Installing Armbian on X98H TV Box to Develop and Deploy with the Singkong Programming Language

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singkong.dev

What You'll Need

- **An X98H TV Box (Allwinner H618):** This tutorial uses the 4GB RAM / 32GB eMMC model**.**
- **A microSD card:** This tutorial uses a Class 10 A1 16GB model.
- **A computer:** Running any OS that supports writing an Armbian disk image to the microSD card. This tutorial uses Windows 10 and Raspberry Pi Imager.
- **A physical keyboard and mouse:** Necessary for interacting with the X98H TV Box during installation, configuration, and software development tasks (in addition to the keyboard/mouse required for the computer).
- **An HDMI cable and display:** Necessary to connect the X98H to a monitor or TV. The same display used by the computer can be shared by switching the input source.
- **A wooden toothpick:** Required to press the reset button hidden inside the AV port to trigger the TV Box bootloader.

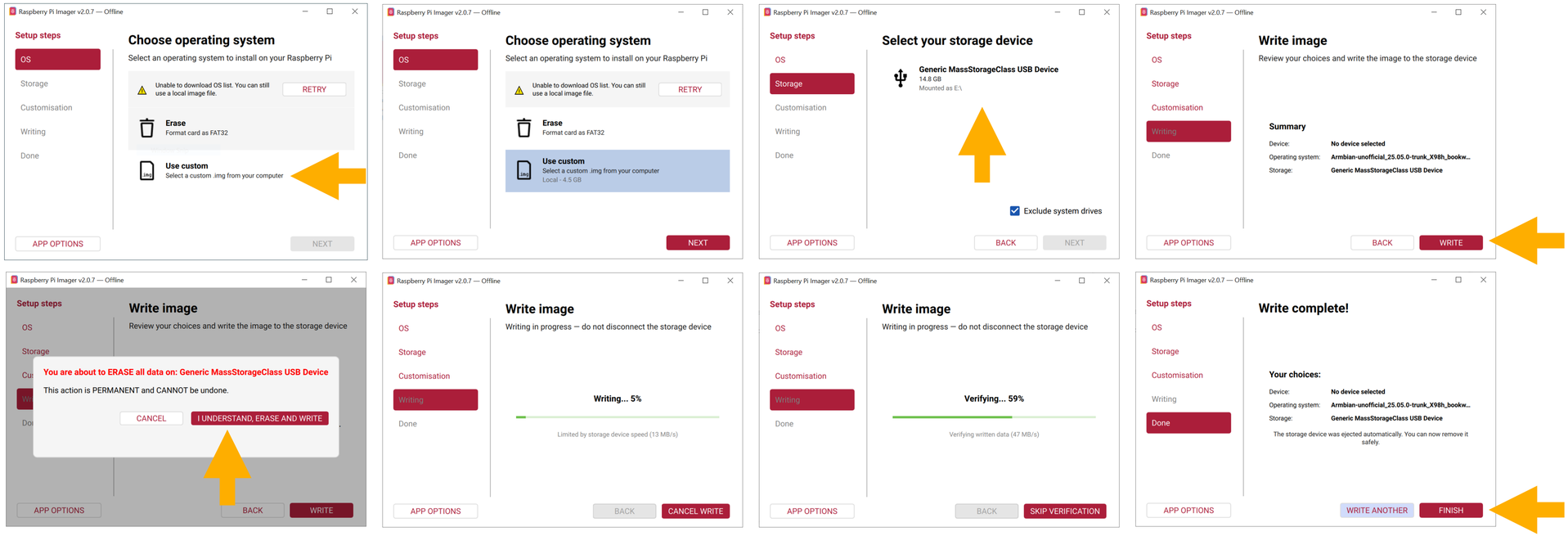
Downloading the Armbian Disk Image

At the time of this writing, the X98H TV Box is not officially supported by Armbian. This tutorial utilizes a community-maintained image.

- **Repository**: github.com/NickAlilovic/build/releases
- **Version**: 20250306, Armbian 25.05.0, Kernel 6.12.11
- **File Name:** Armbian-unofficial_25.05.0-trunk_X98h_bookworm_edge_6.12.11_xfce_desktop.img.xz

Flashing the Armbian Disk Image

- Insert the microSD card: Plug the card into your computer.
- Run Raspberry Pi Imager: Select the downloaded file, choose the microSD card, and click Write to begin. Unplug the card once the process is complete.



Booting from the microSD Card

- **Power off:** Ensure the TV Box is completely powered down.
- **Insert:** Slide the prepared microSD card into the slot.
- **Press and Hold:** Insert the toothpick into the AV jack until you feel the button click; continue holding it firmly.
- **Power on:** Connect the power cable while continuing to hold the button.
- **Release:** Remove the toothpick once the Armbian logo appears on the screen.

Completing the Setup

Carefully complete every prompt to ensure your system is configured correctly.

```
Create root password:
```

```
Choose default system command shell:
```

```
Please provide a username (eg. your first name):
```

```
Create user (<user>) password:
```

```
Please provide your real name:
```

```
Connect via wireless? [Y/n]
Enter a number of SSID:
Enter a password for <SSID>:
```

a network connection is **required** to complete the system configuration.

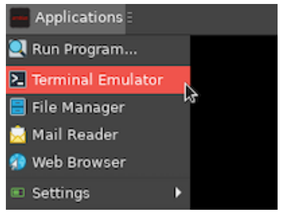
```
Set user language based on your location [Y/n]


...
```

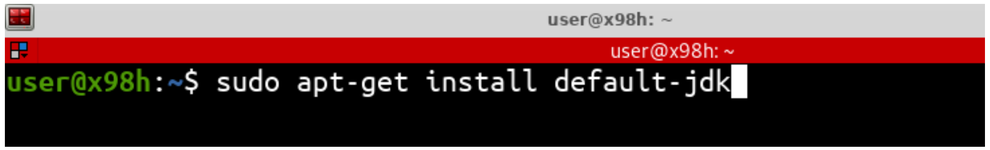
```
Choose your language, country, and timezone


to ensure your system is configured for your region.
```

```
Now starting desktop environment
```

Installing Required Software

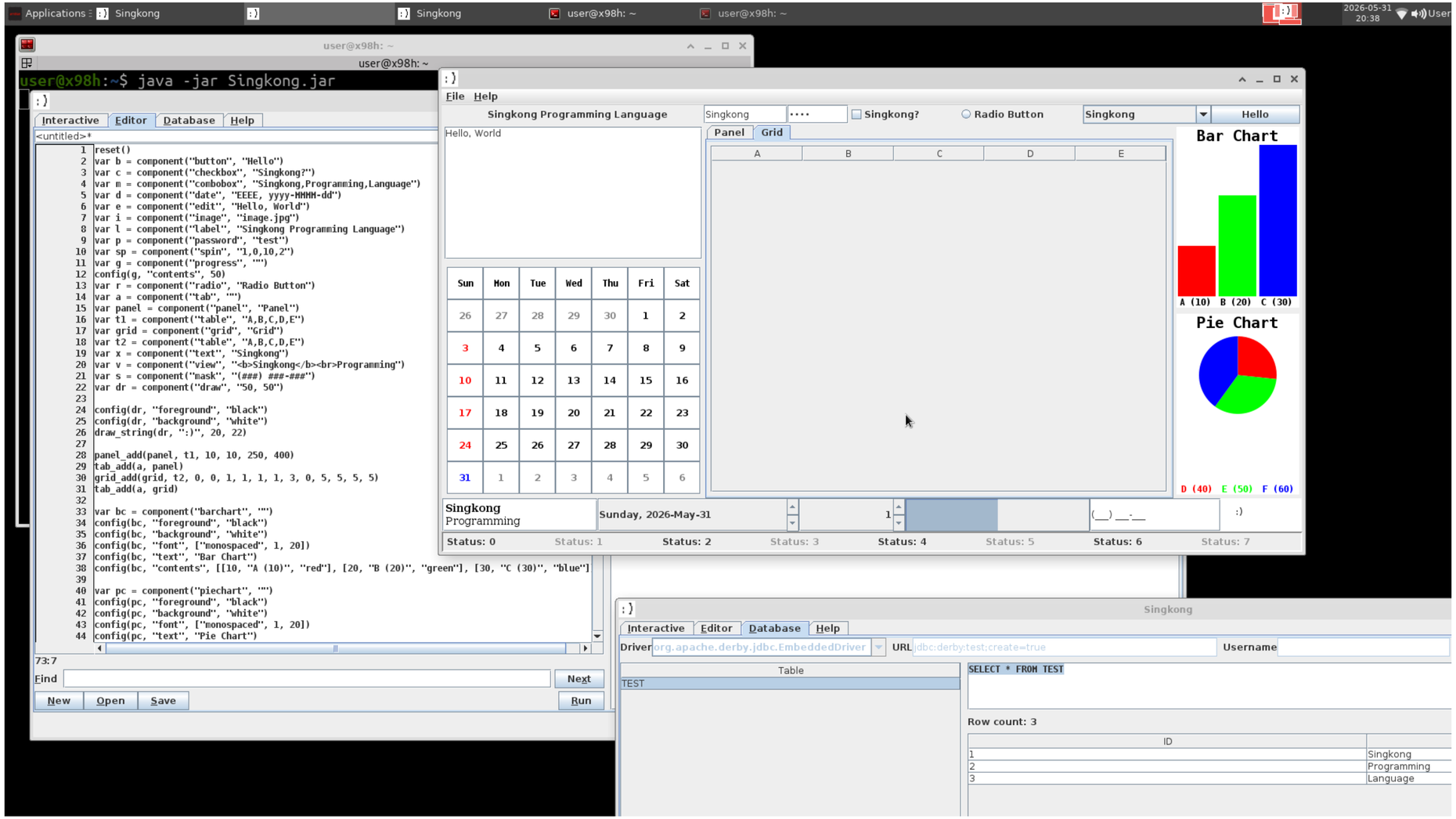
Follow the steps below within the Terminal Emulator to prepare your environment.





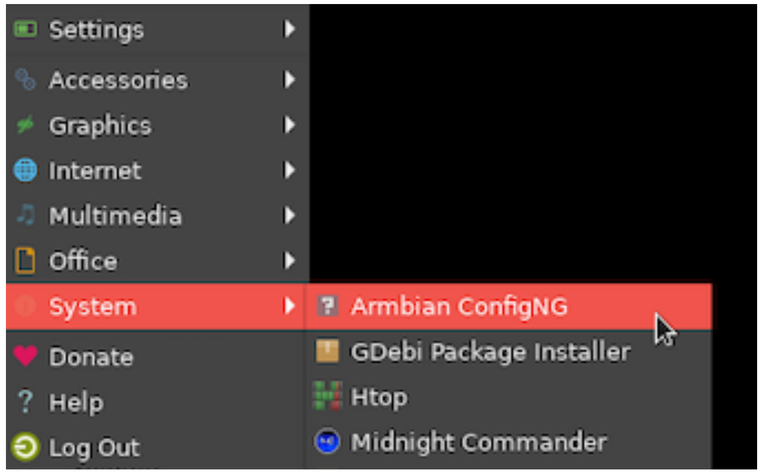
Singkong in Action

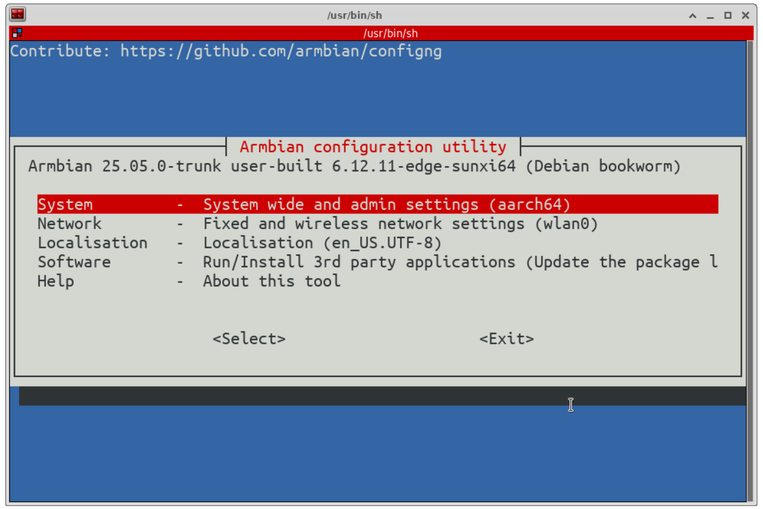
From development to production—leverage your device for both building and running your projects.

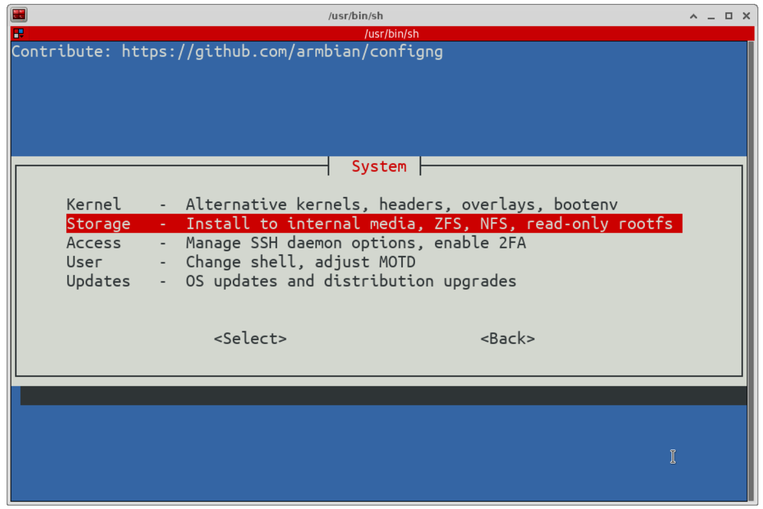


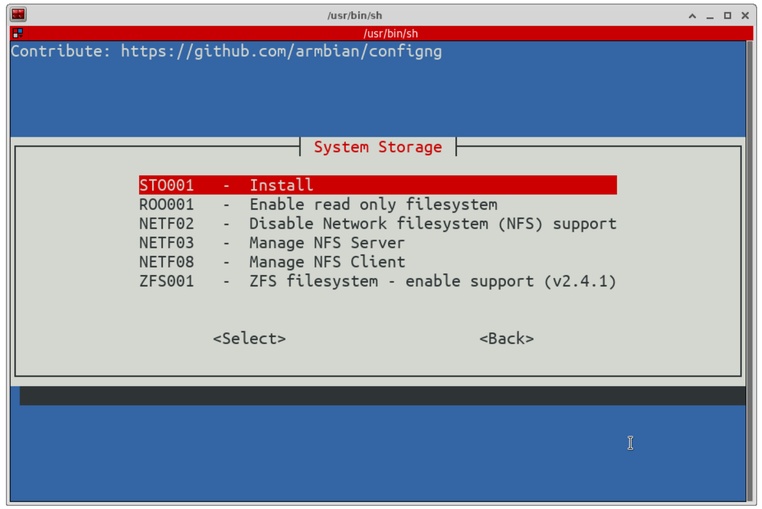
Installing Armbian to the eMMC (Optional)

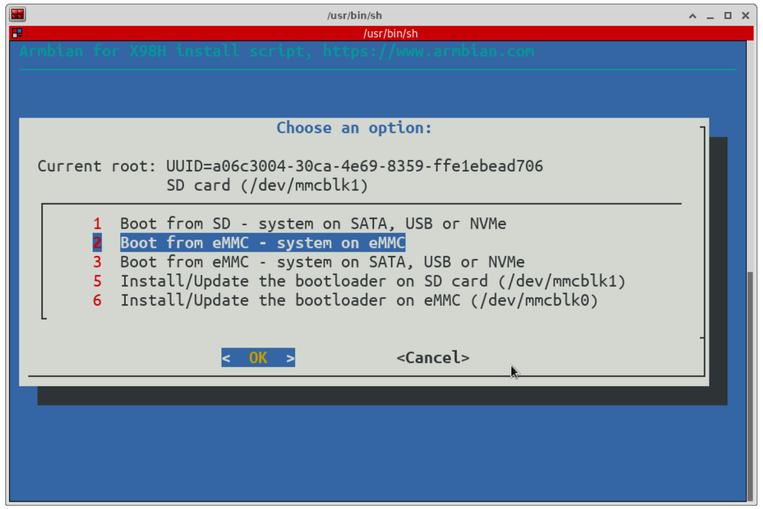
Warning: This process will permanently overwrite your original OS. Once finished, the microSD card will no longer be required for booting











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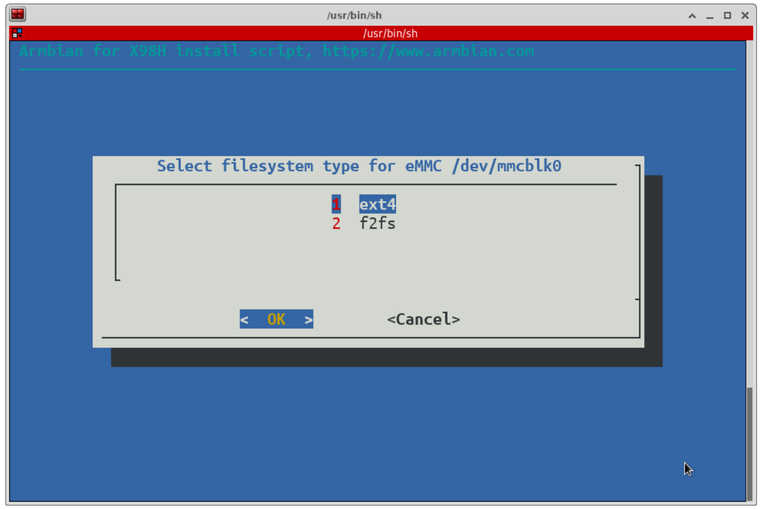

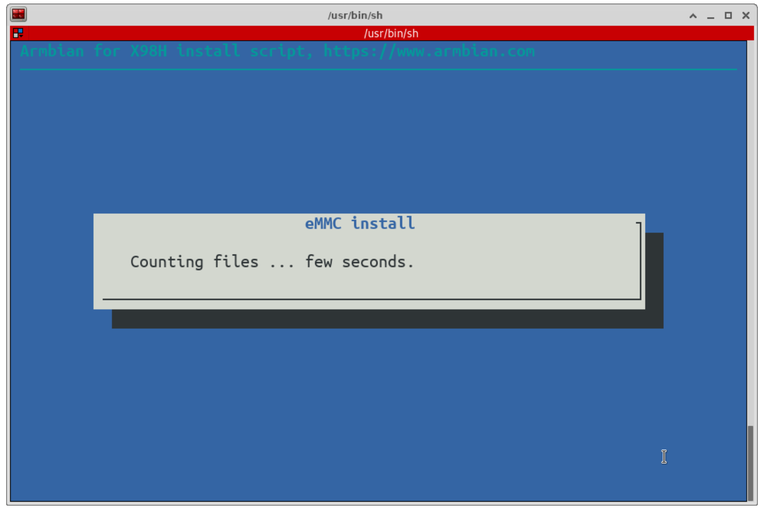

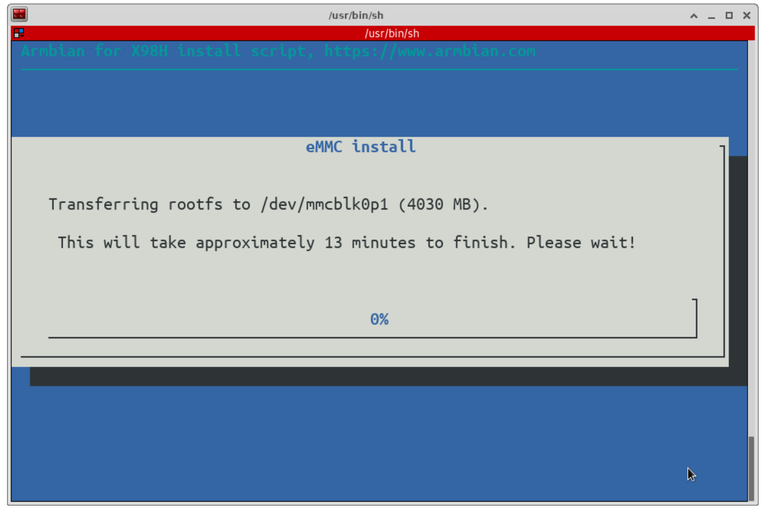

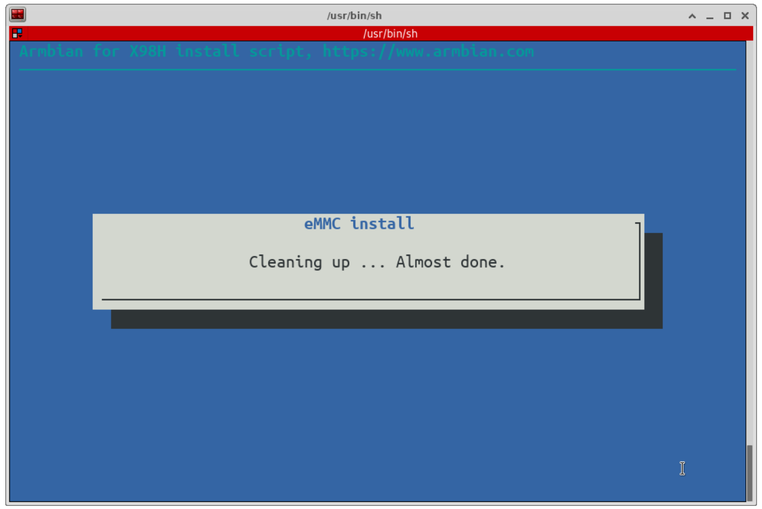

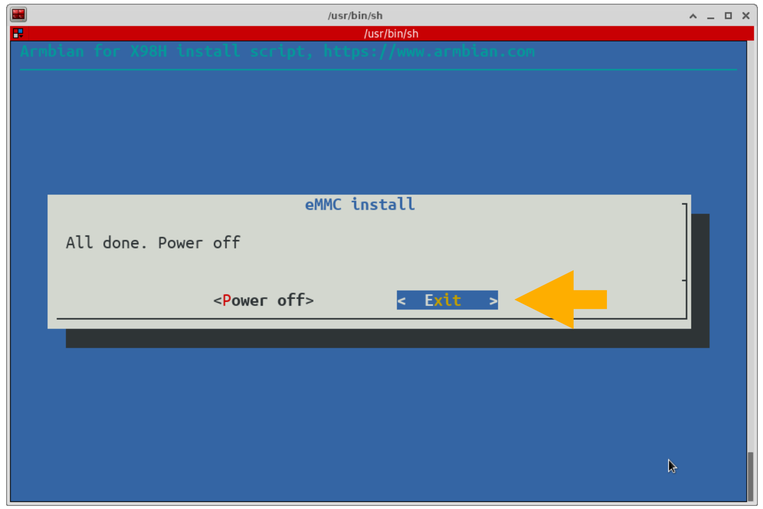

Do not Power off

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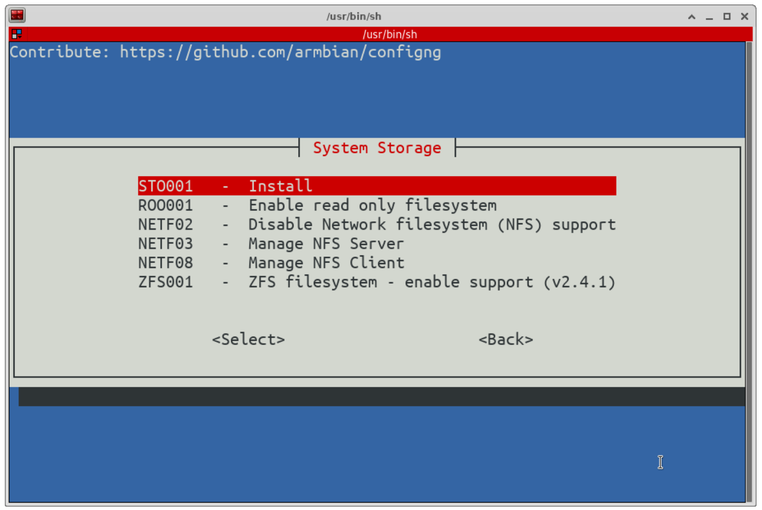

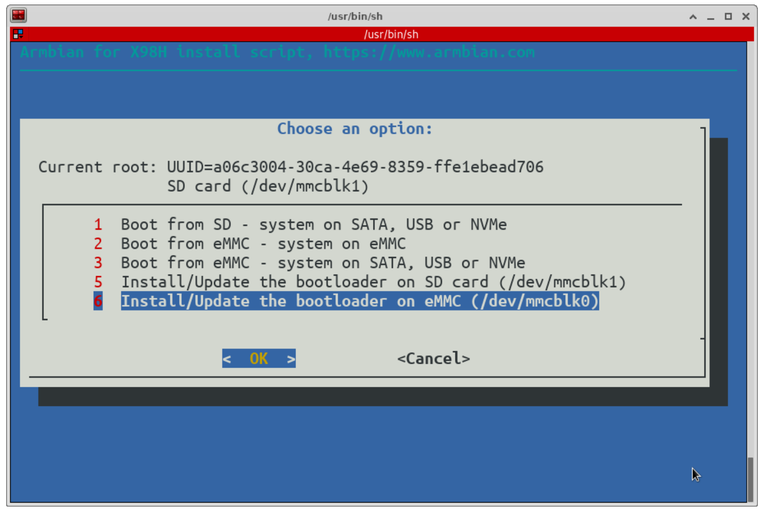

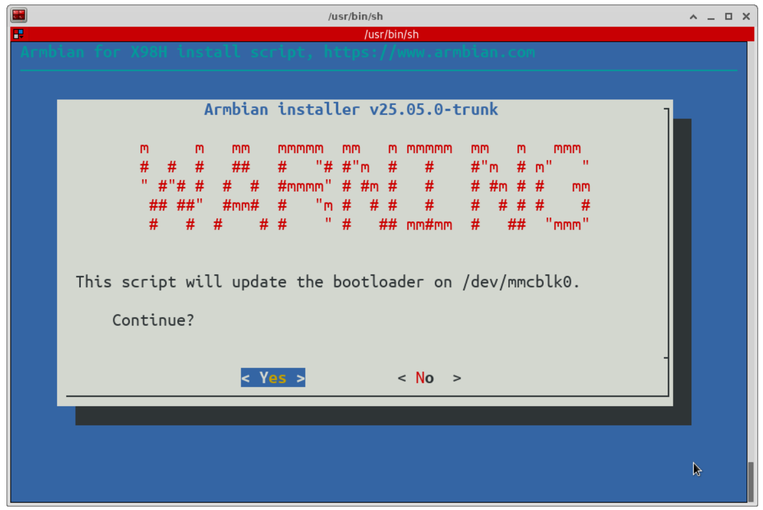

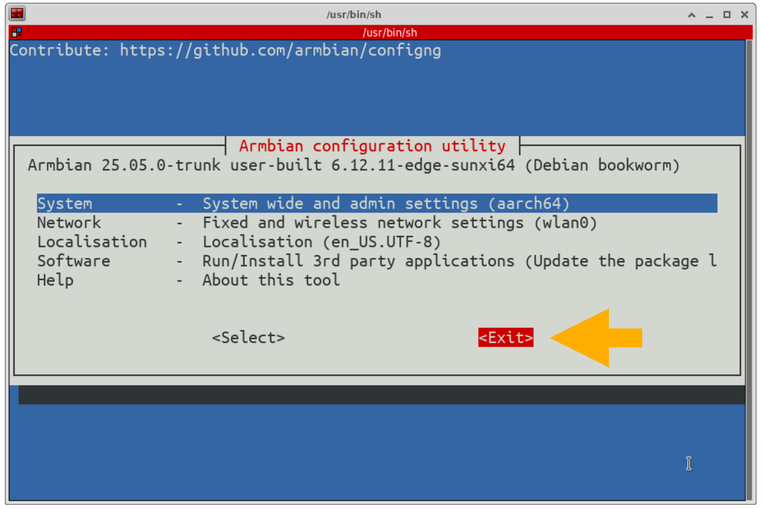

- Power off the device
- Remove the microSD card
- Power on the device to boot from eMMC

Built in collaboration with **Google Gemini** for presentation polishing and editorial layout.