

Install Ngrok

```
Activities Terminal Agu 29 22:04
elberth@elberth-VirtualBox: ~
elberth@elberth-VirtualBox: ~
elberth@elberth-VirtualBox: $ sudo snap apt install ngrok
error: unknown command "apt", see 'snap help'.
elberth@elberth-VirtualBox: $ sudo snap install ngrok
ngrok (v3/stable) 3.26.0 from Ngrok (ngrok-publisher) installed
elberth@elberth-VirtualBox: $ ngrok config add-authtoken 31xqsTqv1IDLNPWJ2A2Xdx6700_q1J2JFupZbRvwM7PMxBT
Authtoken saved to configuration file: /home/elberth/snap/ngrok/300/.config/ngrok/ngrok.yml
elberth@elberth-VirtualBox: $ sudo nano /var/www/html/index.html
elberth@elberth-VirtualBox: $ sudo apt update
Hit:1 http://id.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://id.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:3 http://id.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Get:5 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2.802 kB]
Get:6 http://id.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [870 kB]
Get:7 http://id.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [451 kB]
Get:8 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 DEP-11 Metadata [112 kB]
Get:9 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [18,9 kB]
Get:10 http://id.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [4.360 kB]
Get:11 http://id.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [799 kB]
Get:12 http://id.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 DEP-11 Metadata [212 B]
Get:13 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [782 kB]
Get:14 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1.227 kB]
Get:15 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [304 kB]
Get:16 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 DEP-11 Metadata [359 kB]
Get:17 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [29,5 kB]
Get:18 http://id.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 DEP-11 Metadata [940 B]
Get:19 http://id.archive.ubuntu.com/ubuntu jammy-backports/main amd64 DEP-11 Metadata [7.064 B]
Get:20 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [2.629 kB]
Get:21 http://id.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 DEP-11 Metadata [212 B]
Get:22 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [30,0 kB]
Get:23 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe i386 Packages [18,7 kB]
Get:24 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16,6 kB]
Get:25 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 DEP-11 Metadata [26,0 kB]
Get:26 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe DEP-11 48x48 Icons [20,7 kB]
Get:27 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe DEP-11 64x64 Icons [29,3 kB]
Get:28 http://id.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 DEP-11 Metadata [212 B]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [697 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [387 kB]
```

Add authentication token

```
Activities Terminal Agu 29 22:04
elberth@elberth-VirtualBox: ~
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elberth@elberth-VirtualBox: $ sudo snap apt install ngrok
error: unknown command "apt", see 'snap help'.
elberth@elberth-VirtualBox: $ sudo snap install ngrok
ngrok (v3/stable) 3.26.0 from Ngrok (ngrok-publisher) installed
elberth@elberth-VirtualBox: $ ngrok config add-authtoken 31xqsTqv1IDLNPWJ2A2Xdx6700_q1J2JFupZbRvwM7PMxBT
Authtoken saved to configuration file: /home/elberth/snap/ngrok/300/.config/ngrok/ngrok.yml
elberth@elberth-VirtualBox: $ sudo nano /var/www/html/index.html
elberth@elberth-VirtualBox: $ sudo apt update
Hit:1 http://id.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://id.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:3 http://id.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Get:5 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2.802 kB]
Get:6 http://id.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [870 kB]
Get:7 http://id.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [451 kB]
Get:8 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 DEP-11 Metadata [112 kB]
Get:9 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [18,9 kB]
Get:10 http://id.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [4.360 kB]
Get:11 http://id.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [799 kB]
Get:12 http://id.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 DEP-11 Metadata [212 B]
Get:13 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [782 kB]
Get:14 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1.227 kB]
Get:15 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [304 kB]
Get:16 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 DEP-11 Metadata [359 kB]
Get:17 http://id.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [29,5 kB]
Get:18 http://id.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 DEP-11 Metadata [940 B]
Get:19 http://id.archive.ubuntu.com/ubuntu jammy-backports/main amd64 DEP-11 Metadata [7.064 B]
Get:20 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [2.629 kB]
Get:21 http://id.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 DEP-11 Metadata [212 B]
Get:22 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [30,0 kB]
Get:23 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe i386 Packages [18,7 kB]
Get:24 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16,6 kB]
Get:25 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 DEP-11 Metadata [26,0 kB]
Get:26 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe DEP-11 48x48 Icons [20,7 kB]
Get:27 http://id.archive.ubuntu.com/ubuntu jammy-backports/universe DEP-11 64x64 Icons [29,3 kB]
Get:28 http://id.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 DEP-11 Metadata [212 B]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [697 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [387 kB]
```

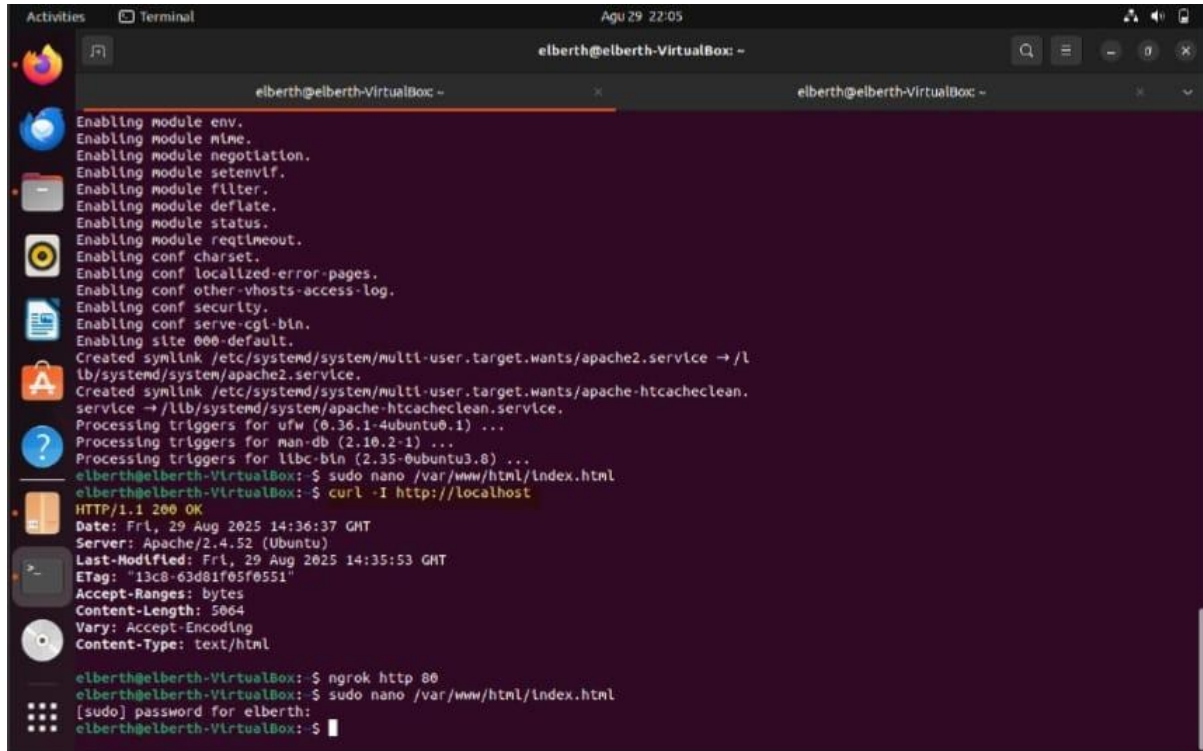
Install Apache2

```
Activities Terminal Agu 29 22:04
elberth@elberth-VirtualBox: ~
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elberth@elberth-VirtualBox: ~
Get:29 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [697 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [387 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 DEP-11 Metadata [54,7 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13,8 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [4.202 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [770 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 DEP-11 Metadata [200 B]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/universe i386 Packages [673 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [995 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [218 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 DEP-11 Metadata [125 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [22,1 kB]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 DEP-11 Metadata [200 B]
Fetched 23,5 MB in 10s (1.495 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
291 packages can be upgraded. Run 'apt list --upgradable' to see them.
elberth@elberth-VirtualBox: ~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap
0 upgraded, 8 newly installed, 0 to remove and 291 not upgraded.
Need to get 1.923 kB of archives.
After this operation, 7.728 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapr1 amd64 1.7.0-0ubuntu0.22.04.2 [100 kB]
Get:2 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1 amd64 1.6.1-5ubuntu4.22.04.2 [92,8 kB]
Get:3 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.1-5ubuntu4.22.04.2 [11,3 kB]
Get:4 http://id.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-ldap amd64 1.6.1-5ubuntu4.22.04.2 [9.170 B]
```

Make file index.html

```
Activities Terminal Agu 29 22:05
elberth@elberth-VirtualBox: ~
elberth@elberth-VirtualBox: ~
elberth@elberth-VirtualBox: ~
Setting up libaprutil1-ldap:amd64 (1.6.1-5ubuntu4.22.04.2) ...
Setting up libaprutil1-dbd-sqlite3:amd64 (1.6.1-5ubuntu4.22.04.2) ...
Setting up apache2-utils (2.4.52-1ubuntu4.16) ...
Setting up apache2-bin (2.4.52-1ubuntu4.16) ...
Setting up apache2 (2.4.52-1ubuntu4.16) ...
Enabling module mpm_event.
Enabling module authz_core.
Enabling module authz_host.
Enabling module authn_core.
Enabling module auth_basic.
Enabling module access_compat.
Enabling module authn_file.
Enabling module authz_user.
Enabling module alias.
Enabling module dir.
Enabling module autoindex.
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.0) ...
elberth@elberth-VirtualBox: ~$ sudo nano /var/www/html/index.html
```

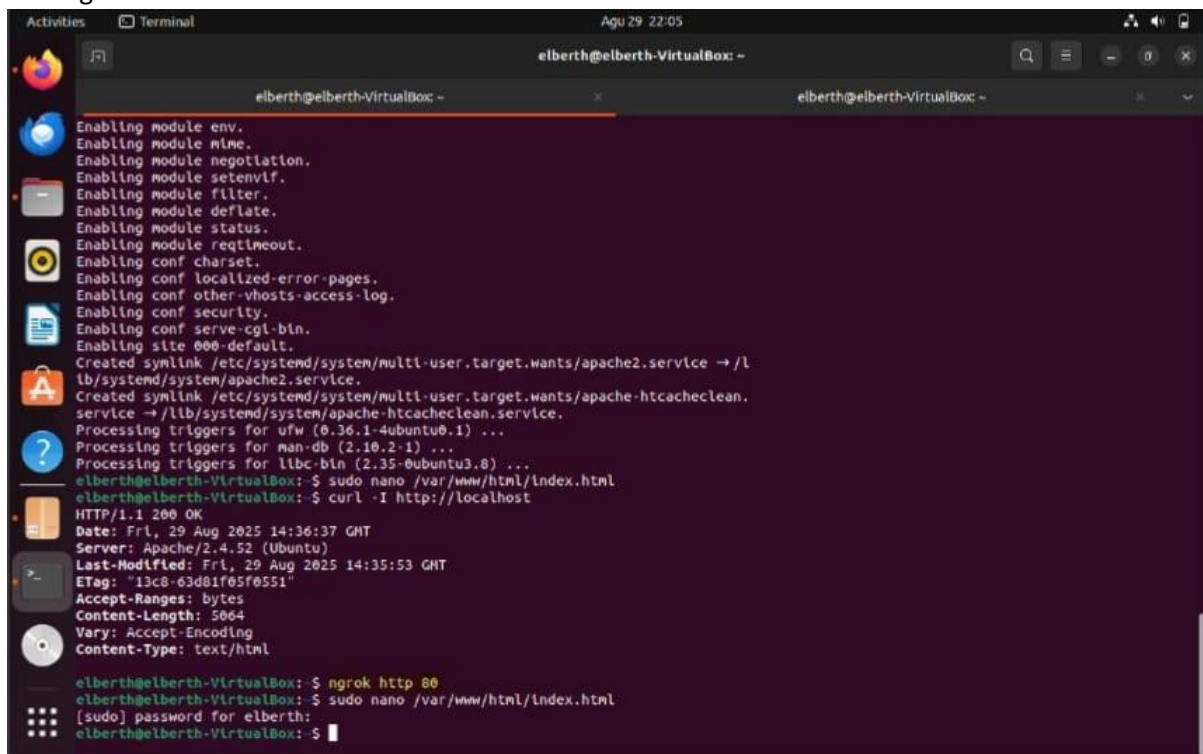

Check if it is running locally



```
Activities Terminal Aug 29 22:05
elberth@elberth-VirtualBox: ~
elberth@elberth-VirtualBox: ~
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
elberth@elberth-VirtualBox: $ sudo nano /var/www/html/index.html
elberth@elberth-VirtualBox: $ curl -I http://localhost
HTTP/1.1 200 OK
Date: Fri, 29 Aug 2025 14:36:37 GMT
Server: Apache/2.4.52 (Ubuntu)
Last-Modified: Fri, 29 Aug 2025 14:35:53 GMT
ETag: "13c8-63d81f05f0551"
Accept-Ranges: bytes
Content-Length: 5064
Vary: Accept-Encoding
Content-Type: text/html

elberth@elberth-VirtualBox: $ ngrok http 80
elberth@elberth-VirtualBox: $ sudo nano /var/www/html/index.html
[sudo] password for elberth:
elberth@elberth-VirtualBox: $
```

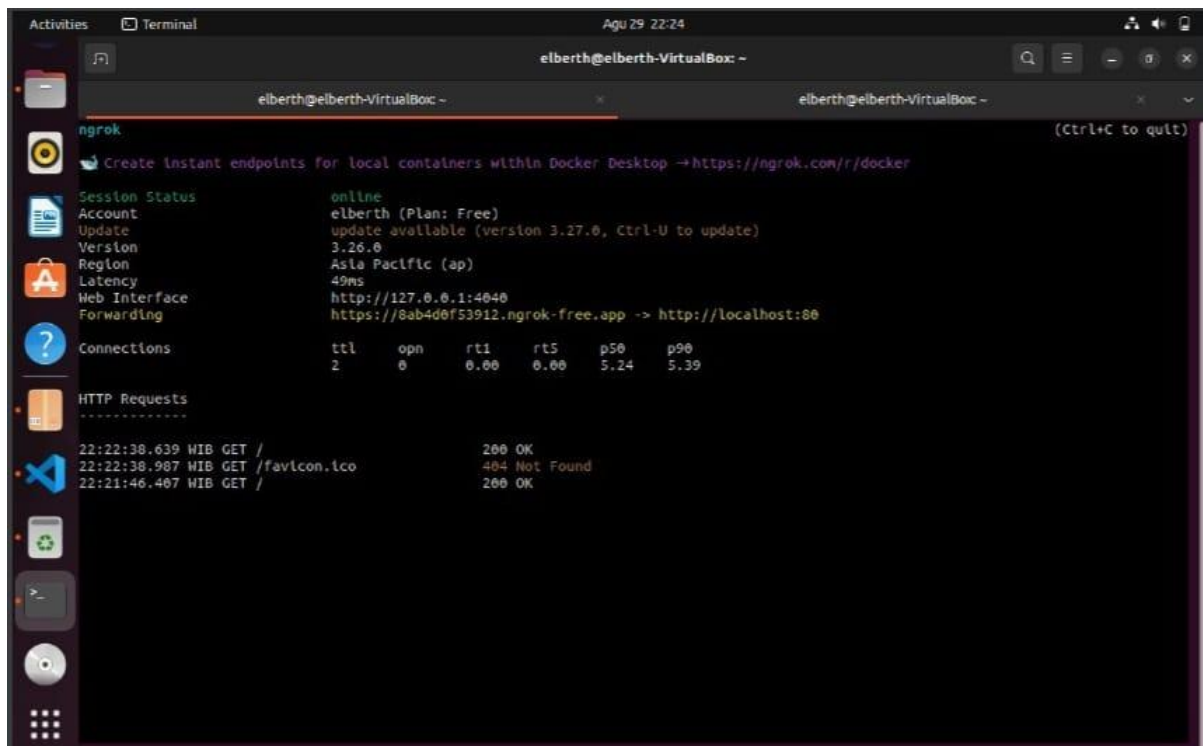
Run Ngrok Tunnel



```
Activities Terminal Aug 29 22:05
elberth@elberth-VirtualBox: ~
elberth@elberth-VirtualBox: ~
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.1-4ubuntu0.1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
elberth@elberth-VirtualBox: $ sudo nano /var/www/html/index.html
elberth@elberth-VirtualBox: $ curl -I http://localhost
HTTP/1.1 200 OK
Date: Fri, 29 Aug 2025 14:36:37 GMT
Server: Apache/2.4.52 (Ubuntu)
Last-Modified: Fri, 29 Aug 2025 14:35:53 GMT
ETag: "13c8-63d81f05f0551"
Accept-Ranges: bytes
Content-Length: 5064
Vary: Accept-Encoding
Content-Type: text/html

elberth@elberth-VirtualBox: $ ngrok http 80
elberth@elberth-VirtualBox: $ sudo nano /var/www/html/index.html
[sudo] password for elberth:
elberth@elberth-VirtualBox: $
```

If successful, the terminal will display the URL: Forwarding `https://xxx-xxx-xxx.ngrok-free.app` -> `http://localhost:80`



The screenshot shows a terminal window titled "elberth@elberth-VirtualBox: ~" with a sidebar on the left containing various application icons. The terminal output displays the ngrok session status and a list of HTTP requests.

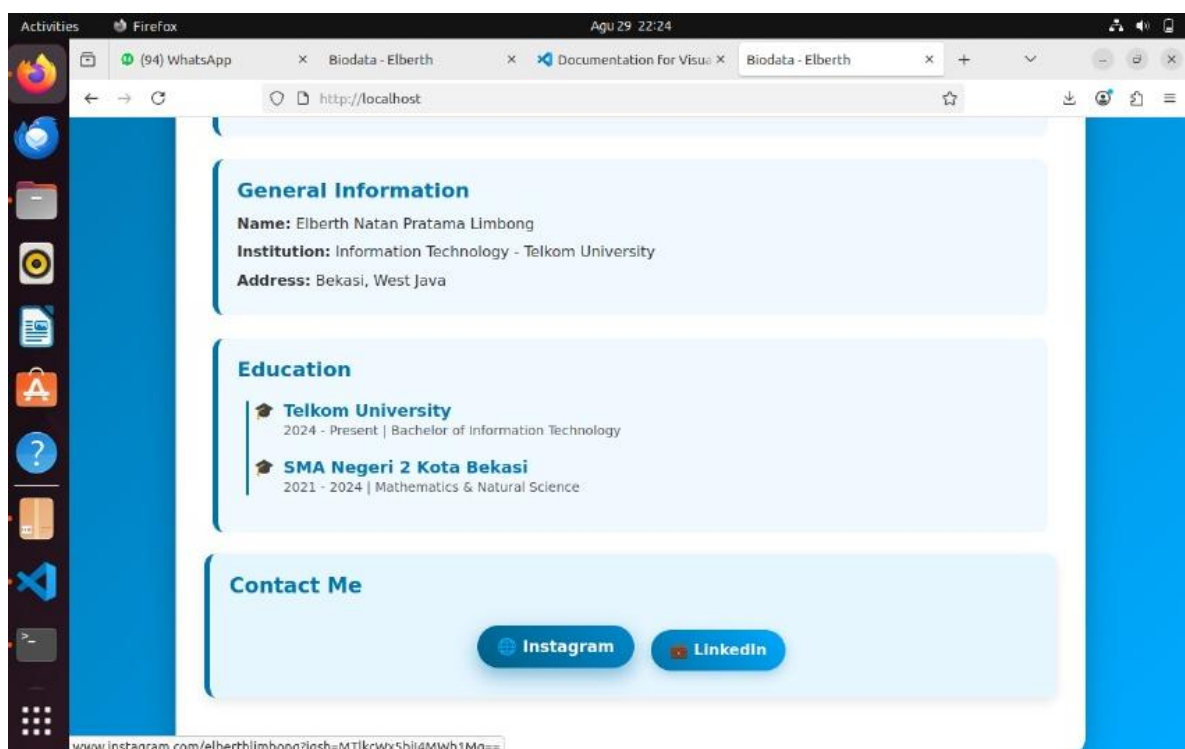
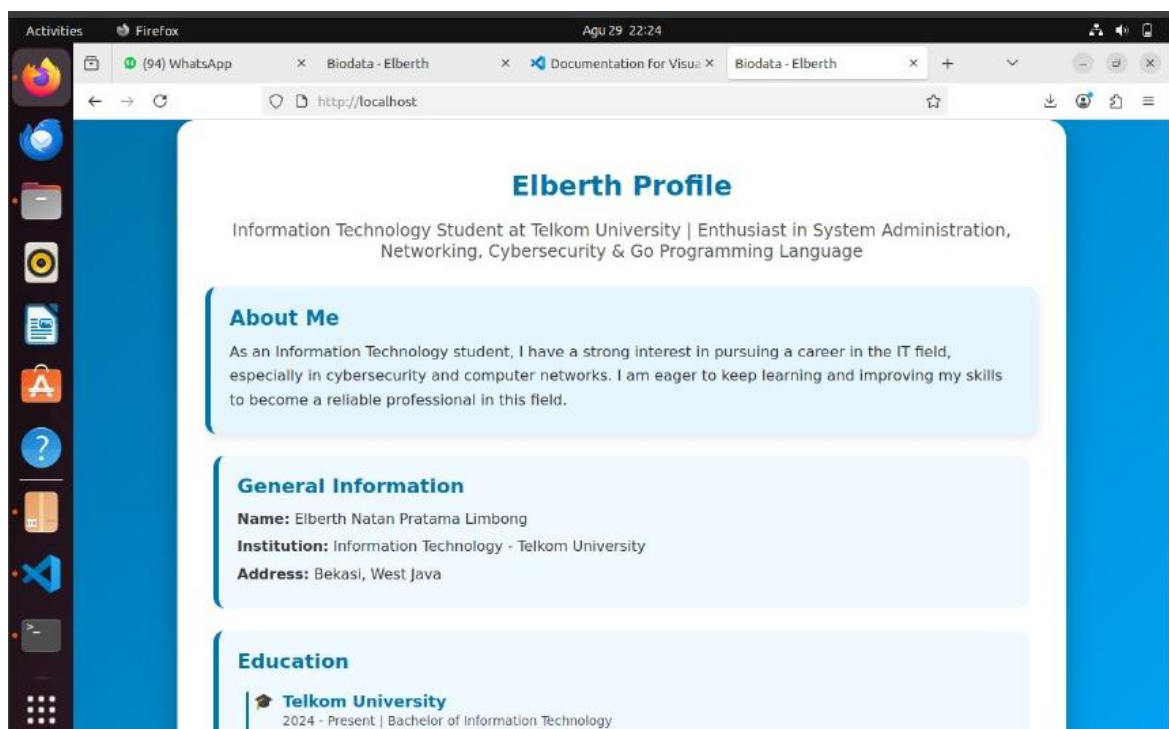
```
ngrok
Create instant endpoints for local containers within Docker Desktop -> https://ngrok.com/r/docker

Session Status
Account      elberth (Plan: Free)
Update      update available (version 3.27.0, Ctrl-U to update)
Version      3.26.0
Region      Asia Pacific (ap)
Latency      49ms
Web Interface http://127.0.0.1:4040
Forwarding   https://8ab4d6f53912.ngrok-free.app -> http://localhost:80

Connections
  ttl  opn  rt1  rt5  p50  p90
    2    0   0.00 0.00  5.24  5.39

HTTP Requests
-----
22:22:38.639 WIB GET / 200 OK
22:22:38.907 WIB GET /favicon.ico 404 Not Found
22:21:46.407 WIB GET / 200 OK
```

display when using http://localhost:80



display when using https://xxxx-xxxx-xxxx.ngrok-free.app

