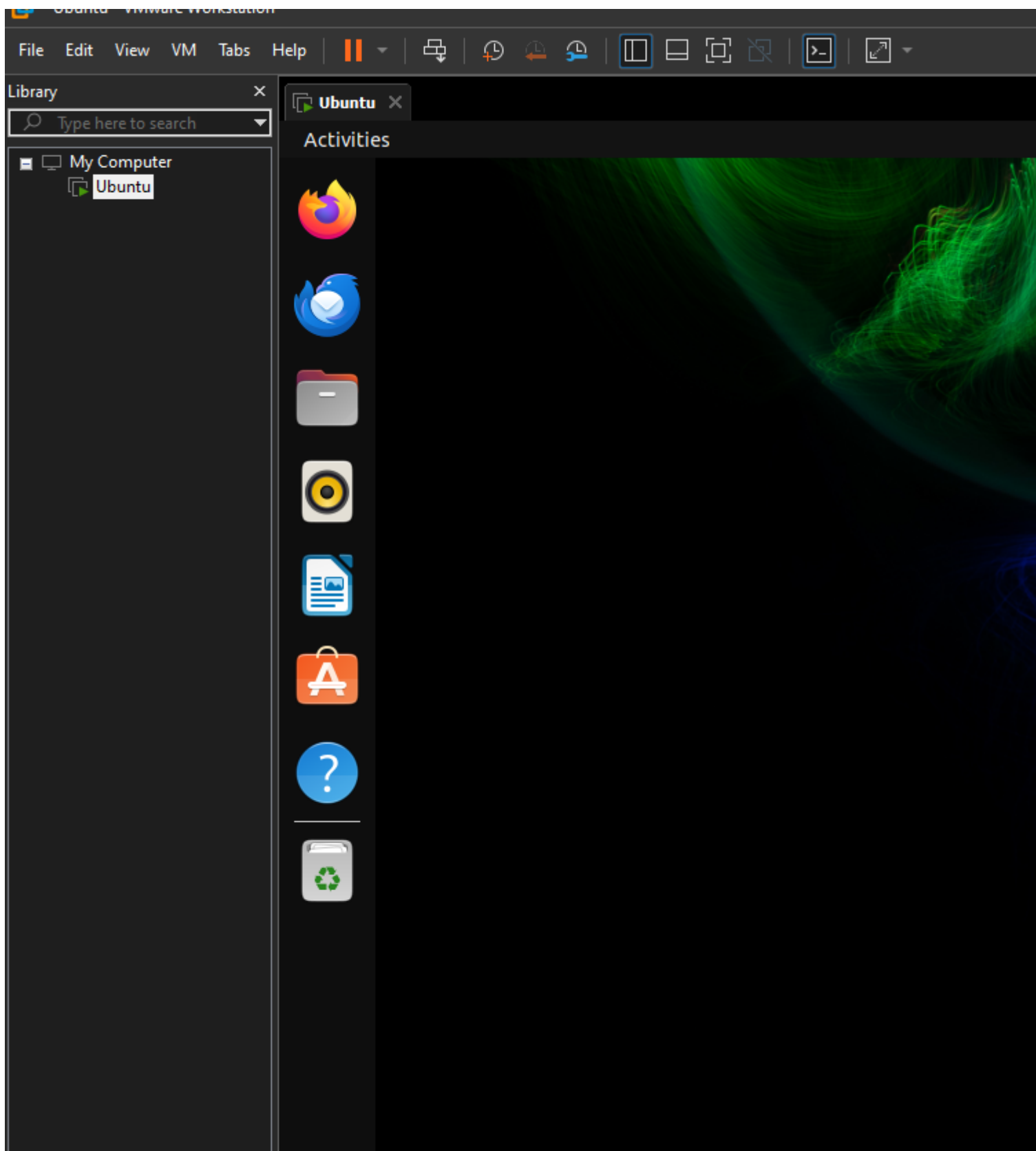


1. Install Virtualbox/ VM ware workstation with different flavors of linux or windows OS on top of windows 7 or 8



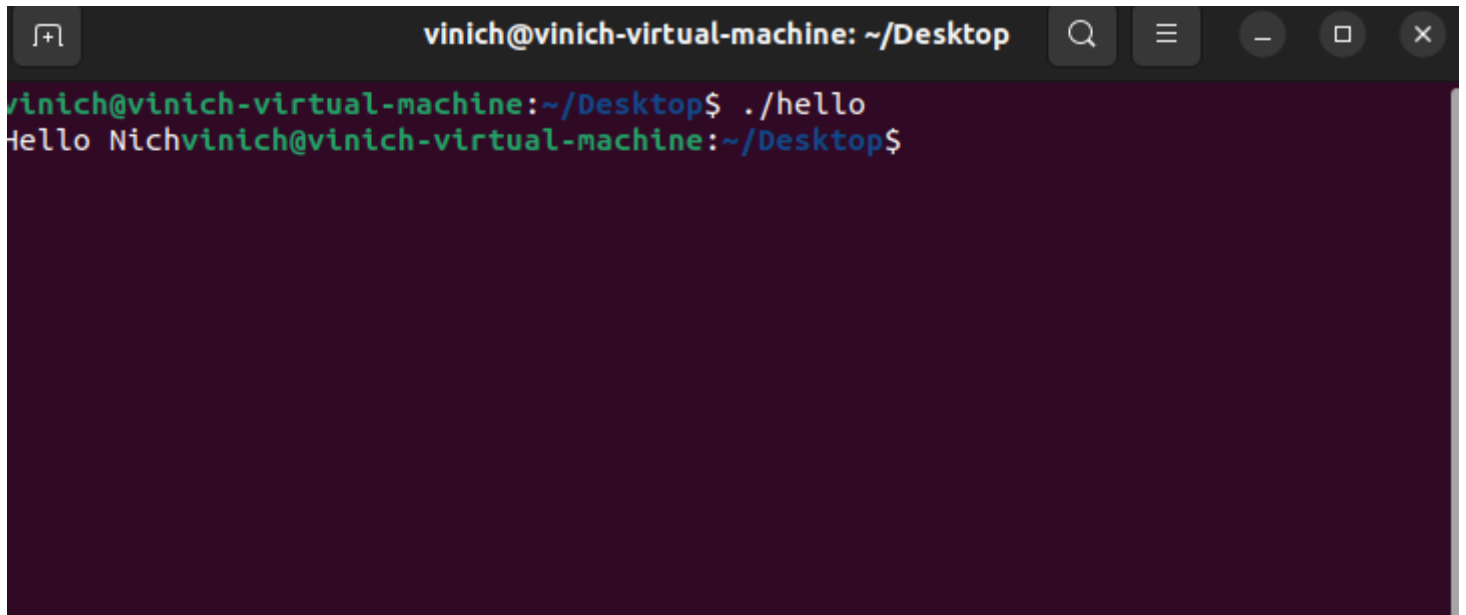
2. Install a C compiler in the virtual machine created using virtual box and execute simple programs

```
sudo apt update
```

```
sudo apt install build-essential
```

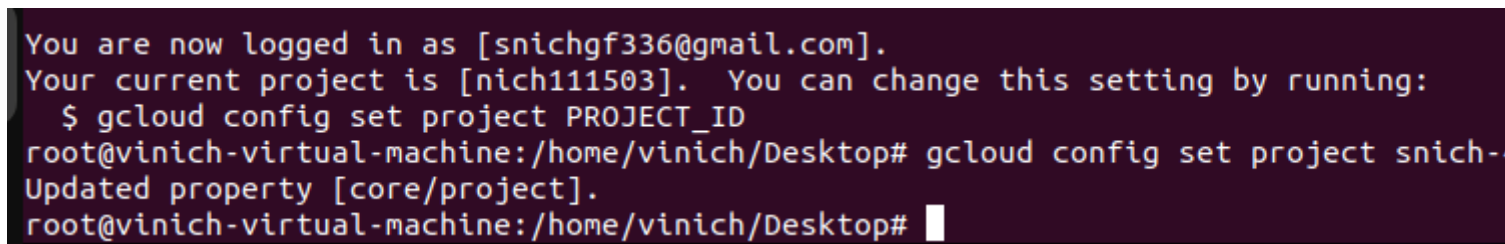
gcc hello.c -o hello.exe

hello.exe

A terminal window titled 'vinich@vinich-virtual-machine: ~/Desktop'. The prompt is 'vinich@vinich-virtual-machine:~/Desktop\$'. The user enters './hello' and the output is 'Hello Nichvinich@vinich-virtual-machine:~/Desktop\$'.

3.Install Google App Engine. Create *hello Name* app and other simple web applications using python/java

gcloud init

A terminal window showing the output of 'gcloud init'. The text is: 'You are now logged in as [snichgf336@gmail.com]. Your current project is [nich111503]. You can change this setting by running: \$ gcloud config set project PROJECT\_ID root@vinich-virtual-machine:/home/vinich/Desktop# gcloud config set project snich- Updated property [core/project]. root@vinich-virtual-machine:/home/vinich/Desktop#'.

3.Use GAE launch the web applications

gcloud app deploygcloud app browse

```
root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# pip install Flask
Command 'pip' not found, but can be installed with:
apt install python3-pip
root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# source env/bin/activate
(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# pip install Flask
Collecting Flask
  Downloading flask-3.1.0-py3-none-any.whl (102 kB)
    _____ 103.0/103.0 KB 1.1 MB/s eta 0:00:00
Collecting Werkzeug>=3.1
  Downloading werkzeug-3.1.3-py3-none-any.whl (224 kB)
    _____ 224.5/224.5 KB 1.5 MB/s eta 0:00:00
Collecting blinker>=1.9
  Downloading blinker-1.9.0-py3-none-any.whl (8.5 kB)
Collecting click>=8.1.3
  Downloading click-8.1.7-py3-none-any.whl (97 kB)
    _____ 97.9/97.9 KB 804.5 kB/s eta 0:00:00
Collecting itsdangerous>=2.2
  Downloading itsdangerous-2.2.0-py3-none-any.whl (16 kB)
Collecting Jinja2>=3.1.2
  Downloading jinja2-3.1.4-py3-none-any.whl (133 kB)
    _____ 133.3/133.3 KB 932.0 kB/s eta 0:00:00
Collecting MarkupSafe>=2.0
  Downloading MarkupSafe-3.0.2-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (29 kB)
Installing collected packages: MarkupSafe, itsdangerous, click, blinker, Werkzeug, Jinja2, Flask
Successfully installed Flask-3.1.0 Jinja2-3.1.4 MarkupSafe-3.0.2 Werkzeug-3.1.3 blinker-1.9.0 click-8.1.7 itsdangerous-2.2.0
(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich#
```

Please enter your numeric choice: 1

**ERROR:** (gcloud.app.deploy) INVALID\_ARGUMENT: The project must have a billing account

(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# touch app.py

(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# nano app.

(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# python3 app.py

(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# nano app.

(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# nano app.py

(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# python3 app.py

\* Serving Flask app 'app'

\* Debug mode: off

**WARNING: This is a development server. Do not use it in a production deployment. Use a production grade web server instead.**

\* Running on all addresses (0.0.0.0)

\* Running on http://127.0.0.1:8082

\* Running on http://192.168.19.138:8082

Press CTRL+C to quit

192.168.19.138 - - [02/Dec/2024 17:32:11] "GET / HTTP/1.1" 200 -

192.168.19.138 - - [02/Dec/2024 17:32:12] "GET /favicon.ico HTTP/1.1" 404 -

^C(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# nano app.py

(env) root@vinich-virtual-machine:/home/vinich/Desktop/hellonich# python3 app.py

\* Serving Flask app 'app'

\* Debug mode: off

**WARNING: This is a development server. Do not use it in a production deployment. Use a production grade web server instead.**

\* Running on all addresses (0.0.0.0)

\* Running on http://127.0.0.1:8082

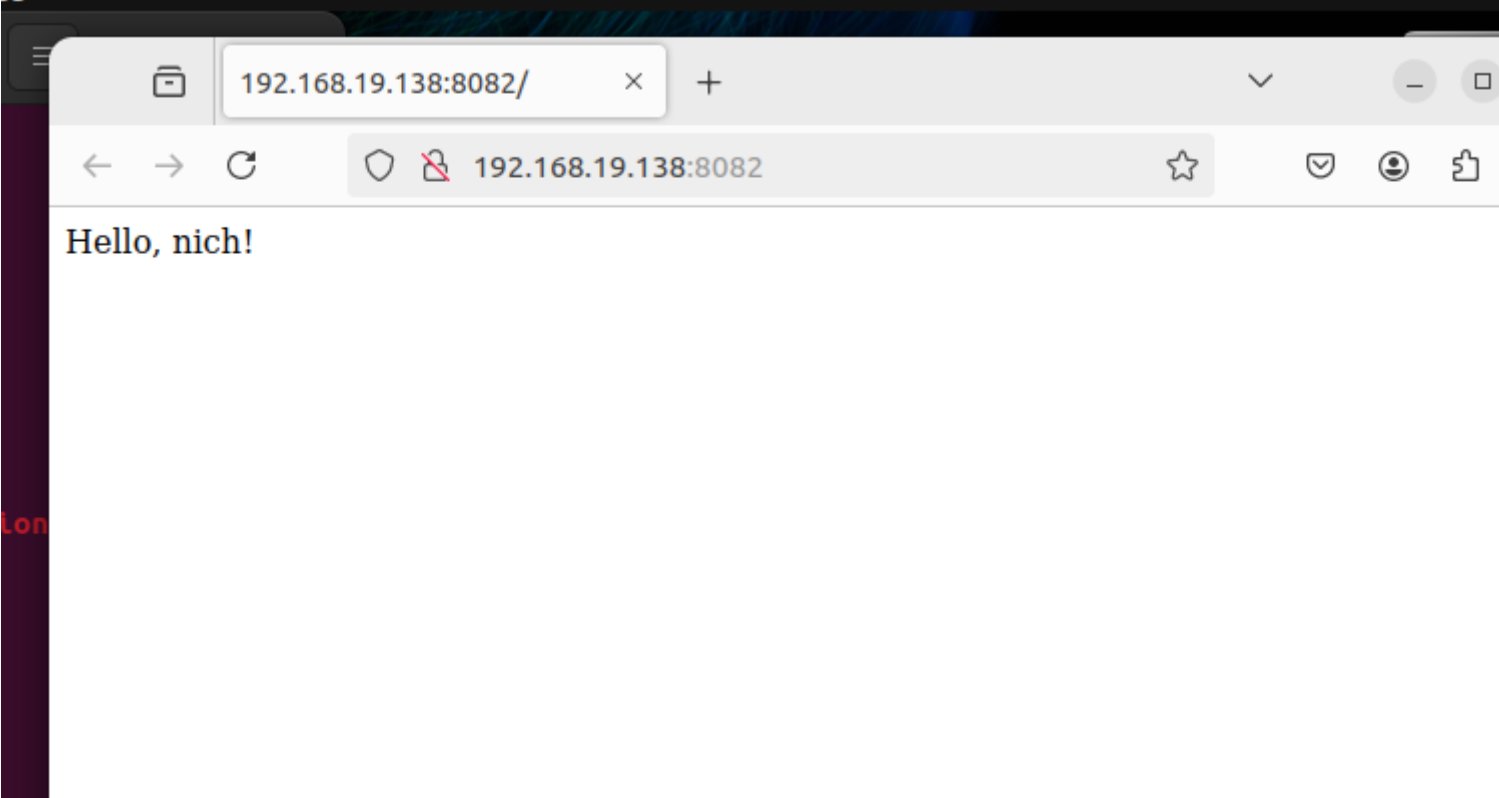
\* Running on http://192.168.19.138:8082

Press CTRL+C to quit

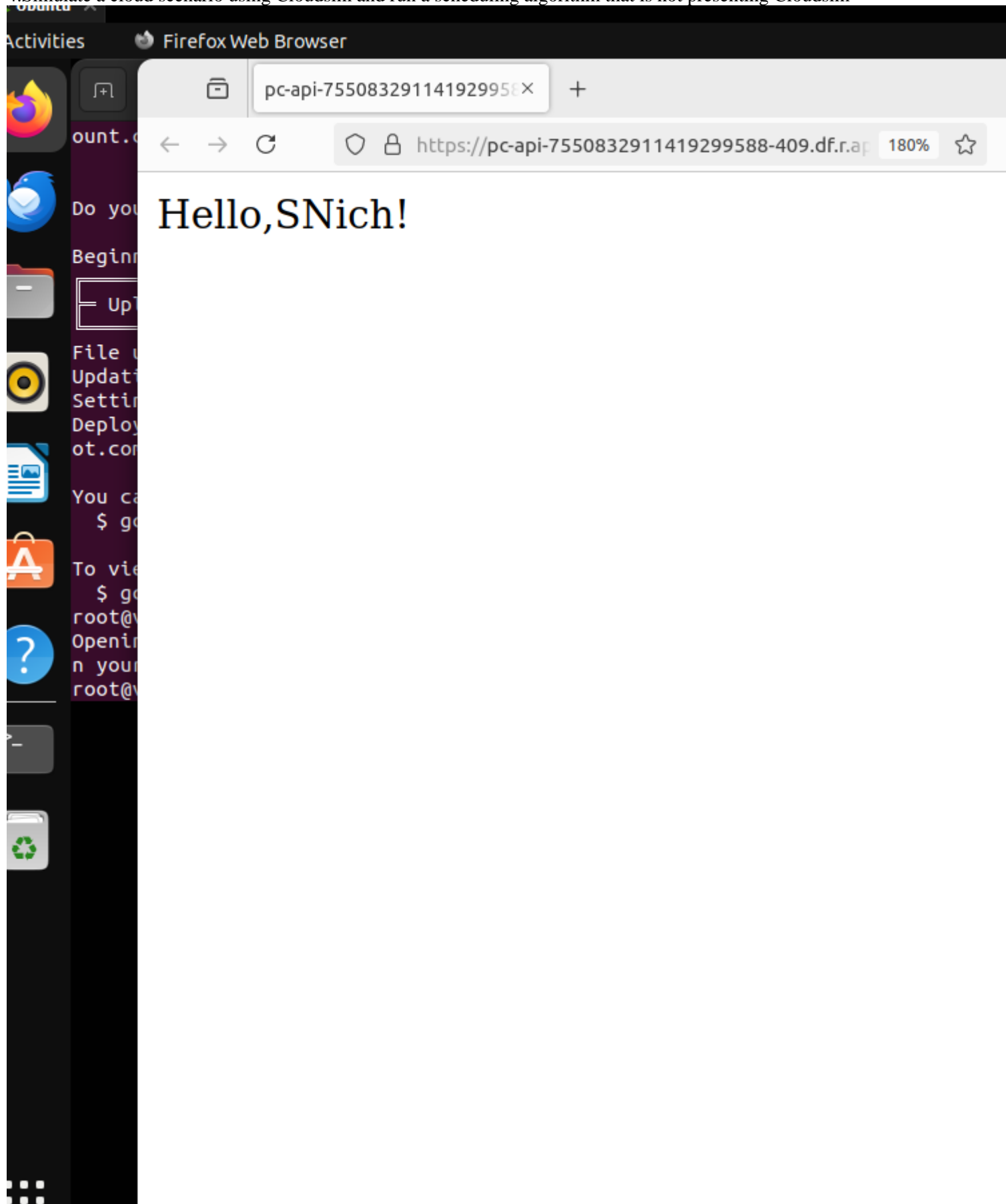
192.168.19.138 - - [02/Dec/2024 17:32:53] "GET / HTTP/1.1" 200 -

█

53



4. Simulate a cloud scenario using Cloudsim and run a scheduling algorithm that is not presenting Cloudsim



## 5.Simulate a Cloud Scenario Using CloudSim

Releases · Cloudslab/cloudsim

+

← → ↺

https://github.com/cloudslab/cloudsim/releases

<> Code

Issues 75

Pull requests 10

Discussions


Actions


Projects


Releases

Tags

Aug 24

 deRemo

 7.0-pre

 d66b673

Compare

# CloudSim v7.0.0-pre

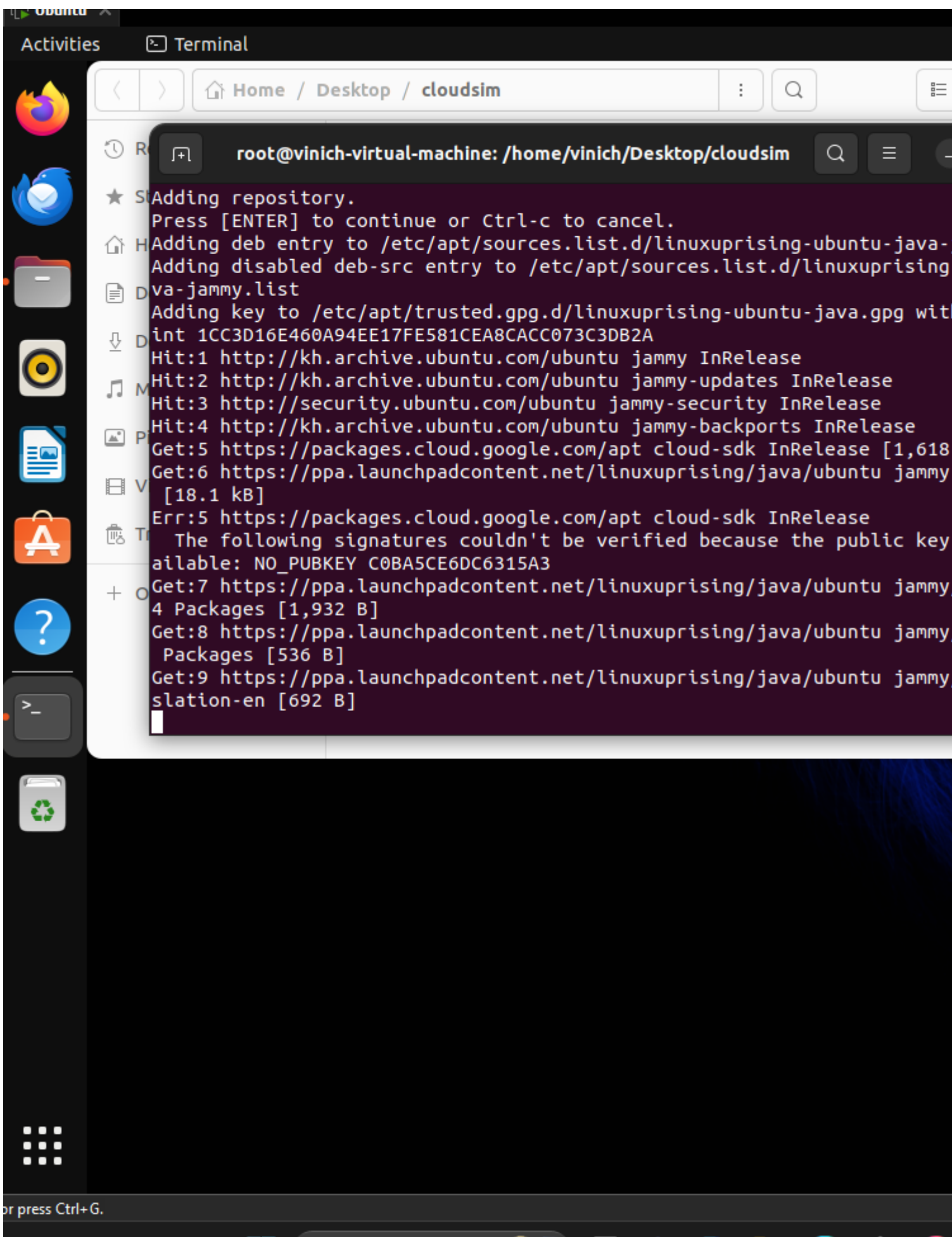
CloudSim v7.0.0-pre (or simply CloudSim) is a new version of CloudSim designed to facilitate the integration of multiple CloudSim extensions. CloudSim v6.0.0-alpha have been replaced by CloudSim v7.0.0-pre to build future CloudSim extensions. For the evaluation of complex workflow and more than 13000 lines of code have been reduced.

**NOTE:** CloudSim7G may have lost the ResCloudlet class (which is now fully replaced by ContainerHost) and due to the re-implementation of declared static integers. However, with more than 10-15 minutes for most cases.

For more information on the changes, please refer to the release notes.

**\*\*Feel free to open issues on GitHub**

Assets 2



Activities

Terminal

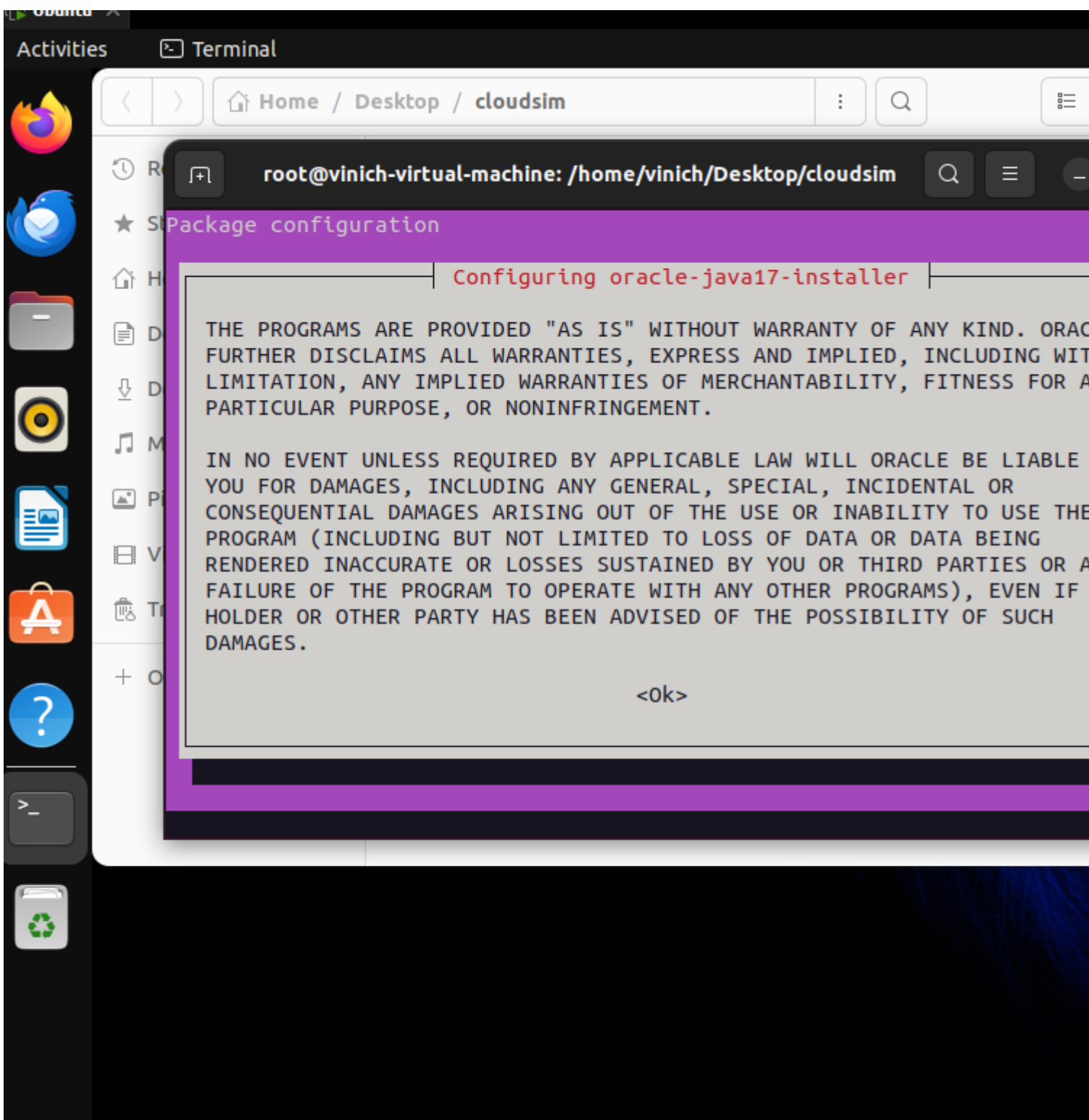
Home / Desktop / cloudsim

root@vinich-virtual-machine: /home/vinich/Desktop/cloudsim

```
Adding repository.
Press [ENTER] to continue or Ctrl-c to cancel.
Adding deb entry to /etc/apt/sources.list.d/linuxuprising-ubuntu-java-
Adding disabled deb-src entry to /etc/apt/sources.list.d/linuxuprising
va-jammy.list
Adding key to /etc/apt/trusted.gpg.d/linuxuprising-ubuntu-java.gpg with
int 1CC3D16E460A94EE17FE581CEA8CACC073C3DB2A
Hit:1 http://kh.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://kh.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:4 http://kh.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:5 https://packages.cloud.google.com/apt cloud-sdk InRelease [1,618
Get:6 https://ppa.launchpadcontent.net/linuxuprising/java/ubuntu jammy
[18.1 kB]
Err:5 https://packages.cloud.google.com/apt cloud-sdk InRelease
The following signatures couldn't be verified because the public key
ailable: NO_PUBKEY C0BA5CE6DC6315A3
Get:7 https://ppa.launchpadcontent.net/linuxuprising/java/ubuntu jammy
4 Packages [1,932 B]
Get:8 https://ppa.launchpadcontent.net/linuxuprising/java/ubuntu jammy
Packages [536 B]
Get:9 https://ppa.launchpadcontent.net/linuxuprising/java/ubuntu jammy
slation-en [692 B]
```

or press Ctrl+G.







vinich@vinich-virtual-machine: ~/Desktop



```
vinich@vinich-virtual-machine:~/Desktop$ java -version
```

```
openjdk version "17.0.13" 2024-10-15
```

```
OpenJDK Runtime Environment (build 17.0.13+11-Ubuntu-2ubuntu122.04)
```

```
OpenJDK 64-Bit Server VM (build 17.0.13+11-Ubuntu-2ubuntu122.04, mixed mode  
and garbage collection)
```

```
vinich@vinich-virtual-machine:~/Desktop$
```