

## Atividade 05 - Dockers, Imagens e Containers

1. Criando um container a partir de uma imagem ubuntu com o nome "container" e o comando bash

```
tiago @ tiago-VirtualBox:~$ docker run --name container -it ubuntu bash
root@ab1145c0ea7b:/# apt-get update
Get:1 http://archive.ubuntu.com/ubuntu jammy InRelease [270 kB]
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [237 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [109 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [99.8 kB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [93.5 kB]
Get:7 http://archive.ubuntu.com/ubuntu jammy/main amd64 Packages [1792 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [212 kB]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [4648 B]
Get:10 http://archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [17.5 MB]
Get:11 http://archive.ubuntu.com/ubuntu jammy/restricted amd64 Packages [164 kB]
Get:12 http://archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [266 kB]
Get:13 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [160 kB]
Get:14 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [392 kB]
Get:15 http://archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [236 kB]
Get:16 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [4648 B]
Get:17 http://archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [2016 B]
Fetched 21.6 MB in 37s (585 kB/s)
Reading package lists... Done
root@ab1145c0ea7b:/# exit
exit
tiago @ tiago-VirtualBox:~$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
ab1145c0ea7b   ubuntu   "bash"    About a minute ago   Exited (0) 5 seconds ago   container
tiago @ tiago-VirtualBox:~$
```

2. Entrar no container de forma a usar o shell e :

a - instalar o Apache

```
Activities Terminal jun 22 00:00 root@ab1145c0ea7b: /
tiago @ tiago-VirtualBox:~$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
ab1145c0ea7b   ubuntu   "bash"    2 minutes ago   Up 20 seconds   container
tiago @ tiago-VirtualBox:~$ docker start container
container
tiago @ tiago-VirtualBox:~$ docker attach container
root@ab1145c0ea7b:/# apt-get apache2
E: Invalid operation apache2
root@ab1145c0ea7b:/# 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 bzip2 ca-certificates file libapr1 libaprutil1 libaprutil1-dbd-sqlite3
  libaprutil1-ldap libbrotli1 libcurl4 libexpat1 libgdbm-compat4 libgdbm6 libicu70 libjansson4 libldap-2.5-0
  libldap-common liblua5.3-0 libmagic-ngc libmagic1 libnghttp2-14 libperl5.34 libpsl5 librtmp1 libsas2-2
  libsas2-modules libsas2-modules-db libsqlite3-0 libssh-4 libxml2 mailcap media-types mime-support netbase openssl
  perl perl-modules-5.34 publicsuffix ssl-cert xz-utils
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser ufw bzip2-doc gdbm-l10n
  libsas2-modules-gssapi-mit | libsas2-modules-gssapi-heimdal libsas2-modules-ldap libsas2-modules-otp
  libsas2-modules-sql perl-doc libterm-readline-gnu-perl | libterm-readline-perl-perl make libtap-harness-archive-perl
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 ca-certificates file libapr1 libaprutil1 libaprutil1-dbd-sqlite3
  libaprutil1-ldap libbrotli1 libcurl4 libexpat1 libgdbm-compat4 libgdbm6 libicu70 libjansson4 libldap-2.5-0
  libldap-common liblua5.3-0 libmagic-ngc libmagic1 libnghttp2-14 libperl5.34 libpsl5 librtmp1 libsas2-2
  libsas2-modules libsas2-modules-db libsqlite3-0 libssh-4 libxml2 mailcap media-types mime-support netbase openssl
  perl perl-modules-5.34 publicsuffix ssl-cert xz-utils
0 upgraded, 43 newly installed, 0 to remove and 6 not upgraded.
Need to get 25.6 MB of archives.
After this operation, 111 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 perl-modules-5.34 all 5.34.0-3ubuntu1 [2975 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy/main amd64 libgdbm6 amd64 1.23-1 [33.9 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy/main amd64 libgdbm-compat4 amd64 1.23-1 [6606 B]
Get:4 http://archive.ubuntu.com/ubuntu jammy/main amd64 libperl5.34 amd64 5.34.0-3ubuntu1 [4809 kB]
Get:5 http://archive.ubuntu.com/ubuntu jammy/main amd64 perl amd64 5.34.0-3ubuntu1 [232 kB]
Get:6 http://archive.ubuntu.com/ubuntu jammy/main amd64 libapr1 amd64 1.7.0-8build1 [187 kB]
Get:7 http://archive.ubuntu.com/ubuntu jammy/main amd64 libexpat1 amd64 2.4.7-1 [90.7 kB]
Get:8 http://archive.ubuntu.com/ubuntu jammy/main amd64 libaprutil1 amd64 1.6.1-5ubuntu4 [92.4 kB]
```

## b - instalar o PHP

```
Activities Terminal jun 22 00:03 root@ab1145c0ea7b: /  
root@ab1145c0ea7b:/# apt install php libapache2-mod-php  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  libapache2-mod-php8.1 libargon2-1 libbsd0 libedit2 libmd0 libsodium23 php-common php8.1 php8.1-cli php8.1-common  
  php8.1-opcache php8.1-readline psmisc tzdata ucf  
Suggested packages:  
  php-pear  
The following NEW packages will be installed:  
  libapache2-mod-php libapache2-mod-php8.1 libargon2-1 libbsd0 libedit2 libmd0 libsodium23 php php-common php8.1  
  php8.1-cli php8.1-common php8.1-opcache php8.1-readline psmisc tzdata ucf  
0 upgraded, 17 newly installed, 0 to remove and 6 not upgraded.  
Need to get 5978 kB of archives.  
After this operation, 26.9 MB of additional disk space will be used.  
Do you want to continue? [Y/n] Y  
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 libargon2-1 amd64 0~20171227-0.3 [19.5 kB]  
Get:2 http://archive.ubuntu.com/ubuntu jammy/main amd64 libmd0 amd64 1.0.4-1build1 [23.0 kB]  
Get:3 http://archive.ubuntu.com/ubuntu jammy/main amd64 libbsd0 amd64 0.11.5-1 [44.8 kB]  
Get:4 http://archive.ubuntu.com/ubuntu jammy/main amd64 tzdata all 2022a-0ubuntu1 [342 kB]  
Get:5 http://archive.ubuntu.com/ubuntu jammy/main amd64 ucf all 3.0043 [56.1 kB]  
Get:6 http://archive.ubuntu.com/ubuntu jammy/main amd64 libedit2 amd64 3.1-20210910-1build1 [96.8 kB]  
Get:7 http://archive.ubuntu.com/ubuntu jammy/main amd64 psmisc amd64 23.4-2build3 [119 kB]  
Get:8 http://archive.ubuntu.com/ubuntu jammy/main amd64 php-common all 2:92ubuntu1 [12.4 kB]  
Get:9 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-common amd64 8.1.2-1ubuntu2.1 [1122 kB]  
Get:10 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-opcache amd64 8.1.2-1ubuntu2.1 [365 kB]  
Get:11 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-readline amd64 8.1.2-1ubuntu2.1 [13.5 kB]  
Get:12 http://archive.ubuntu.com/ubuntu jammy/main amd64 libsodium23 amd64 1.0.18-1build2 [164 kB]  
Get:13 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-cli amd64 8.1.2-1ubuntu2.1 [1825 kB]  
Get:14 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapache2-mod-php8.1 amd64 8.1.2-1ubuntu2.1 [1760 kB]  
Get:15 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapache2-mod-php all 2:8.1+92ubuntu1 [2898 B]  
Get:16 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1 all 8.1.2-1ubuntu2.1 [9166 B]  
Get:17 http://archive.ubuntu.com/ubuntu jammy/main amd64 php all 2:8.1+92ubuntu1 [2756 B]  
Fetched 5978 kB in 9s (687 kB/s)  
debconf: delaying package configuration, since apt-utils is not installed  
Selecting previously unselected package libargon2-1:amd64.  
(Reading database ... 7847 files and directories currently installed.)  
Preparing to unpack .../00-libargon2-1_0~20171227-0.3_amd64.deb ...  
Unpacking libargon2-1:amd64 (0~20171227-0.3) ...  
Selecting previously unselected package libmd0:amd64.
```

## c - instalar o MySQL

```
Activities Terminal jun 22 00:06 root@ab1145c0ea7b: /  
Processing triggers for libapache2-mod-php8.1 (8.1.2-1ubuntu2.1) ...  
root@ab1145c0ea7b:/# apt install mysql-server  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  libaio1 libcgi-fast-perl libcgi-pm-perl libclone-perl libencode-locale-perl libevent-core-2.1-7  
  libevent-pthreads-2.1-7 libfcgi-bin libfcgi-perl libfcgi0ldbl libhtml-parser-perl libhtml-tagset-perl  
  libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libmecab2 libnuma1  
  libprotobuf-lite23 libtimedate-perl liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0  
  mysql-client-core-8.0 mysql-common mysql-server-8.0 mysql-server-core-8.0  
Suggested packages:  
  libdata-dump-perl libipc-sharedcache-perl libbusiness-isbn-perl libwww-perl mailx tinyca  
The following NEW packages will be installed:  
  libaio1 libcgi-fast-perl libcgi-pm-perl libclone-perl libencode-locale-perl libevent-core-2.1-7  
  libevent-pthreads-2.1-7 libfcgi-bin libfcgi-perl libfcgi0ldbl libhtml-parser-perl libhtml-tagset-perl  
  libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl liblwp-mediatypes-perl libmecab2 libnuma1  
  libprotobuf-lite23 libtimedate-perl liburi-perl mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0  
  mysql-client-core-8.0 mysql-common mysql-server mysql-server-8.0 mysql-server-core-8.0  
0 upgraded, 31 newly installed, 0 to remove and 6 not upgraded.  
Need to get 28.7 MB of archives.  
After this operation, 241 MB of additional disk space will be used.  
Do you want to continue? [Y/n] Y  
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 mysql-common all 5.8+1.0.8 [7212 B]  
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-core-8.0 amd64 8.0.29-0ubuntu0.22.04.2 [2483  
kB]  
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-8.0 amd64 8.0.29-0ubuntu0.22.04.2 [22.7 kB]  
Get:4 http://archive.ubuntu.com/ubuntu jammy/main amd64 libaio1 amd64 0.3.112-13build1 [7176 B]  
Get:5 http://archive.ubuntu.com/ubuntu jammy/main amd64 libevent-core-2.1-7 amd64 2.1.12-stable-1build3 [93.9 kB]  
Get:6 http://archive.ubuntu.com/ubuntu jammy/main amd64 libevent-pthreads-2.1-7 amd64 2.1.12-stable-1build3 [7642 B]  
Get:7 http://archive.ubuntu.com/ubuntu jammy/main amd64 libmecab2 amd64 0.996-14build9 [199 kB]  
Get:8 http://archive.ubuntu.com/ubuntu jammy/main amd64 libnuma1 amd64 2.0.14-3ubuntu2 [22.5 kB]  
Get:9 http://archive.ubuntu.com/ubuntu jammy/main amd64 libprotobuf-lite23 amd64 3.12.4-1ubuntu7 [208 kB]  
Get:10 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-core-8.0 amd64 8.0.29-0ubuntu0.22.04.2 [16.9  
MB]  
Get:11 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-8.0 amd64 8.0.29-0ubuntu0.22.04.2 [1391 kB]  
Get:12 http://archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-tagset-perl all 3.20-4 [12.5 kB]  
Get:13 http://archive.ubuntu.com/ubuntu jammy/main amd64 liburi-perl all 5.10-1 [78.8 kB]  
Get:14 http://archive.ubuntu.com/ubuntu jammy/main amd64 libhtml-parser-perl amd64 3.76-1build2 [88.4 kB]  
Get:15 http://archive.ubuntu.com/ubuntu jammy/main amd64 libcgi-pm-perl all 4.54-1 [188 kB]  
Get:16 http://archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi0ldbl amd64 2.4.2-2build2 [38.0 kB]
```

