Unix 420-321-VA

Section: 00001

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Journal # 2

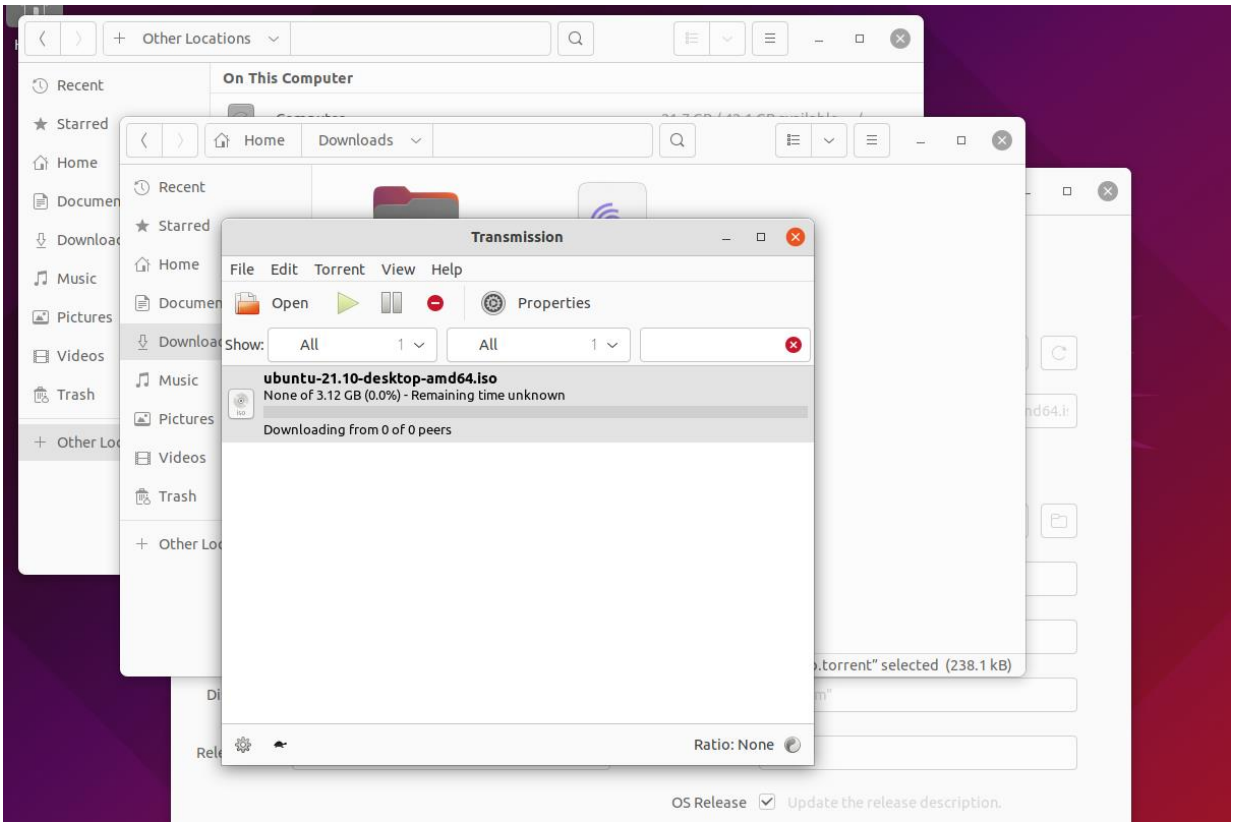
The goal for week 2:

1) Resolve the issues that have arisen last week.

2) Improve the trial by downloading media industry-specific software packages and providing background options

3) Test the iso image

2022-04-19: On Tuesday, I worked with Jonathan to solve the issues I had last week. The iso image could not be recognized in Cubic since it had not been properly downloaded. He assisted me in re-download the iso image using torrent. We believe the gimp download failed because one of the commands was missing (add-apt-repository universe). Last week, I found two tutorials. I was following the first tutorial, however, there was no command for this step in that tutorial. As a result, I rearranged my preparations and am now able to successfully produce a customized iso image.



As I did last week, I repeated the first six steps below. To properly document my attempts, I've included the first six steps below.

Step 1: Download Cubic

```
jiamin@jiamin-VirtualBox:~$ sudo apt-add-repository ppa:cubic-wizard/release
Repository: 'deb http://ppa.launchpad.net/cubic-wizard/release/ubuntu/ impish main'
Description:
PPA for Cubic release branch

     ///////
    ///\   \
   ///  \___\  Custom Ubuntu ISO Creator
   \ \  /////
    \ \/////
     \_____\

 Cubic (Custom Ubuntu ISO Creator) is a GUI wizard to create a customized Ubuntu Live ISO image.

 More info: https://launchpad.net/cubic
More info: https://launchpad.net/~cubic-wizard/+archive/ubuntu/release
Adding repository.
Press [ENTER] to continue or Ctrl-c to cancel.
Adding deb entry to /etc/apt/sources.list.d/cubic-wizard-ubuntu-release-impish.list
Adding disabled deb-src entry to /etc/apt/sources.list.d/cubic-wizard-ubuntu-release-impish.list
Adding key to /etc/apt/trusted.gpg.d/cubic-wizard-ubuntu-release.gpg with fingerprint B7579F80E494ED3406A
59DF9081525E2B4F1283B
```

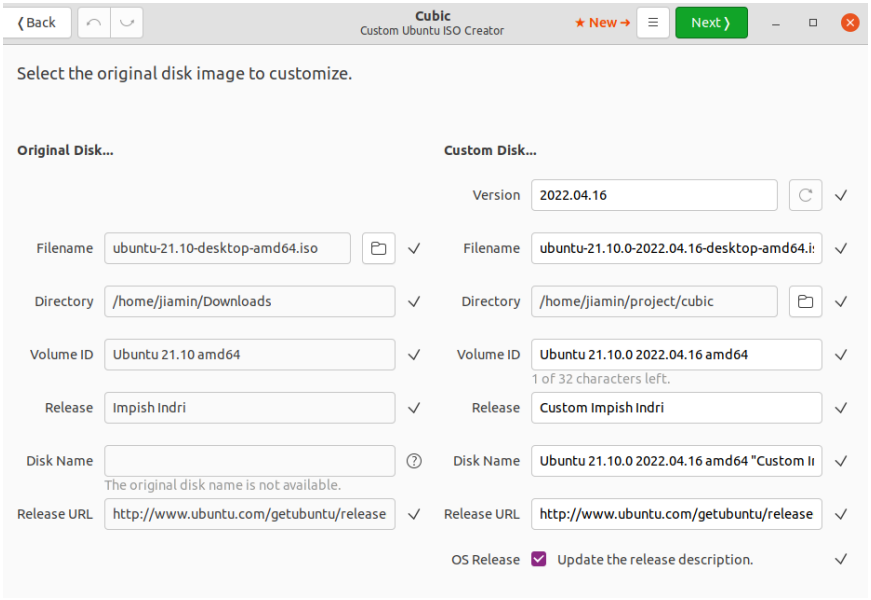
```
jiamin@jiamin-VirtualBox:~$ sudo apt-key adv --keyserver keyserver.ubuntu.com --recv-keys B7579F80E494ED3
406A59DF9081525E2B4F1283B
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
Executing: /tmp/apt-key-gpghome.tqIYk01rXl/gpg.1.sh --keyserver keyserver.ubuntu.com --recv-keys B7579F80
E494ED3406A59DF9081525E2B4F1283B
gpg: key 081525E2B4F1283B: "Launchpad PPA for PJ Singh" not changed
gpg: Total number processed: 1
gpg:              unchanged: 1
```

```
jiamin@jiamin-VirtualBox:~$ sudo apt update
Hit:1 http://security.ubuntu.com/ubuntu impish-security InRelease
Hit:2 http://ppa.launchpad.net/cubic-wizard/release/ubuntu impish InRelease
Hit:3 http://ir.archive.ubuntu.com/ubuntu impish InRelease
Hit:4 http://ir.archive.ubuntu.com/ubuntu impish-updates InRelease
Hit:5 http://ir.archive.ubuntu.com/ubuntu impish-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
```

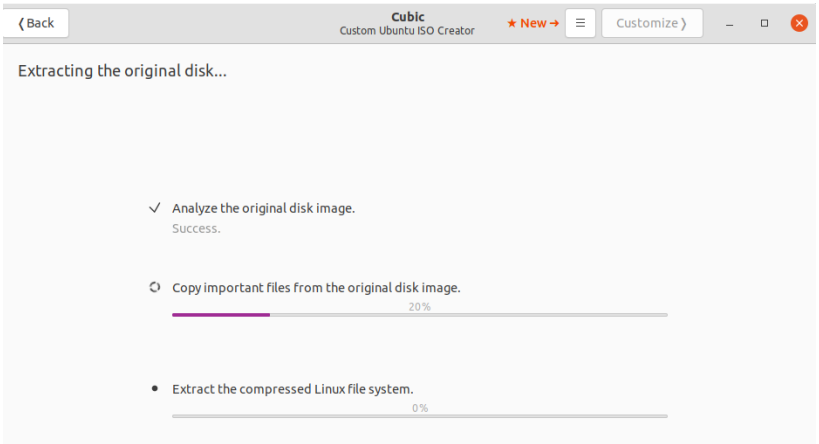
```
jiamin@jiamin-VirtualBox:~$ sudo apt install cubic
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libfwupdplugin1
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  arj binutils binutils-common binutils-x86-64-linux-gnu binwalk blt cpu-checker cramfsswap fonts-lyx
  freeglut3 g++ g++-11 gcc gcc-11 ibverbs-providers ipxe-qemu ipxe-qemu-256k-compat-efi-roms isolinux
  javascript-common libafflib0v5 libaio1 libasan6 libatomic1 libbfio1 libbinutils libblas3 libburn4
  libc-dev-bin libc-devtools libc6-dev libcacard0 libcc1-0 libcrypt-dev libctf-nobfd0 libctf0
  libdate-manip-perl libdaxctl1 libdouble-conversion3 libewf2 libfdt1 libgcc-11-dev libgfortran5
  libibverbs1 libiniparser1 libiscsi7 libisoburn1 libisofs6 libitm1 libjs-jquery libjs-jquery-ui
  libjte2 liblapack3 liblbfgsb0 liblsan0 libmd4c0 libndctl6 libnsl-dev libnss-mymachines libpcre2-16-0
  libpmem1 libpmemobj1 libqt5core5a libqt5dbus5 libqt5designer5 libqt5gui5 libqt5help5 libqt5network5
  libqt5opengl5 libqt5printsupport5 libqt5sql5 libqt5sql5-sqlite libqt5svg5 libqt5test5 libqt5widgets5
  libqt5xml5 libquadmath0 librados2 librbd1 librdmacm1 libsdl2-2.0-0 libslirp0 libspice-server1
```

Step 2: Open Cubic. Pic1 is the default initial interface after a successful installation of Cubic. Choose a directory to store the custom iso image. I make a new directory to store it in. (/home/jiamin/project/cubic)

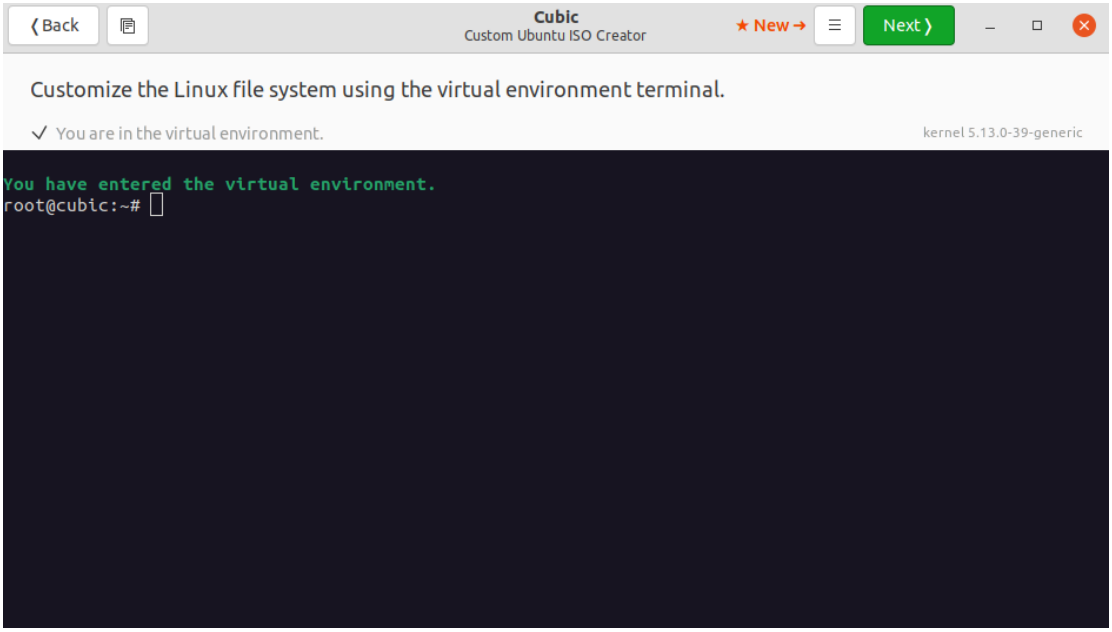
Step 3: Download the original iso image from Ubuntu's official website. To add the downloaded original iso image, click the file icon next to the File Name column. All remaining information is automatically filled in.



Step 4: It takes a few minutes to create an environment.



Step 5: Enter the virtual environment terminal.



Step 6: It can start configuring the desired action. I began by adding the universe repository and upgrading downloaded packages to the most recent version.

```
root@cubic:~# add-apt-repository universe
Adding component(s) 'universe' to all repositories.
Press [ENTER] to continue or Ctrl-c to cancel.
Added universe to: deb http://archive.ubuntu.com/ubuntu/ impish universe restricted main
Added universe to: deb http://security.ubuntu.com/ubuntu/ impish-security universe restricted main
Added universe to: deb http://archive.ubuntu.com/ubuntu/ impish-updates universe restricted main
Hit:1 http://security.ubuntu.com/ubuntu impish-security InRelease
Hit:2 http://archive.ubuntu.com/ubuntu impish InRelease
Get:3 http://security.ubuntu.com/ubuntu impish-security/universe amd64 Packages [149 kB]
Hit:4 http://archive.ubuntu.com/ubuntu impish-updates InRelease
```

```
root@cubic:~# apt update
Get:1 http://security.ubuntu.com/ubuntu impish-security InRelease [110 kB]
Get:2 http://archive.ubuntu.com/ubuntu impish InRelease [270 kB]
Get:3 http://security.ubuntu.com/ubuntu impish-security/main amd64 Packages [297 kB]
Get:4 http://archive.ubuntu.com/ubuntu impish-updates InRelease [115 kB]
Get:5 http://archive.ubuntu.com/ubuntu impish/main amd64 Packages [1396 kB]
Get:6 http://security.ubuntu.com/ubuntu impish-security/main Translation-en [73.1 kB]
```

Step 7: Download media industry-specific software packages.

```
root@cubic:~# apt install gimp
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
gimp is already the newest version (2.10.24-2).
0 upgraded, 0 newly installed, 0 to remove and 244 not upgraded.
```

```
root@cubic:~# apt install audacity
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
audacity is already the newest version (2.4.2~dfsg0-5).
The following package was automatically installed and is no longer required:
  libfwupdplugin1
Use 'apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

2022-04-23: Continuation

Step 7: Download media industry-specific software packages.

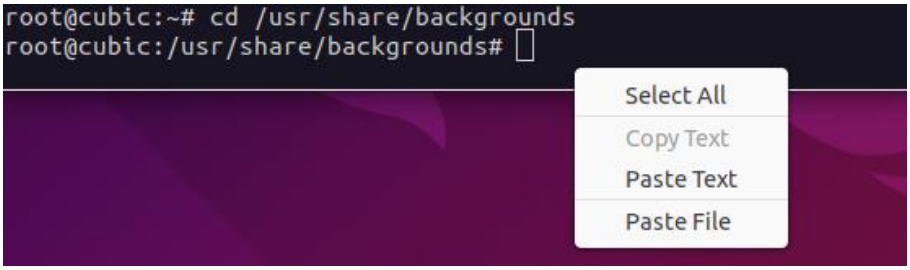
```
root@cubic:~# apt install kdenlive
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libfwupdplugin1
Use 'apt autoremove' to remove it.
The following additional packages will be installed:
  breeze breeze-cursor-theme breeze-icon-theme catdoc dvdauthor dvgrab frei0r-plugins gdal-data gstreamer1.0-plugins-bad
  kaccounts-providers kactivities-bin kactivitymanagerd kde-style-breeze kdeconnect kded5 kdenlive-data keditbookmarks kinit
  kio kpackagelauncherqml kpackagetool5 kpeople-vcard kwayland-data kwayland-integration kwin-style-breeze libaccounts-glib0
  libaccounts-qt5-1 libaec0 libappimage0 libarmadillo10 libarpack2 libcfitsio9 libcharls2 libdap27 libdapclient6v5
  libdbusmenu-qt5-2 libebur128-1 libepsilon1 libepub0 libfakekey0 libfam0 libfreexl1 libfyba0 libgavl1 libgdal28 libgdcm3.0
  libgeos-3.9.0 libgeos-c1v5 libgeotiff5 libgstreamer-plugins-bad1.0-0 libgupnp-igd-1.0-4 libhdf4-0-alt libhdf5-103-1
  libhdf5-hl-100 libhfstospell11 libkaccounts2 libkate1 libkdecorations2-5v5 libkdecorations2private8 libkf5activities5
```

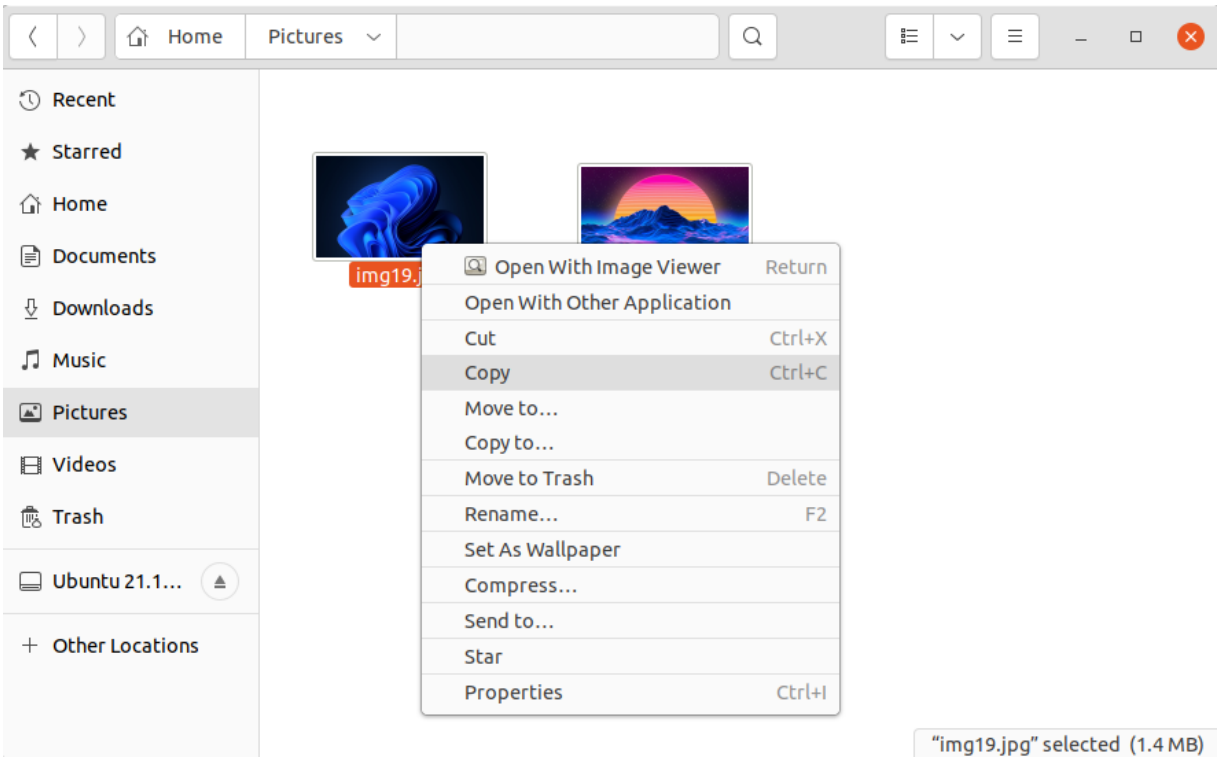
```
root@cubic:~# apt install krita
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  ca-certificates-mono cli-common libfwupdplugin1 libgdiplus libglib2.0-cil libgtk2.0-cil libmono-addins-gui0.2-cil
  libmono-addins0.2-cil libmono-btls-interface4.0-cil libmono-cairo4.0-cil libmono-corlib4.5-cil libmono-corlib4.5-dll
  libmono-i18n-west4.0-cil libmono-i18n4.0-cil libmono-posix4.0-cil libmono-security4.0-cil libmono-sharpzip4.84-cil
  libmono-system-configuration4.0-cil libmono-system-core4.0-cil libmono-system-drawing4.0-cil libmono-system-numerics4.0-cil
  libmono-system-security4.0-cil libmono-system-xml4.0-cil libmono-system4.0-cil mono-4.0-gac mono-gac mono-runtime
  mono-runtime-common mono-runtime-sgen
Use 'apt autoremove' to remove them.
The following additional packages will be installed:
  gsfonts krita-data krita-gmic libgmic1 libgraphicsmagick++-q16-12 libgraphicsmagick-q16-3 libgsl25 libgslcblas0
  libopencolorio1v5 libopencv-videoio4.5 libqt5designer5 libqt5help5 libquazip5-1 libtinyxml2.6.2v5 libyaml-cpp0.6
  python3-pyqt5 python3-pyqt5.sip python3-sip
Suggested packages:
  krita-l10n graphicsmagick-dbg gsl-ref-psdoc | gsl-doc-pdf | gsl-doc-info | gsl-ref-html libquazip-doc python3-pyqt5-dbg
The following NEW packages will be installed:
  gsfonts krita krita-data krita-gmic libgmic1 libgraphicsmagick++-q16-12 libgraphicsmagick-q16-3 libgsl25 libgslcblas0
  libopencolorio1v5 libopencv-videoio4.5 libqt5designer5 libqt5help5 libquazip5-1 libtinyxml2.6.2v5 libyaml-cpp0.6
  python3-pyqt5 python3-pyqt5.sip python3-sip
0 upgraded, 19 newly installed, 0 to remove and 0 not upgraded.
Need to get 94.4 MB of archives.
After this operation, 227 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
```

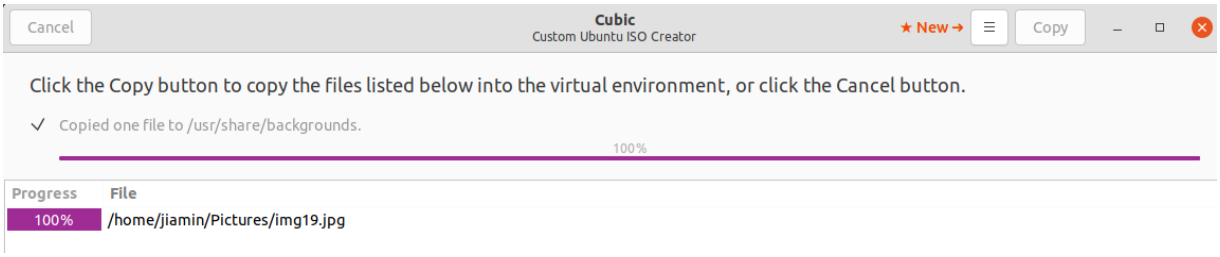
I downloaded Gimp (Photoshop alternative), Audacity (audio editing), Kdenlive (video editing), and Krita (painting tool).

Step 8 - part1: Provide background options. To begin, change the directory to */usr/share/backgrounds* Download some of the wallpapers available. Then paste the file from the *Downloads* folder into the virtual environment's terminal. It will display a new interface like the one below; click Copy.

Repeat these procedures for each wallpaper you'd like to use.



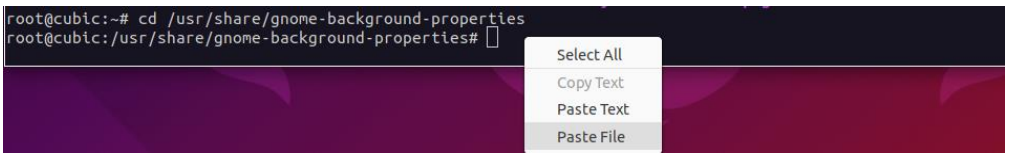


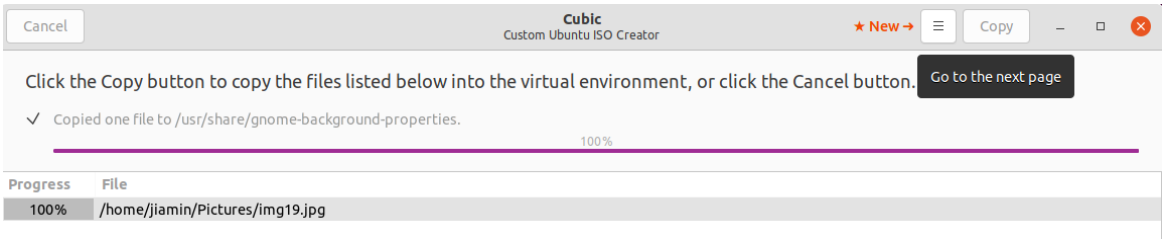


List all the backgrounds in the directory (img19 & outrun-vaporwave are the ones I added):

```
root@cubic:~# ls /usr/share/backgrounds
 Impish-Indri_WP_4096x2304_Grey.png                      img19.jpg
'Milky_Way_by_Paulo_Jos'$'\303\251''_Oliveira_Amaro.jpg'  outrun-vaporwave-hd-wallpaper-preview.jpg
'Way_by_Kacper_'$'\305\232''lusarczyk.jpg'               ubuntu-default-greyscale-wallpaper.png
 contest                                                 warty-final-ubuntu.png
```

Step 8 - part2: Same as the first part of step 8, but in a different directory. Change directory to */usr/share/gnome-background-properties.* When you right-click on the desktop, you can pick the newly added background in the Change Desktop Background window.

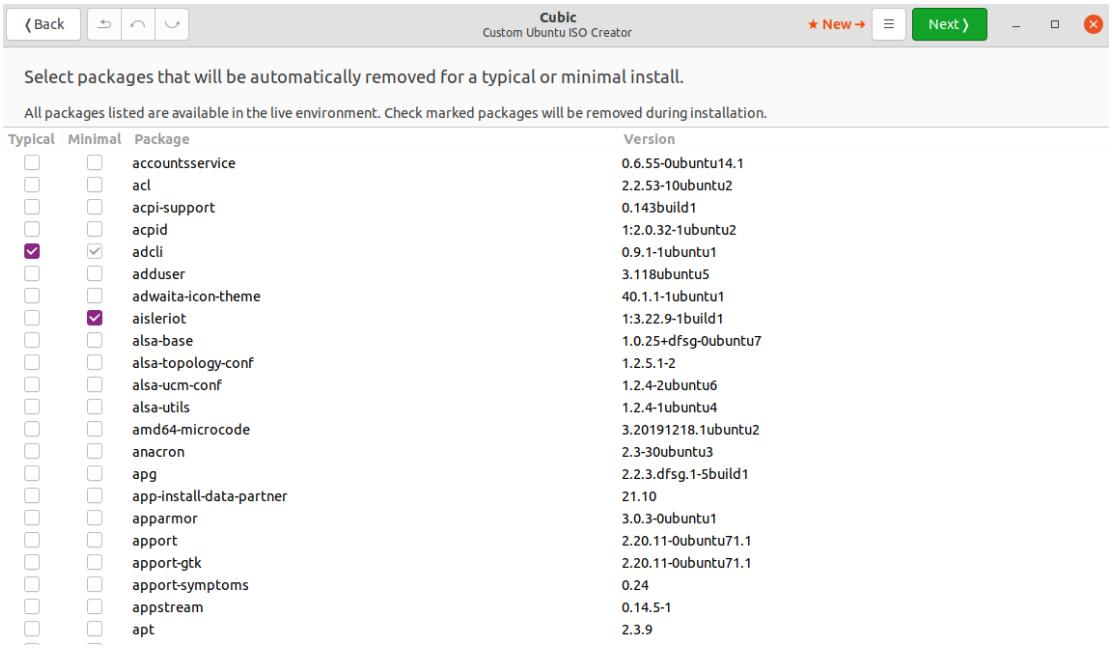




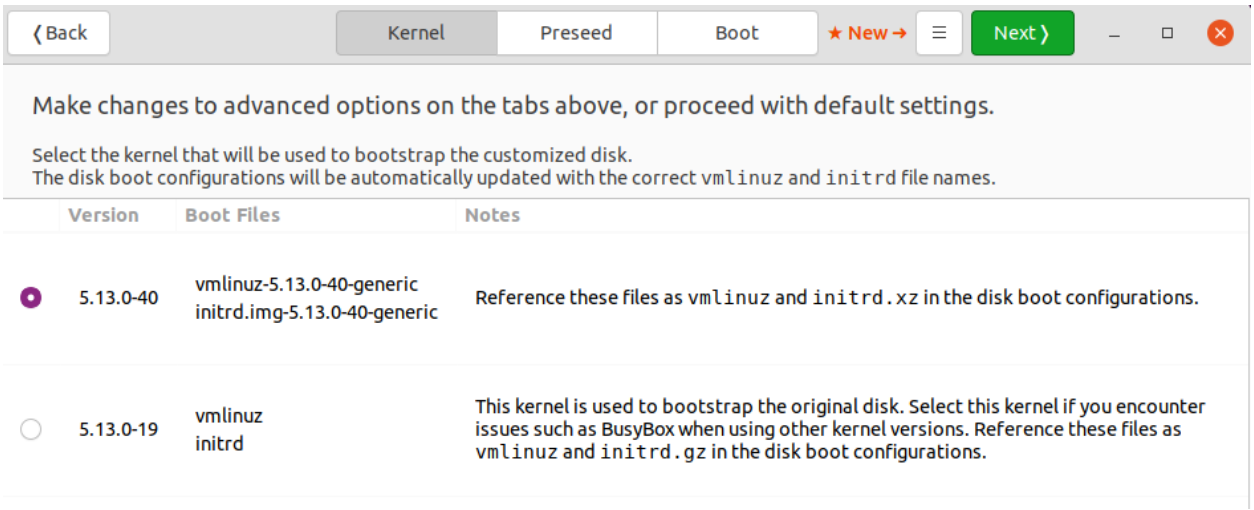
List all the backgrounds in the directory (img19 & outrun-vaporwave are the ones I added):

```
root@cubic:/usr/share/gnome-background-properties# ls
img19.jpg  impish-wallpapers.xml  outrun-vaporwave-hd-wallpaper-preview.jpg  ubuntu-wallpapers.xml
```

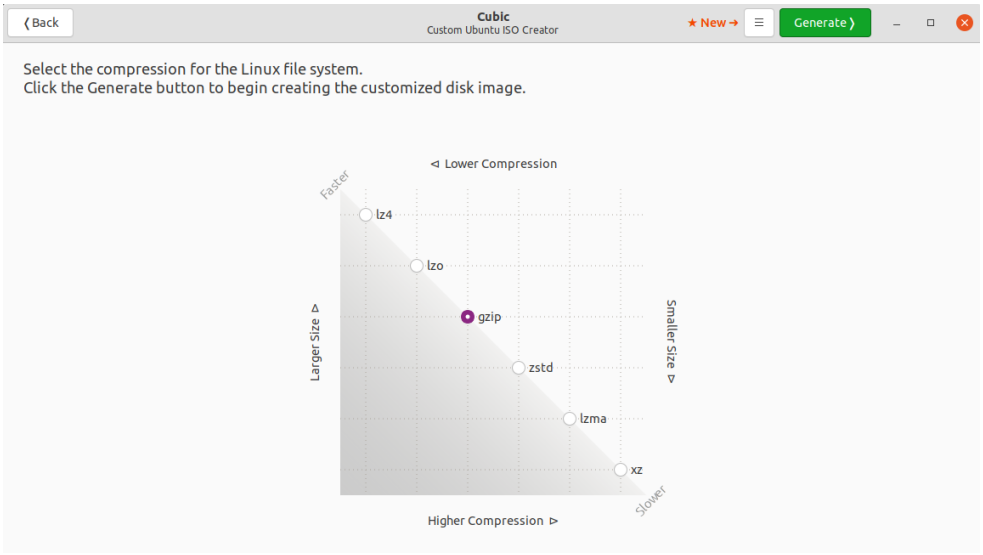
Step 9: Choose which packages need to be deleted from the customized iso. I keep the default.

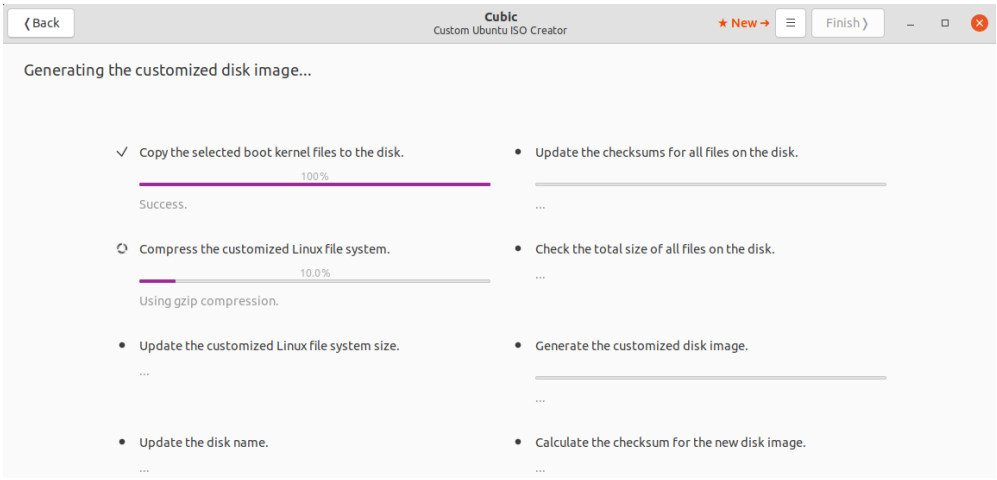


Step 10: Select the Kernel

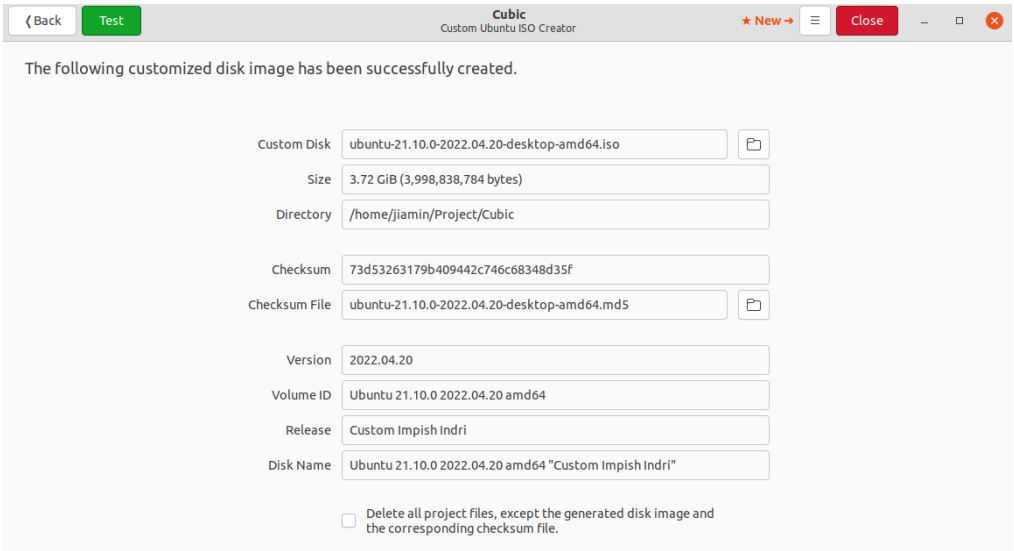


Step 11: Generate customized iso

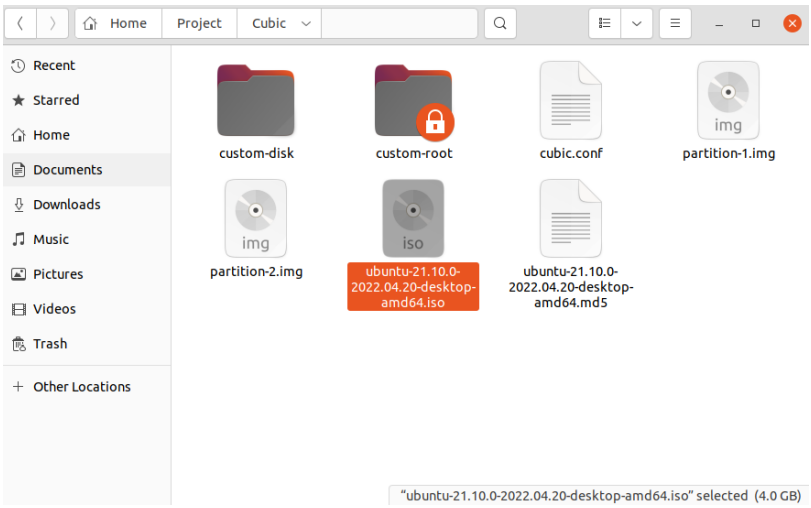




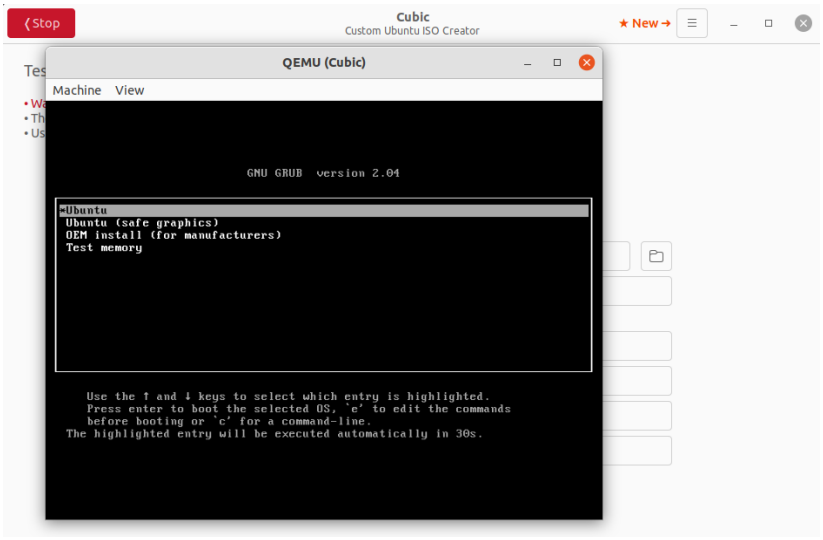
The following are the details of the custom ISO image that was generated.



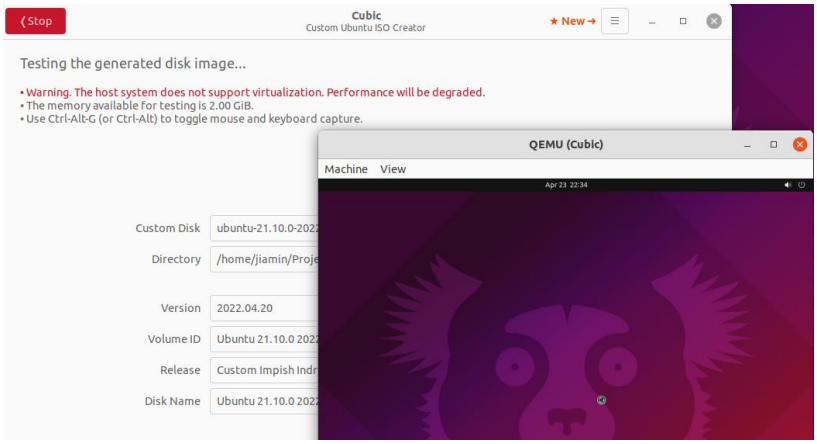
Check the selected folder to store the customized iso:

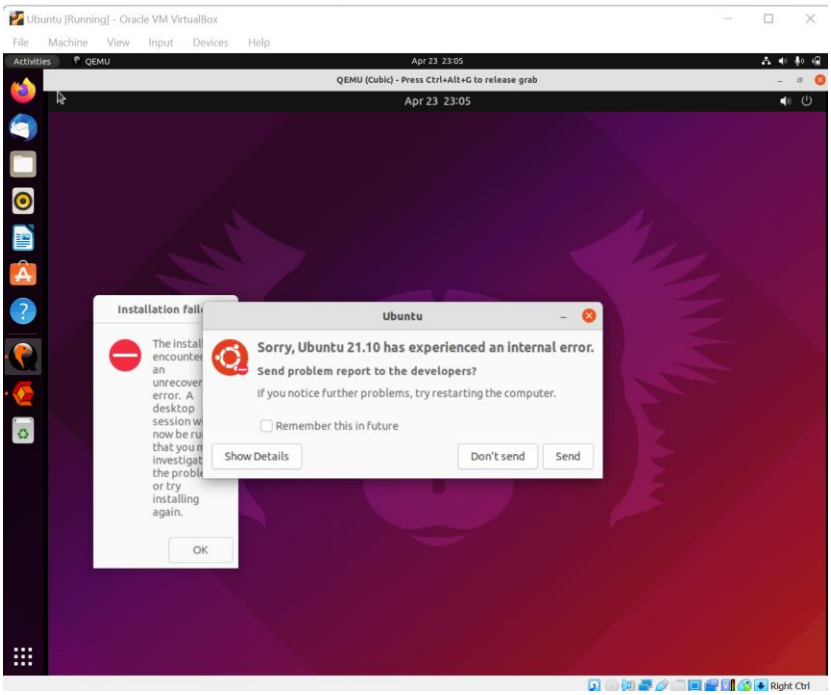


Step 12: Test iso image using Cubic

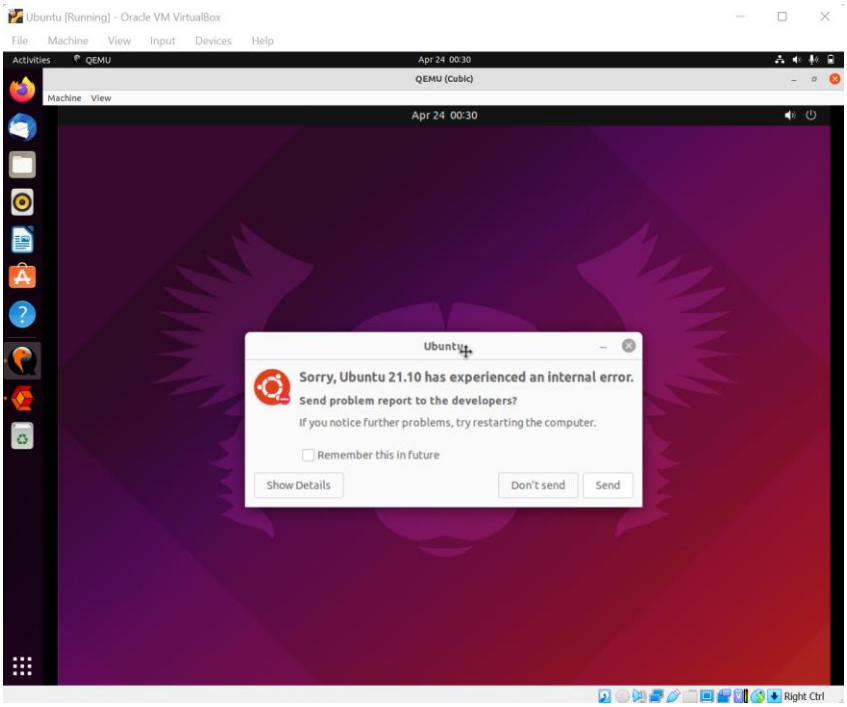


It took three hours for the desktop screen to load. Finally, it didn't offer any further desktop options, such as activities, and it displayed the following problem.

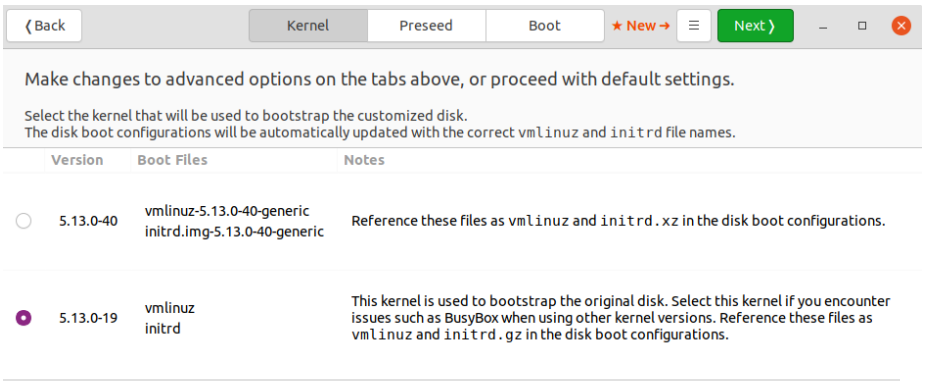


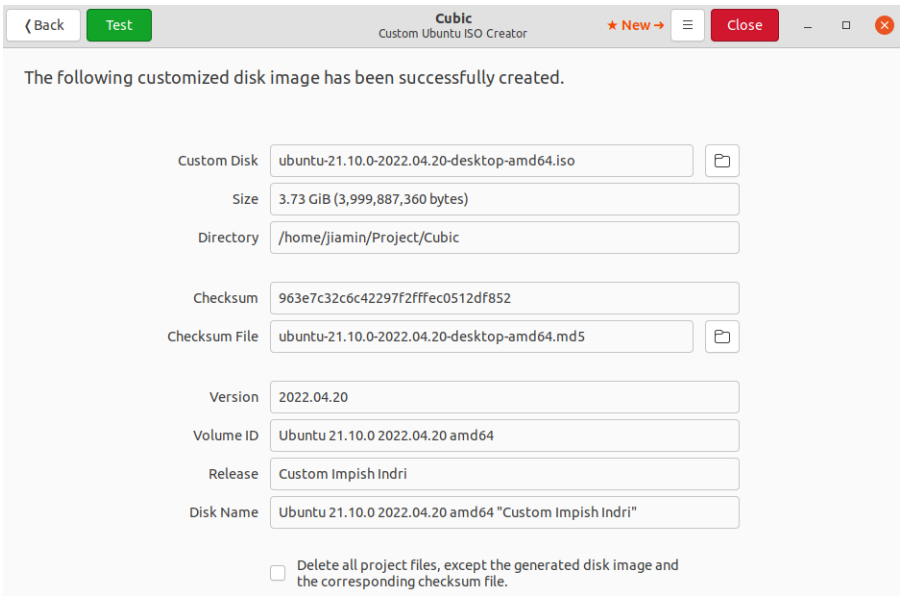


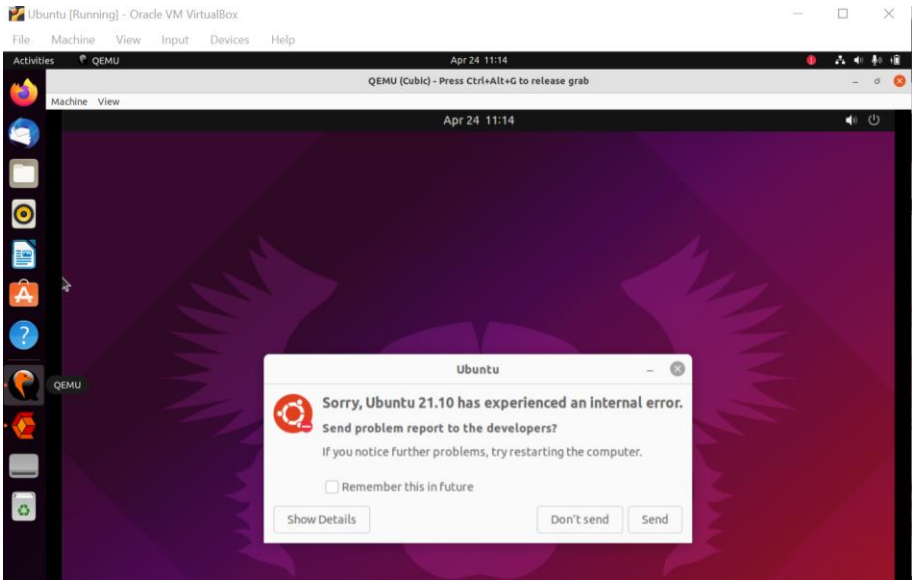
Second trial: I retested the iso image. The error remains the same.



Third Trial: In the previous step of picking a kernel, I was not sure which kernel to use. Because the tutorial only appears as one option. And I have two choices: the one I chose previously and the one demonstrated in the tutorial. This time I tried with the kernel guided by the tutorial. However, the loading error remains the same.







Summary: A custom ISO image has been created for users in the media industry (with custom packages and background selection). Since the test phase is still failing, I will experiment with other ways to test and communicate with my teammate.