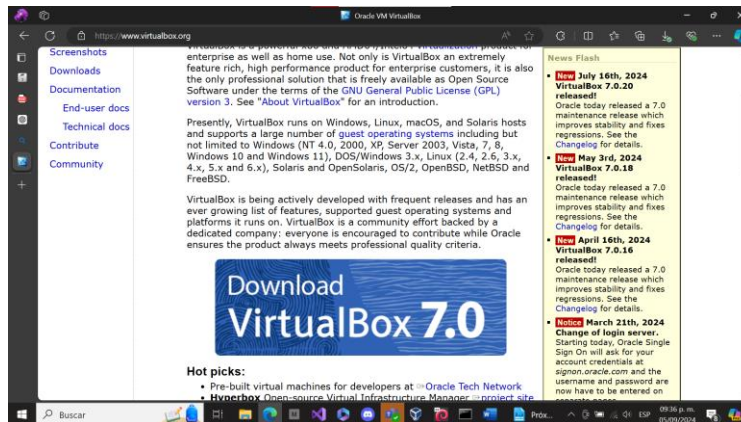


ACTIVIDAD 9. DEMOSTRAR EL AMBIENTE DE DESARROLLO WEB EN LA PC DEL ESTUDIANTE.

Instalar virtualizador VirtualBox

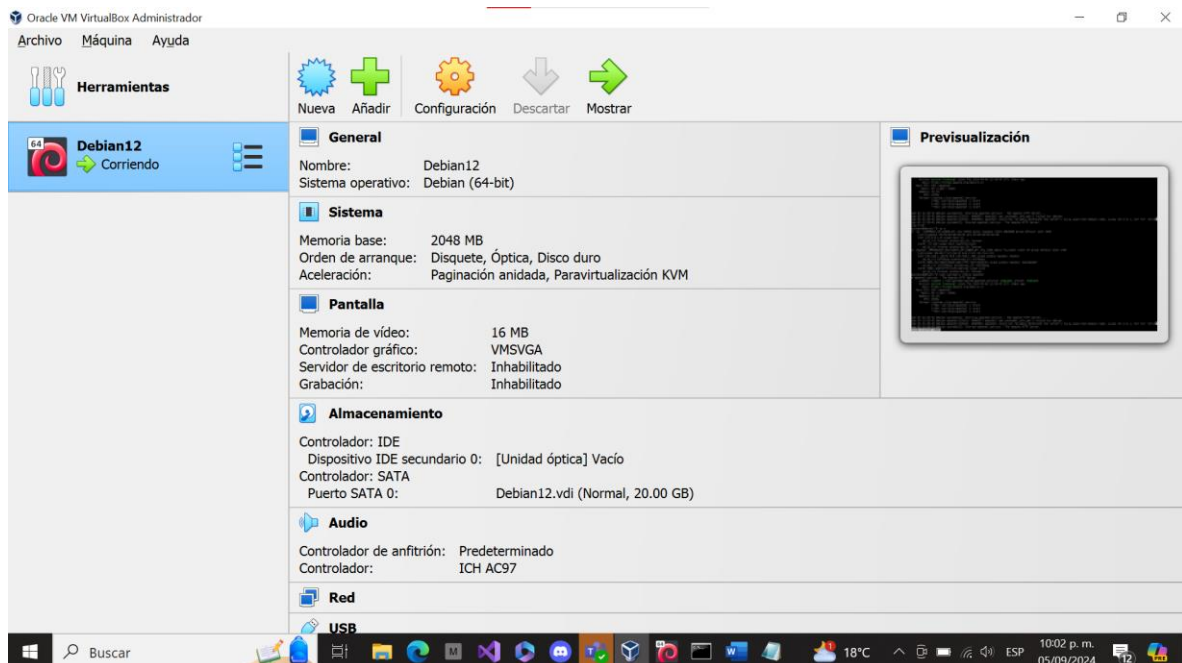
Para instalar virtual box debemos de dirigirnos a su pagina y descargar el archivo para iniciar la descarga donde seguiremos todos los pasos.



Después seguir con los pasos del instalador nos aparecerá el acceso en nuestro escritorio.



Instalar máquina virtual con sistema operativo Linux Debian 12 minimal



Instalar un servidor web Apache 2

Para iniciar la instalación de Apache2 prepararemos nuestro sistema operativo ejecutando los siguientes comandos:

```
apt update
```

```
apt upgrade
```

```
apt install sudo
```

nano /etc/sudoers -> En este documento en la parte de permisos, agregaremos una línea exactamente igual a la que existe pero con nuestro usuario.

```
# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL
gustavo ALL=(ALL:ALL) ALL
# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "ainclude" directives
```

Ahora ingresamos con nuestro usuario y ejecutamos los siguientes comandos:

```
sudo apt update
```

```
sudo apt install apache2
```

Después de realizar estos pasos ejecutaremos los siguientes comandos para verificar que este instalado y funcionando.

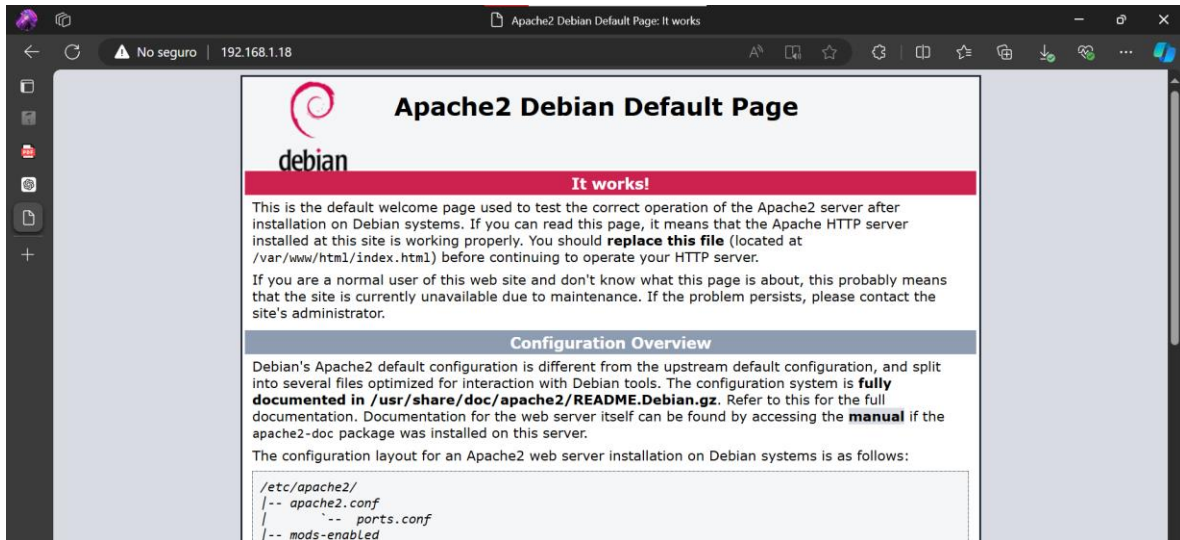
```
sudo systemctl enable apache2
```

```
sudo systemctl status apache2
```

```
gustavo@debian:~$ sudo systemctl enable apache2
Synchronizing state of apache2.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable apache2
gustavo@debian:~$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Thu 2024-09-05 21:28:45 CST; 25min ago
     Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 502 (apache2)
    Tasks: 55 (limit: 2306)
   Memory: 20.1M
      CPU: 107ms
   CGroup: /system.slice/apache2.service
           └─502 /usr/sbin/apache2 -k start
             └─503 /usr/sbin/apache2 -k start
               └─504 /usr/sbin/apache2 -k start

sep 05 21:28:45 debian systemd[1]: Starting apache2.service - The Apache HTTP Server...
sep 05 21:28:45 debian apachectl[501]: AH00557: apache2: apr_sockaddr_info_get() failed for debian
sep 05 21:28:45 debian apachectl[501]: AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1. Set the 'ServerName' directive dynamically to determine the server's name.
sep 05 21:28:45 debian systemd[1]: Started apache2.service - The Apache HTTP Server.
lines 1-17/17 (END)
```

Y para verificar desde nuestro equipo podemos ir a un navegador y poner http://<La ip de su máquina virtual>



Instalar gestor de base de datos MariaDB

Ejecutamos los siguientes comandos:

```
sudo apt update
```

```
sudo apt upgrade
```

```
sudo apt install mariadb-server mariadb-client
```

Para verificar que el servicio funcione ejecutamos estos dos comandos:

```
sudo systemctl enable mariadb
```

```
sudo systemctl status mariadb
```

```
gustavo@debian:~$ sudo systemctl enable mariadb
Synchronizing state of mariadb.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable mariadb
gustavo@debian:~$ sudo systemctl status mariadb
● mariadb.service - MariaDB 10.11.6 database server
   Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; preset: enabled)
   Active: active (running) since Thu 2024-09-05 22:18:12 CST; 1min 0s ago
     Docs: man:mariadb(8)
           https://mariadb.com/kb/en/library/systemd/
  Main PID: 2129 (mariadbd)
    Status: "Taking your SQL requests now..."
     Tasks: 9 (limit: 2306)
    Memory: 162.4M
       CPU: 413ms
   CGroup: /system.slice/mariadb.service
           └─2129 /usr/sbin/mariadbd

sep 05 22:18:12 debian mariadbd[2129]: 2024-09-05 22:18:12 0 [Note] InnoDB: Loading buffer pool(s) from /var/lib/mysql/ib_buffer_pool
sep 05 22:18:12 debian mariadbd[2129]: 2024-09-05 22:18:12 0 [Warning] You need to use --log-bin to make --expire-logs-days or --binlog-expire-logs-seconds work
sep 05 22:18:12 debian mariadbd[2129]: 2024-09-05 22:18:12 0 [Note] Server socket created on IP: '127.0.0.1'.
sep 05 22:18:12 debian mariadbd[2129]: 2024-09-05 22:18:12 0 [Note] InnoDB: Buffer pool(s) load completed at 240905 22:18:12
sep 05 22:18:12 debian mariadbd[2129]: 2024-09-05 22:18:12 0 [Note] /usr/sbin/mariadbd: ready for connections.
sep 05 22:18:12 debian mariadbd[2129]: Version: '10.11.6-MariaDB-0+deb12u1' socket: '/run/mysqld/mysqld.sock' port: 3306 Debian 12
sep 05 22:18:12 debian systemd[1]: Started mariadb.service - MariaDB 10.11.6 database server.
sep 05 22:18:12 debian /etc/mysql/debian-start[2145]: Upgrading MySQL tables if necessary.
sep 05 22:18:12 debian /etc/mysql/debian-start[2156]: Checking for insecure root accounts.
sep 05 22:18:12 debian /etc/mysql/debian-start[2160]: Triggering myisam-recover for all MyISAM tables and aria-recover for all Aria tables
lines 1-23/23 (END)
```

Instalar PHP 7.x o PHP 8.x

```
Configurando libimagequant0:amd64 (2.17.0-1) ...
Configurando fonts-dejavu-core (2.37-6) ....
Configurando libgav1-1:amd64 (0.10.0-1+b1) ...
Configurando libdav1d6:amd64 (1.0.0-2+deb12u1) ...
Configurando libx265-199:amd64 (3.5-2+b1) ...
Configurando libwebp7:amd64 (1.2.4-0.2+deb12u1) ...
Configurando libtiff6:amd64 (4.5.0-6+deb12u1) ...
Configurando libxslt1.1:amd64 (1.1.35-1) ...
Configurando libharfbuzz0b:amd64 (6.0.0+dfsg-3) ...
Configurando libde265-0:amd64 (1.0.11-1+deb12u2) ...
Configurando libyuv0:amd64 (0.0~git20230123.b2528b0-1) ...
Configurando libonig5:amd64 (6.9.8-1) ...
Configurando php7.4-xml (1:7.4.33-14+0~20240802.94+debian12~1.gbpe16668) ...

Creating config file /etc/php/7.4/mods-available/dom.ini with new version

Creating config file /etc/php/7.4/mods-available/simplexml.ini with new version

Creating config file /etc/php/7.4/mods-available/xml.ini with new version

Creating config file /etc/php/7.4/mods-available/xmlreader.ini with new version

Creating config file /etc/php/7.4/mods-available/xmlwriter.ini with new version

Creating config file /etc/php/7.4/mods-available/xsl.ini with new version
Configurando libavif15:amd64 (0.11.1-1) ...
Configurando fontconfig-config (2.14.1-4) ...
Configurando libheif1:amd64 (1.15.1-1) ...
Configurando php7.4-mbstring (1:7.4.33-14+0~20240802.94+debian12~1.gbpe16668) ...

Creating config file /etc/php/7.4/mods-available/mbstring.ini with new version
Configurando libraqm0:amd64 (0.7.0-4.1) ...
Procesando disparadores para sgml-base (1.31) ...
Configurando libfontconfig1:amd64 (2.14.1-4) ...
Procesando disparadores para libapache2-mod-php7.4 (1:7.4.33-14+0~20240802.94+debian12~1.gbpe16668) ...
Procesando disparadores para libc-bin (2.36-9+deb12u8) ...
Procesando disparadores para man-db (2.11.2-2) ...
Configurando libgd3:amd64 (2.3.3-12+0~20240711.16+debian12~1.gbpd0ea70) ...
Configurando php7.4-gd (1:7.4.33-14+0~20240802.94+debian12~1.gbpe16668) ...

Creating config file /etc/php/7.4/mods-available/gd.ini with new version
Procesando disparadores para php7.4-cli (1:7.4.33-14+0~20240802.94+debian12~1.gbpe16668) ...
Procesando disparadores para libc-bin (2.36-9+deb12u8) ...
Procesando disparadores para libapache2-mod-php7.4 (1:7.4.33-14+0~20240802.94+debian12~1.gbpe16668) ...
gustavo@debian:~$ php -v
PHP 7.4.33 (cli) (built: Aug  2 2024 16:10:33) ( NTS )
Copyright (c) The PHP Group
Zend Engine v3.4.0, Copyright (c) Zend Technologies
    with Zend OPcache v7.4.33, Copyright (c), by Zend Technologies
gustavo@debian:~$
```

```
GNU nano 7.2 /var/www/html/info.php
<?php
phpinfo();
?>
```

gustavo@debian:~\$

PHP 7.4.33 - phpinfo()

No seguro | 192.168.1.18/info.php

PHP Version 7.4.33

System	Linux debian 6.1.0-25-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.106-3 (2024-08-26) x86_64
Build Date	Aug 2 2024 16:10:33
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/7.4/apache2
Loaded Configuration File	/etc/php/7.4/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/7.4/apache2/conf.d
Additional .ini files parsed	/etc/php/7.4/apache2/conf.d/10-mysqld.ini, /etc/php/7.4/apache2/conf.d/10-opcache.ini, /etc/php/7.4/apache2/conf.d/10-pdo.ini, /etc/php/7.4/apache2/conf.d/15-xml.ini, /etc/php/7.4/apache2/conf.d/20-calendar.ini, /etc/php/7.4/apache2/conf.d/20-ctype.ini, /etc/php/7.4/apache2/conf.d/20-curl.ini, /etc/php/7.4/apache2/conf.d/20-dom.ini, /etc/php/7.4/apache2/conf.d/20-exif.ini, /etc/php/7.4/apache2/conf.d/20-ffi.ini, /etc/php/7.4/apache2/conf.d/20-fileinfo.ini, /etc/php/7.4/apache2/conf.d/20-ftp.ini, /etc/php/7.4/apache2/conf.d/20-gd.ini, /etc/php/7.4/apache2/conf.d/20-gettext.ini, /etc/php/7.4/apache2/conf.d/20-iconv.ini, /etc/php/7.4/apache2/conf.d/20-json.ini, /etc/php/7.4/apache2/conf.d/20-mbstring.ini, /etc/php/7.4/apache2/conf.d/20-mysql.ini, /etc/php/7.4/apache2/conf.d/20-pdo_mysql.ini, /etc/php/7.4/apache2/conf.d/20-phar.ini, /etc/php/7.4/apache2/conf.d/20-posix.ini, /etc/php/7.4/apache2/conf.d/20-readline.ini, /etc/php/7.4/apache2/conf.d/20-shmop.ini, /etc/php/7.4/apache2/conf.d/20-simplexml.ini, /etc/php/7.4/apache2/conf.d/20-sockets.ini, /etc/php/7.4/apache2/conf.d/20-sysvmsg.ini, /etc/php/7.4/apache2/conf.d/20-sysvsem.ini, /etc/php/7.4/apache2/conf.d/20-sysvshm.ini, /etc/php/7.4/apache2/conf.d/20-tokenizer.ini, /etc/php/7.4/apache2/conf.d/20-xmireader.ini, /etc/php/7.4/apache2/conf.d/20-xmireader.ini, /etc/php/7.4/apache2/conf.d/20-xsl.ini
PHP API	20190902
PHP Extension	20190902
Zend Extension	320190902
Zend Extension Build	API320190902.NTS
PHP Extension Build	API20190902.NTS
Debug Build	no

17°C 10:51 p. m. 05/09/2024

Instalar un editor de scripts para html, js, css, php, sql (el de preferencia del estudiante) en su máquina host.

File Edit Selection View Go Run ... Search

HelloWorld.html X

C:\Users\gusta\Documents\ITS\localhost\HelloWorld.html > html > body > h1

```
1 <!DOCTYPE html>
2 <html>
3   <header>
4     <title>HELLO WORLD</title>
5   </header>
6   <body>
7     <h1>Hello World!!!!</h1>
8   </body>
9 </html>
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

History restored

PS C:\Users\gusta> History restored

PS C:\Users\gusta> History restored

Tab Moves Focus Ln 7, Col 28 Spaces: 4 UTF-8 CRLF HTML

17°C 10:58 p. m. 05/09/2024

Instalar FileZilla en la máquina host

