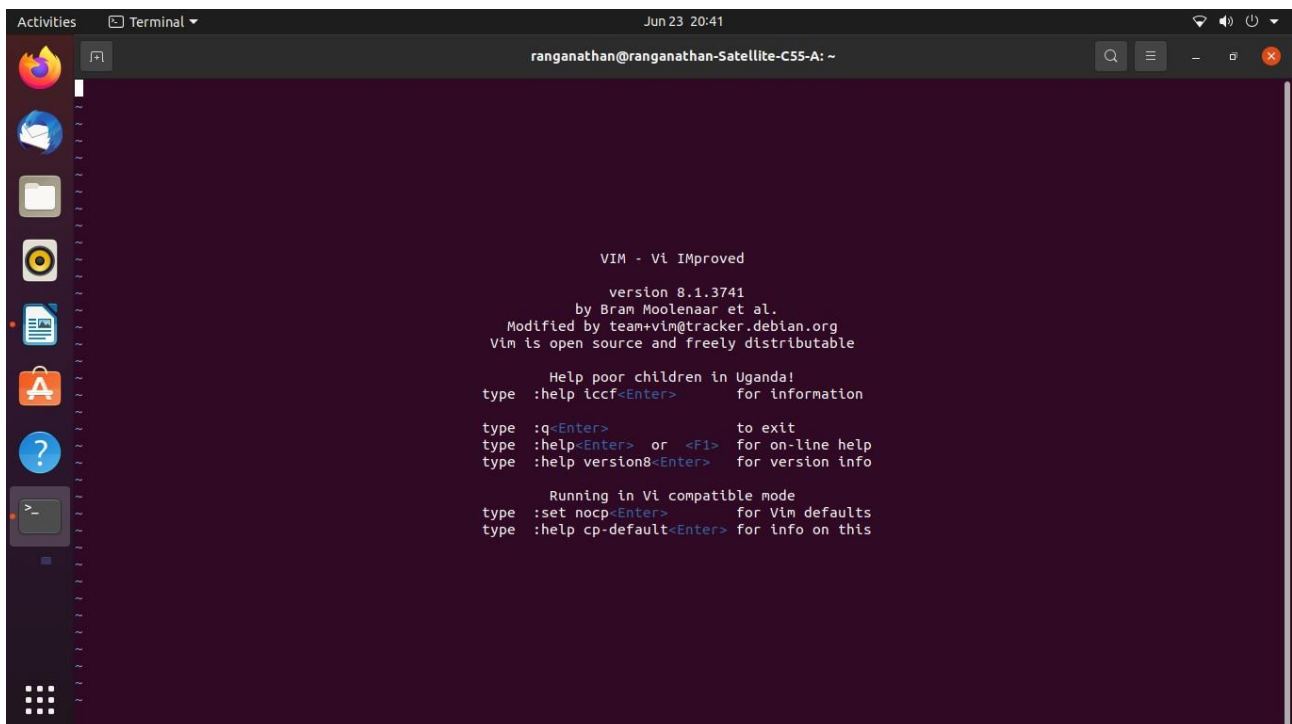


To Open the vi editor type vi command and press Enter



A terminal window titled "ranganathan@ranganathan-Satellite-C55-A: ~" with a dark purple background. The command prompt shows the user has run `ls` and then `vi`. The terminal output for `ls` lists directories: Desktop, Documents, Downloads, Music, Pictures, Public, snap, Spring-Core, Templates, and Videos. The `vi` command has been entered, and the cursor is at the end of the line.

vi editor opened



The same terminal window now displays the Vim help screen. The text is as follows:

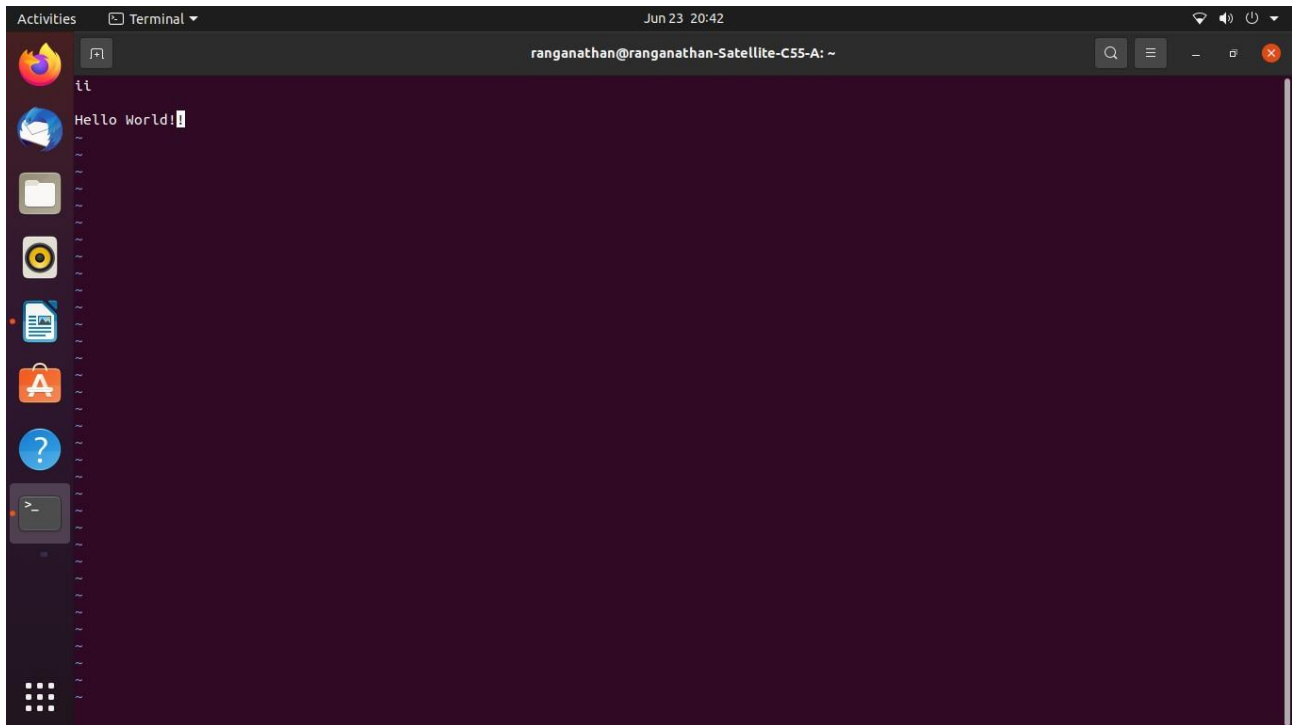
```
VIM - Vi IMproved
      version 8.1.3741
      by Bram Moolenaar et al.
      Modified by team+vim@tracker.debian.org
      Vim is open source and freely distributable

  Help poor children in Uganda!
type  :help iccf<Enter>      for information

type  :q<Enter>              to exit
type  :help<Enter> or <F1>   for on-line help
type  :help version8<Enter> for version info

  Running in Vi compatible mode
type  :set nocp<Enter>      for Vim defaults
type  :help cp-default<Enter> for info on this
```

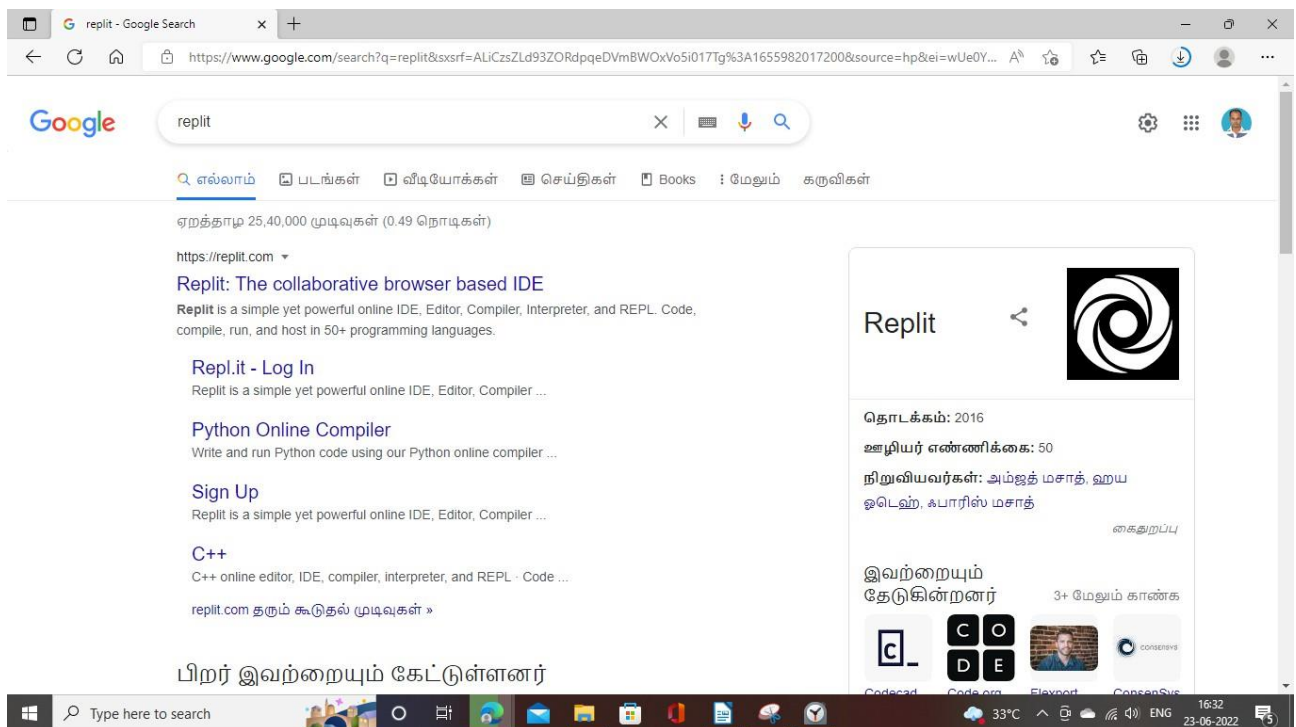
Step 5: To type inside the vi editor press i to go into the insertion mode and start typing

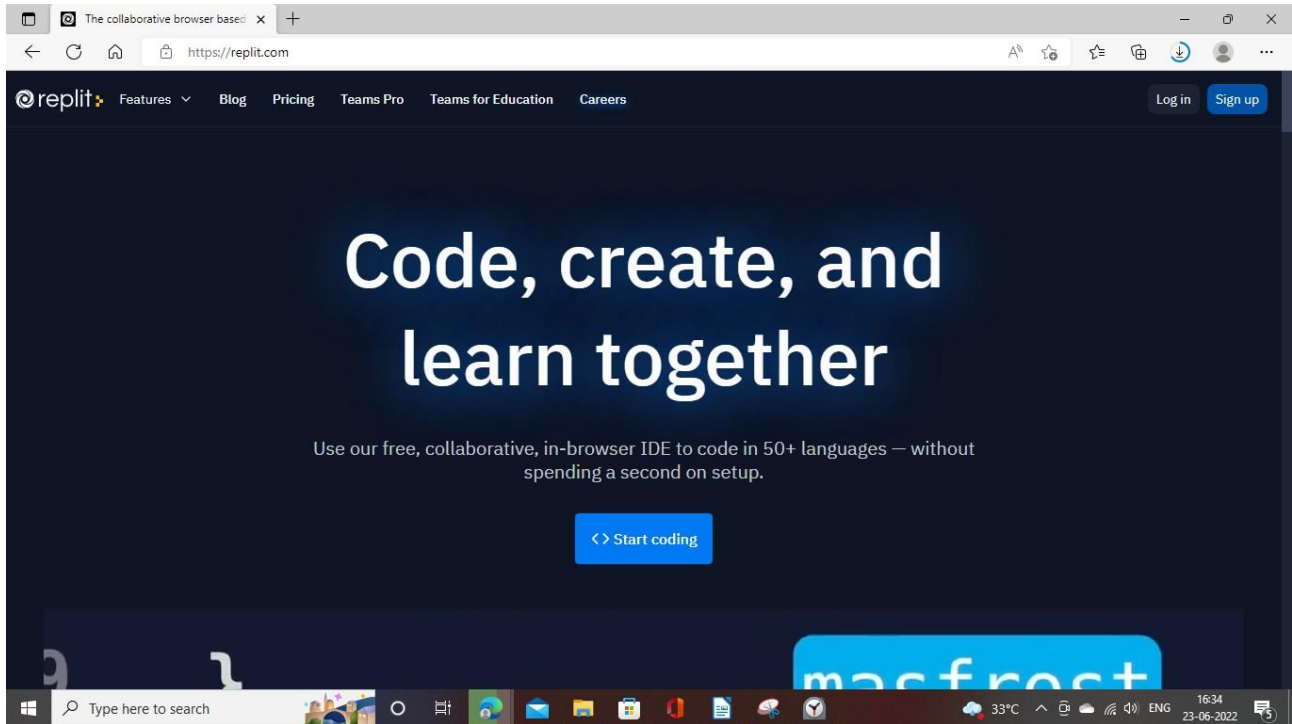


2. Browser-Based Development Environment Setup using Replit

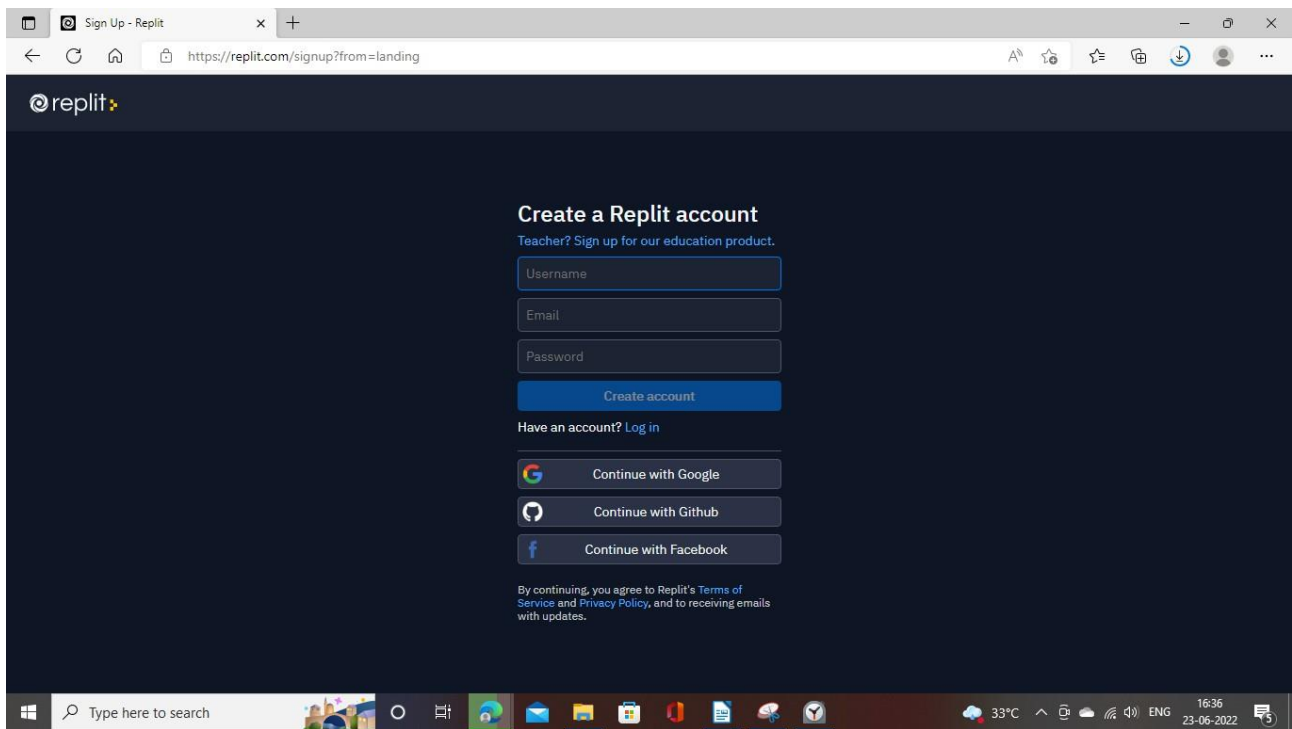
Introduction: A **cloud-based IDE (Integrated Development Environment)** that runs code in a browser. It is a Online coding platform.

Search for “replit” in google or click on <https://replit.com/>

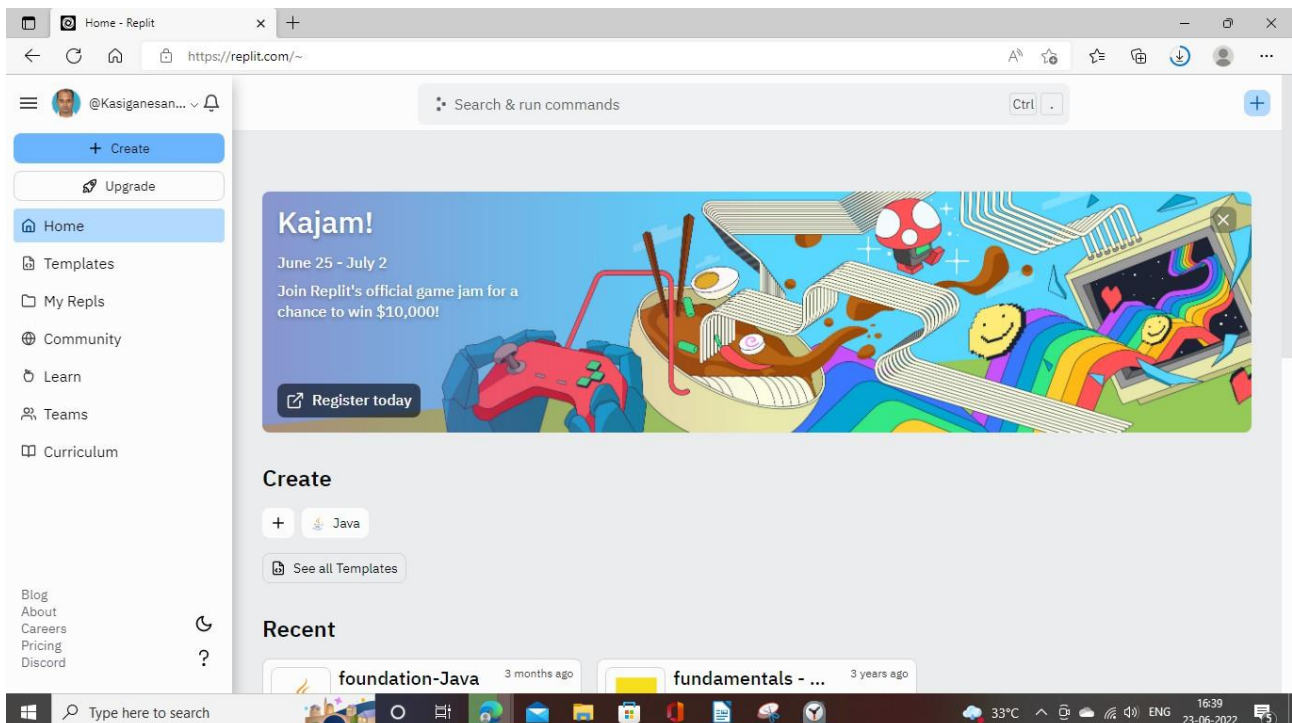




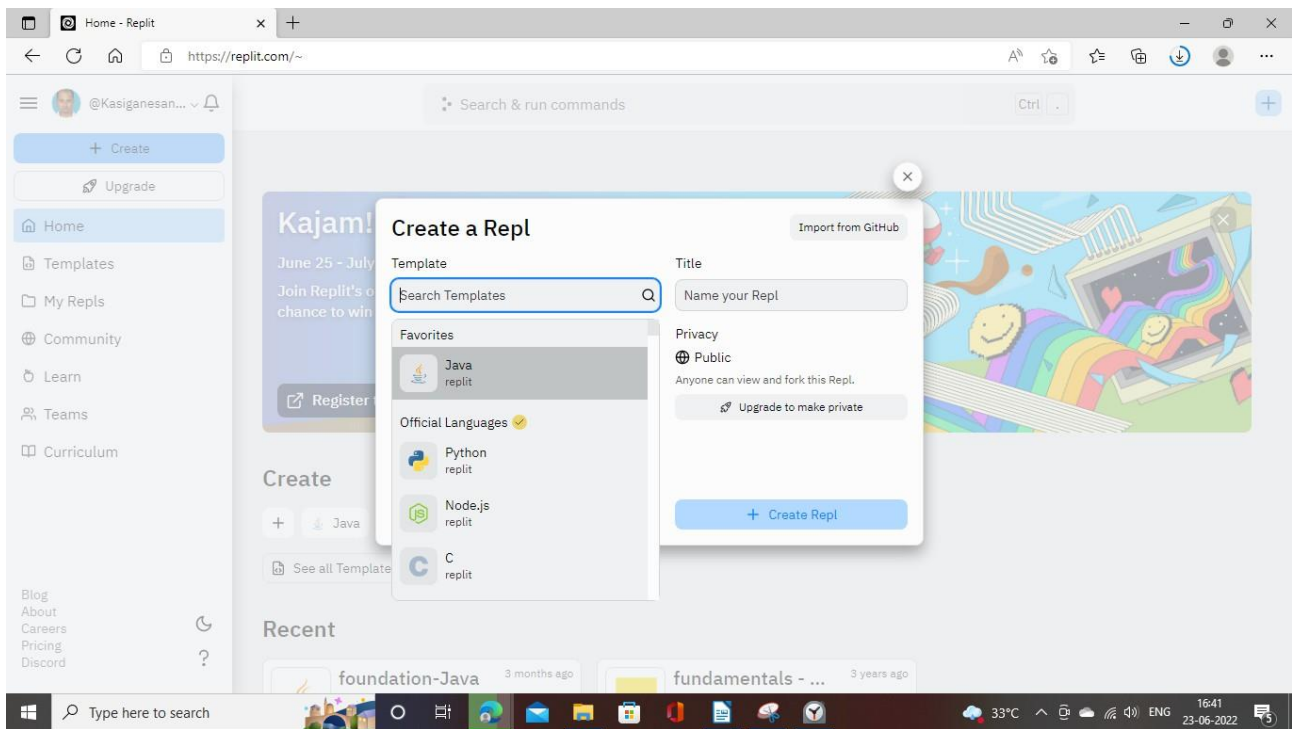
Click on Sign Up if you are new to the platform. You can click on Continue with Google if you want to sign in with your google account or you can choose the other two ways (Continue with facebook or Continue with Github if you prefer)



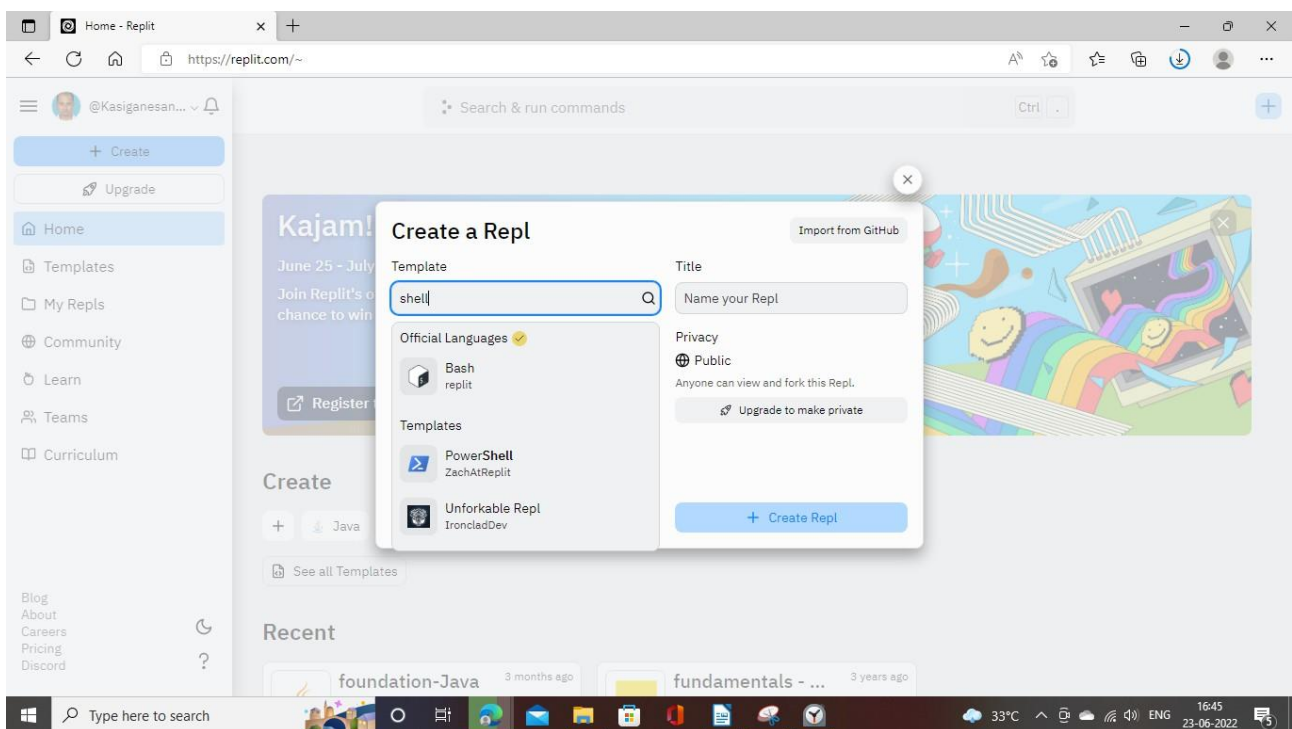
In the resulting page click + Create button to create a new Repl



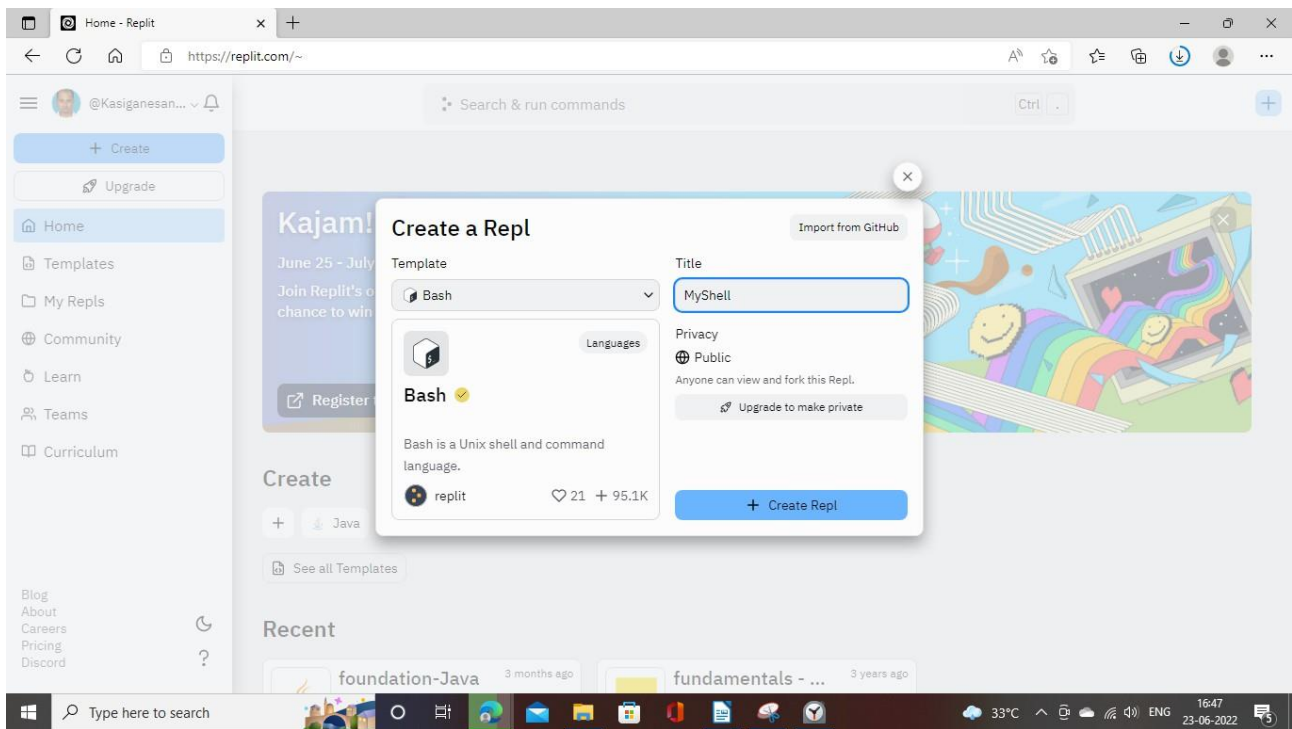
Will look like this



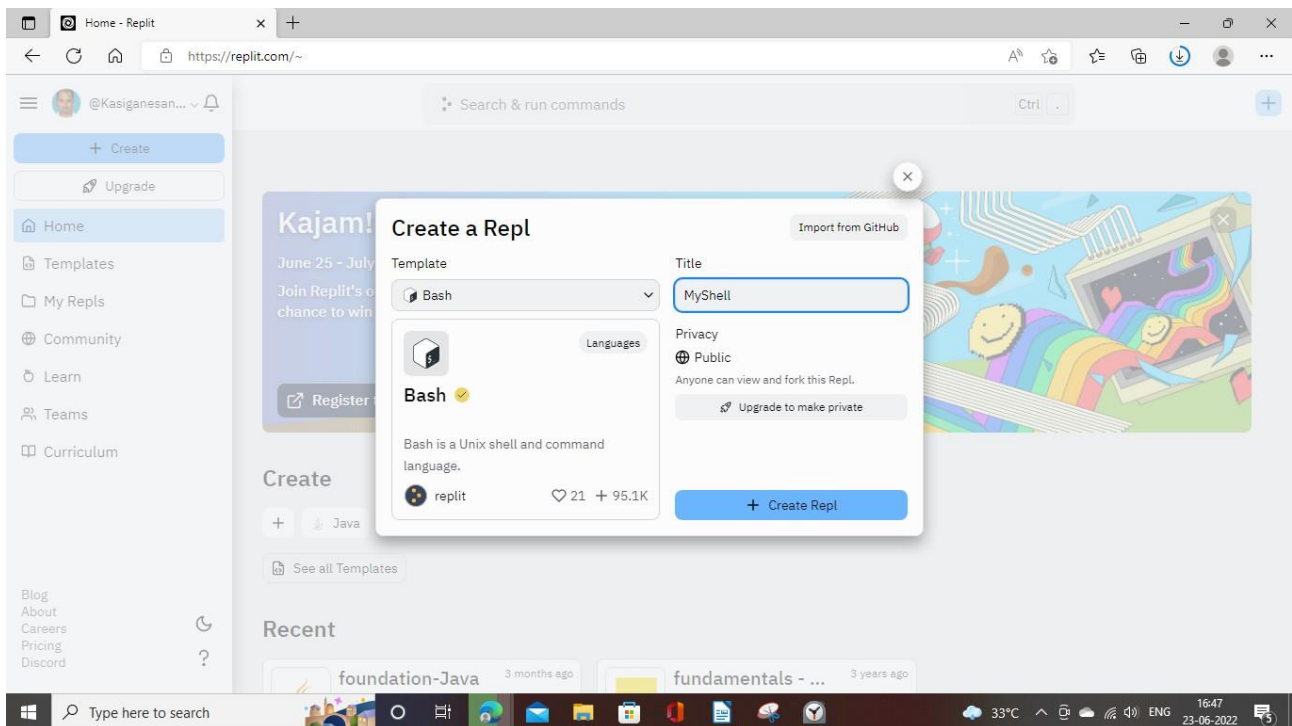
Type shell and select bash from the available list:



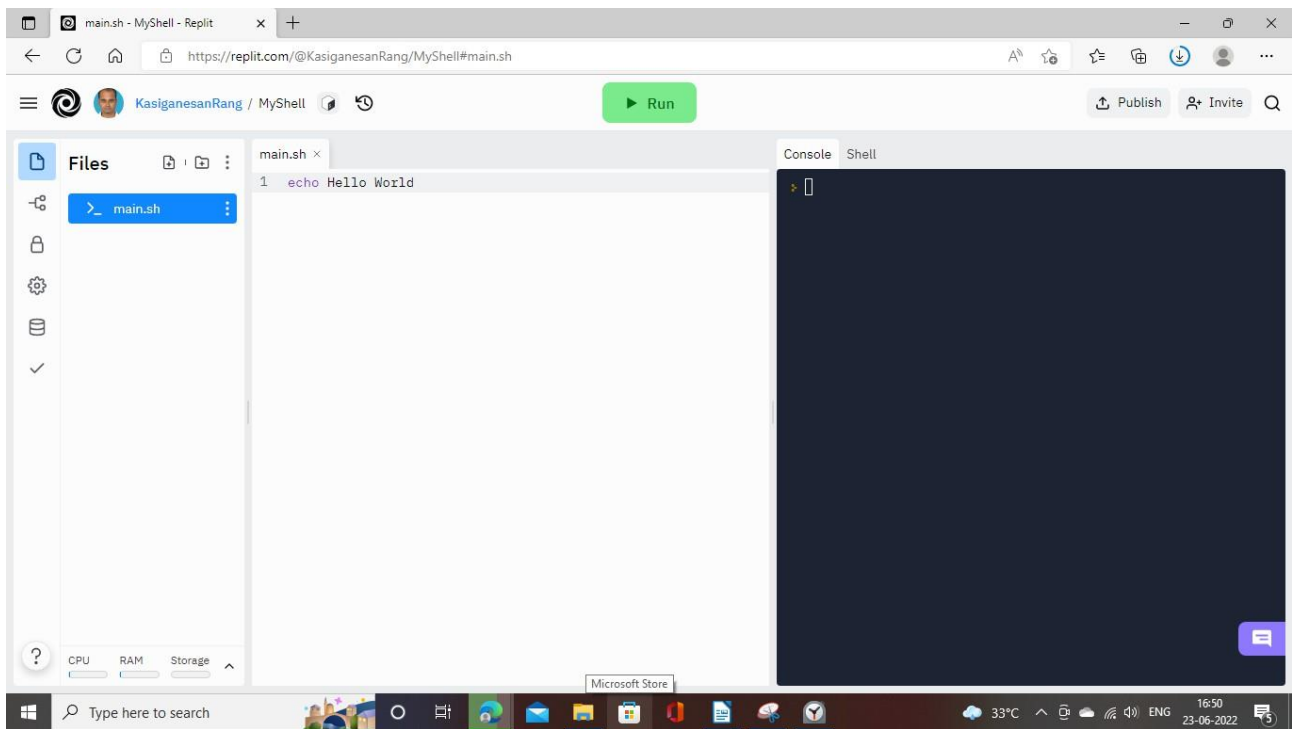
Give a Title as you want.



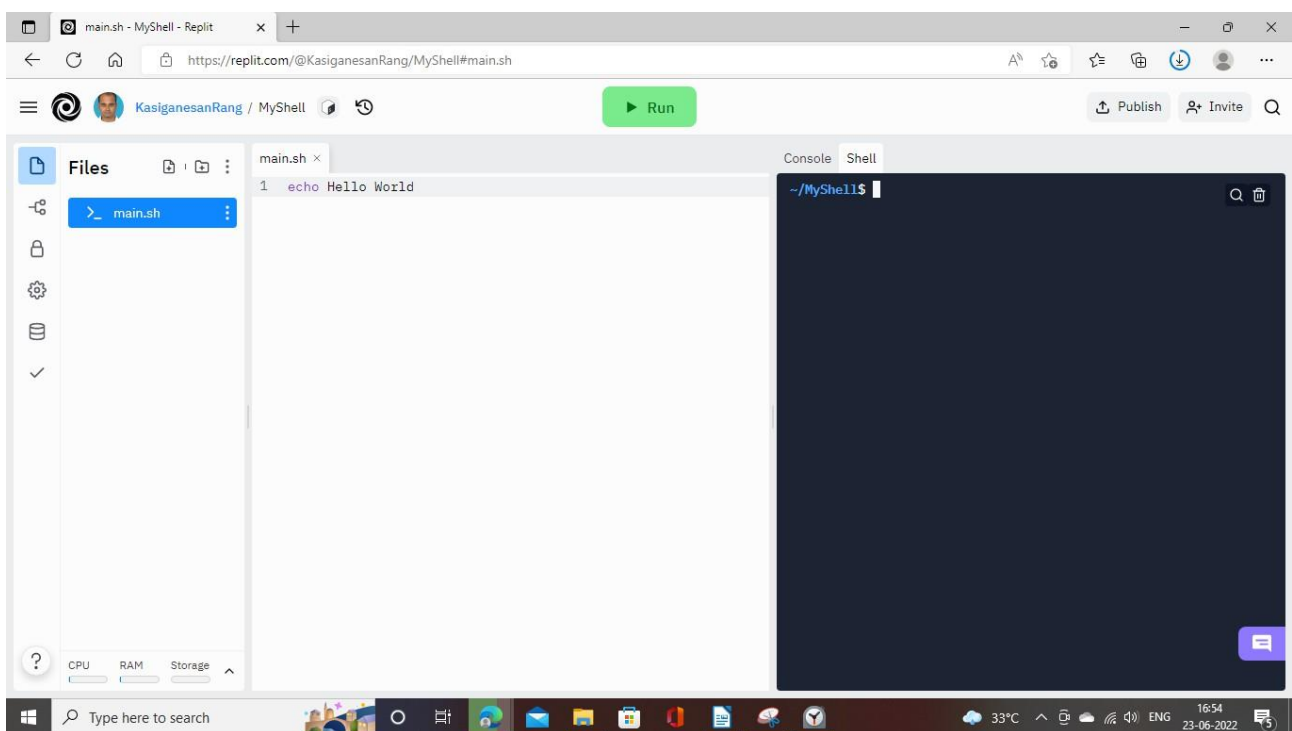
Click the + Create Repl button



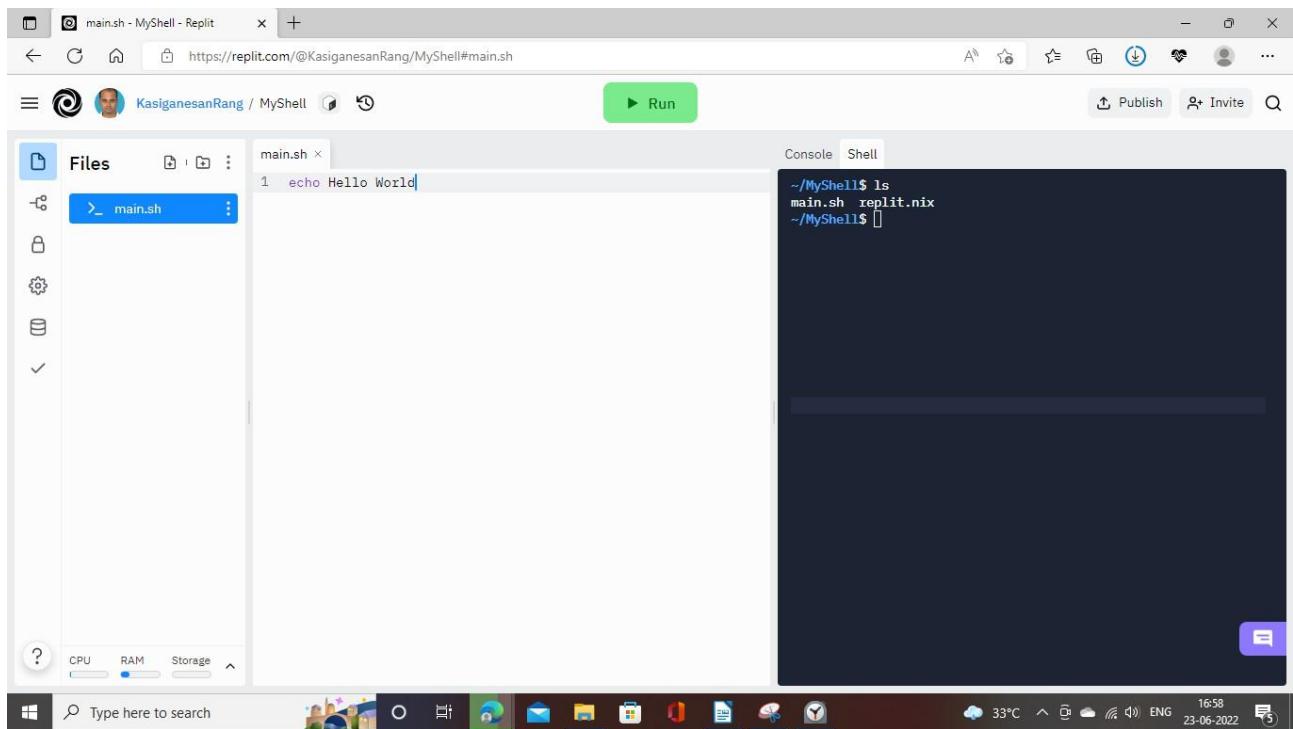
Resulting environment will look like this.



Select the Shell tab on the terminal window on the right



You can use all commands of UNIX/LINUX comfortably here.



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