Notes 4

How to install and remove software using the APT command.

APT(Advanced Package Tool) is a set of tools used for managing Debian packages such as **installing, updating, and removing the software** through command-line interface.

Formula: `sudo + apt + install/update/remove + package_name`

To Install Software:

1. Before installing any software, **first update** all the packages in the system. Use any of these two commands to update Debian.
   - `sudo apt update; sudo apt upgrade -y`
2. Then **install a package** using the following command to install any package we want.
   - `sudo apt install package_name`
   - **For example:** `sudo apt install tilix;` `sudo apt install bastet`

To Remove Software:

1. Use the following command to **remove a package without deleting the configuration files**.
   - `sudo apt remove package_name`
   - **For example:** `sudo apt remove cheat;` `sudo apt remove firefox`
2. To **completely remove a package including the configuration files** use the following command.
   - `sudo apt purge package_name`
   - **For example:** `sudo apt purge firefox`
3. After uninstalling software, **remove all unused dependencies** and **clean up** the system.
   - `sudo apt clean; sudo apt autoclean; sudo apt autoremove`

We can also **install or remove** multiple programs **at the same time** by adding the package name with space between two package and using **'+' and '-' sign** at the end of each package.

- **For example:** `sudo apt install tilix+ bastet+ cheat- firefox-`

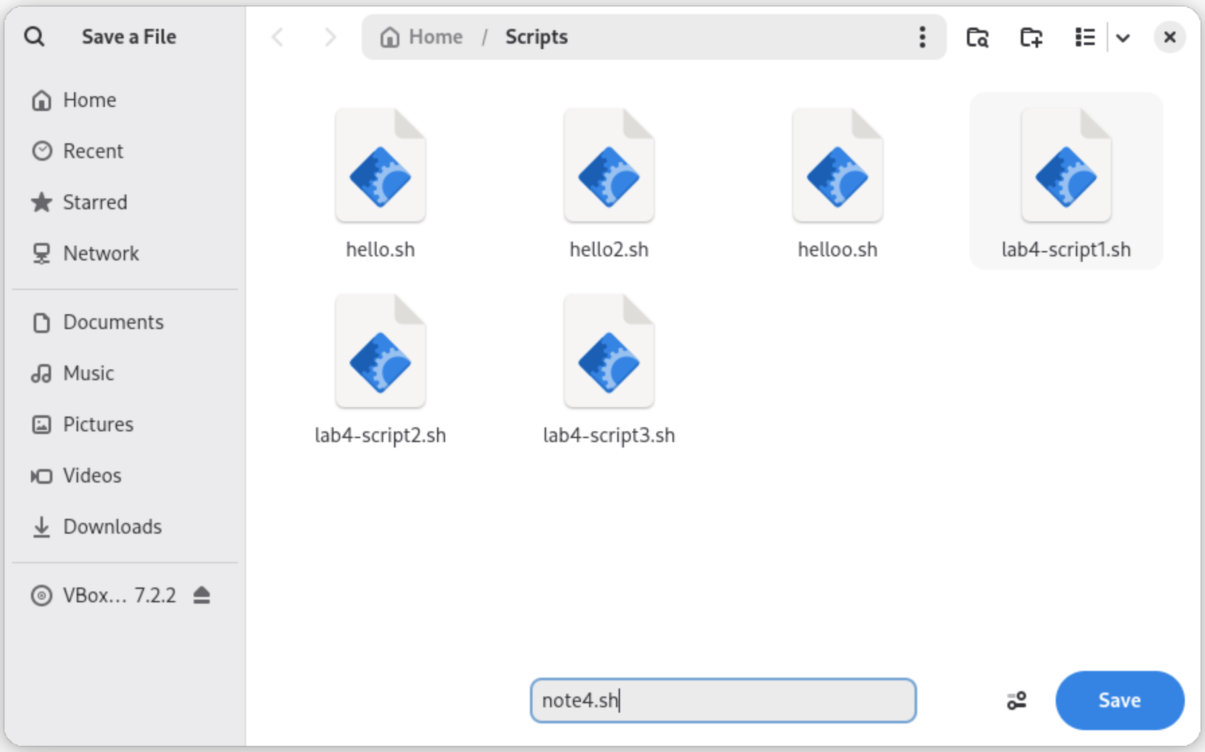
How to create a shell script step by step including screenshots and how to run it.

Shell script is a text file containing a series of commands created so that the Linux shell can automate the execution of multiple commands.

The step by step process is as follows:

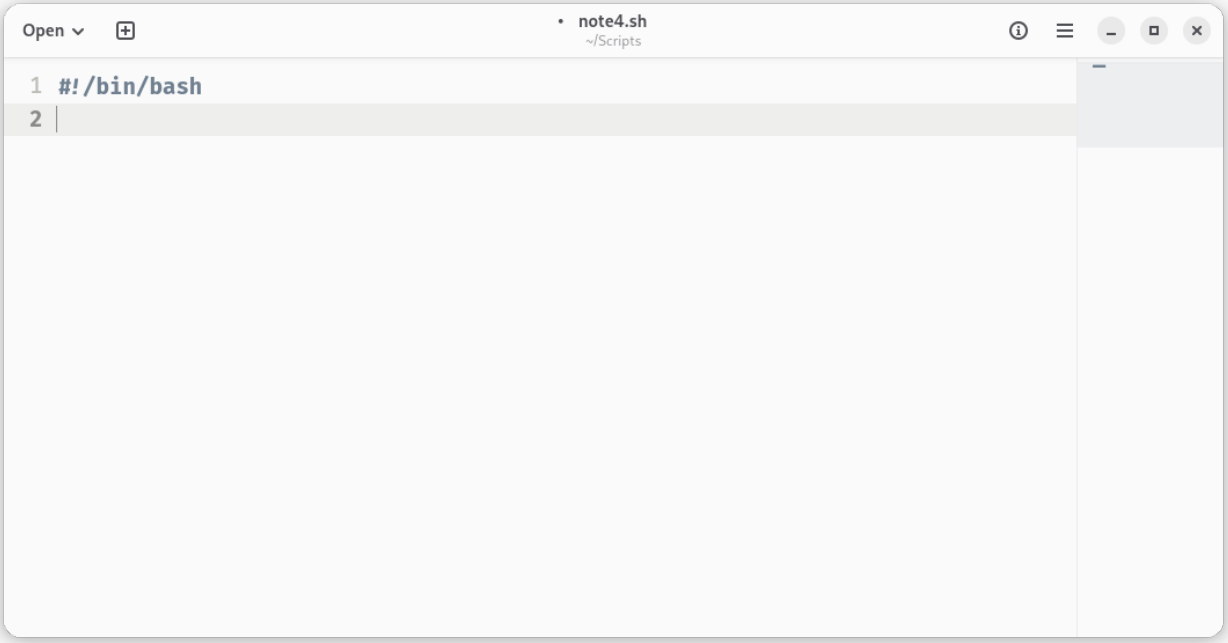
Step 1: Create the file

Open a text editor and create a script file. Then, save the file as **file_name.sh**. **For example:** `note4.sh`



Step 2: Add shell declaration

The first line in the file must be the **shell interpreter** or **shebang** to tell the system which shell to use. For **bash shell** it would be: `#!/bin/bash`



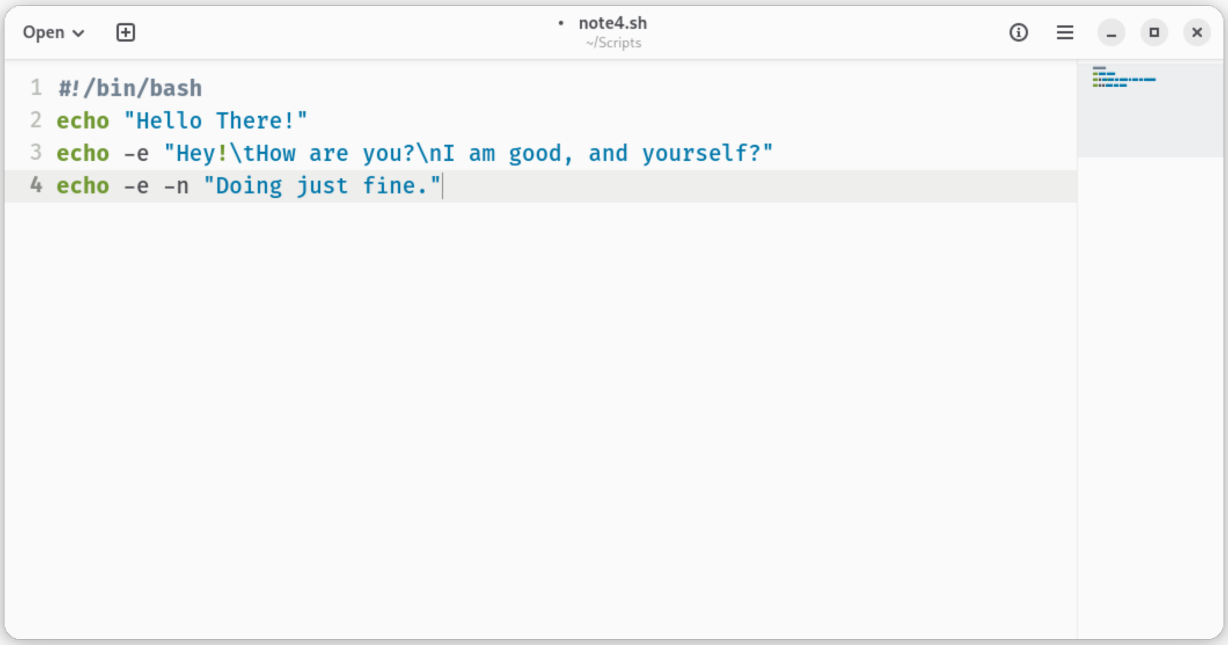
```
#!/bin/bash

```

Step 3: Add your code

Write the commands we want the shell to execute when the file is run. The **formula or syntax** to write a command is : `echo + option + "string"`

For example: `#!/bin/bash` `echo "Hello There!"` `echo -e "Hey!\tHow are you?\nI am good, and yourself?"` `echo -e -n "Doing just fine."`



```
#!/bin/bash
echo "Hello There!"
echo -e "Hey!\tHow are you?\nI am good, and yourself?"
echo -e -n "Doing just fine."
```

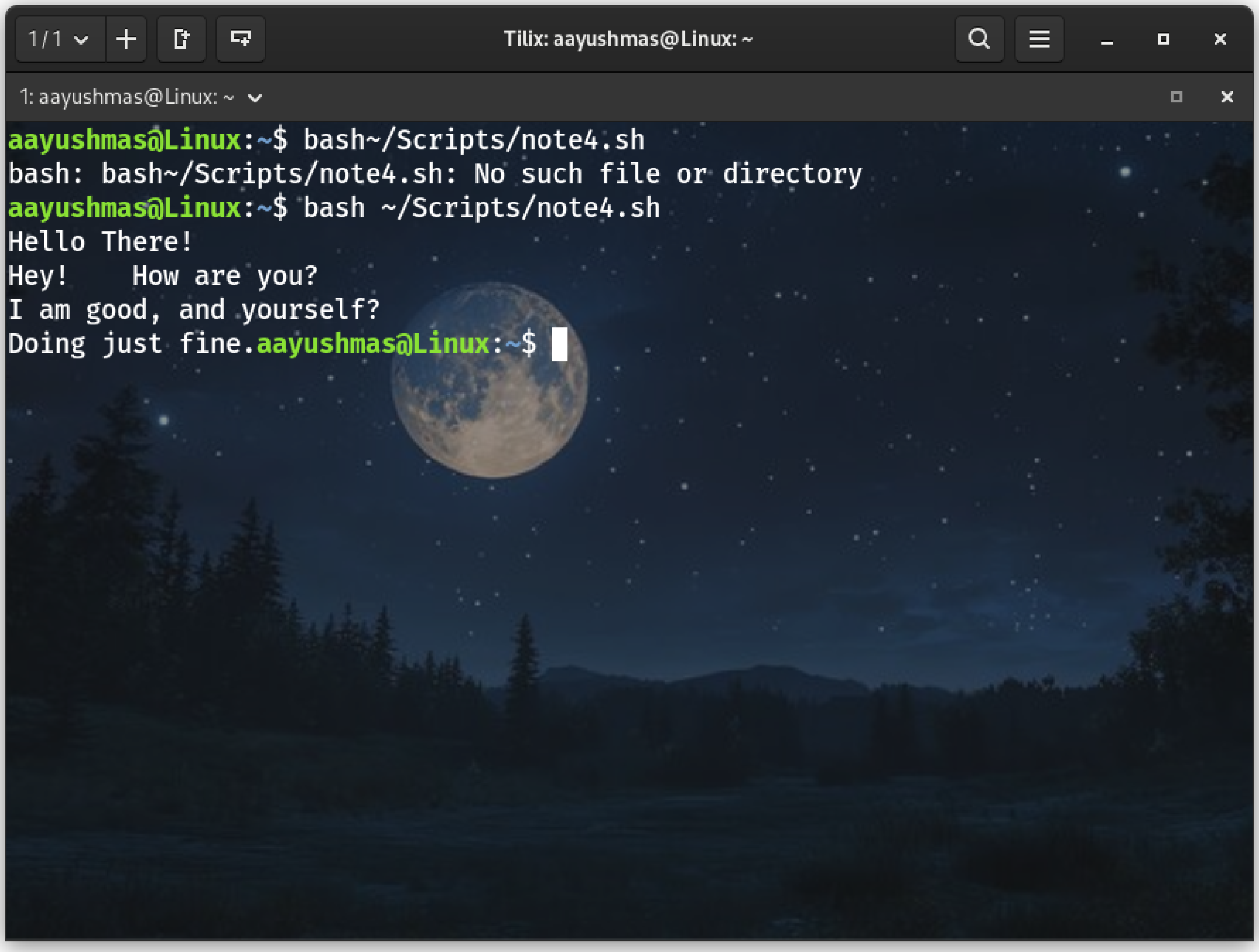
Then, save and exit.

Step 4: Run the script

To run the script **open terminal** and use the following command: `bash~/path/to/script/script_name.sh`

For example: `bash~/Scripts/note4.sh`

Then we can see the output displayed in our terminal.



```
aayushmas@Linux:~$ bash~/Scripts/note4.sh
bash: bash~/Scripts/note4.sh: No such file or directory
aayushmas@Linux:~$ bash ~/Scripts/note4.sh
Hello There!
Hey!    How are you?
I am good, and yourself?
Doing just fine.aayushmas@Linux:~$
```