

INTRO TO CREATING .DEBS

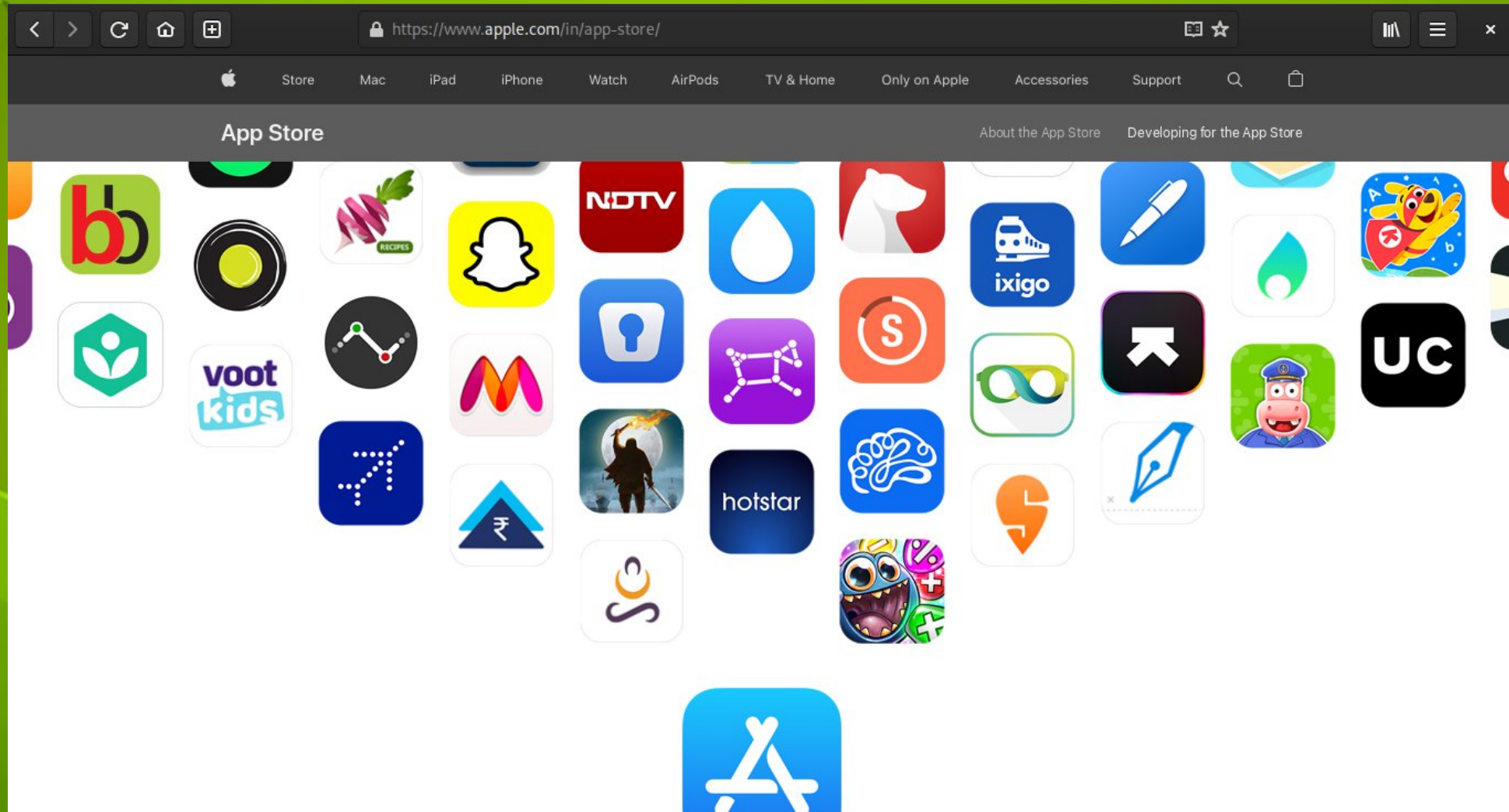
<https://wiki.debian.org/Packaging/Learn>

Google Play for Android

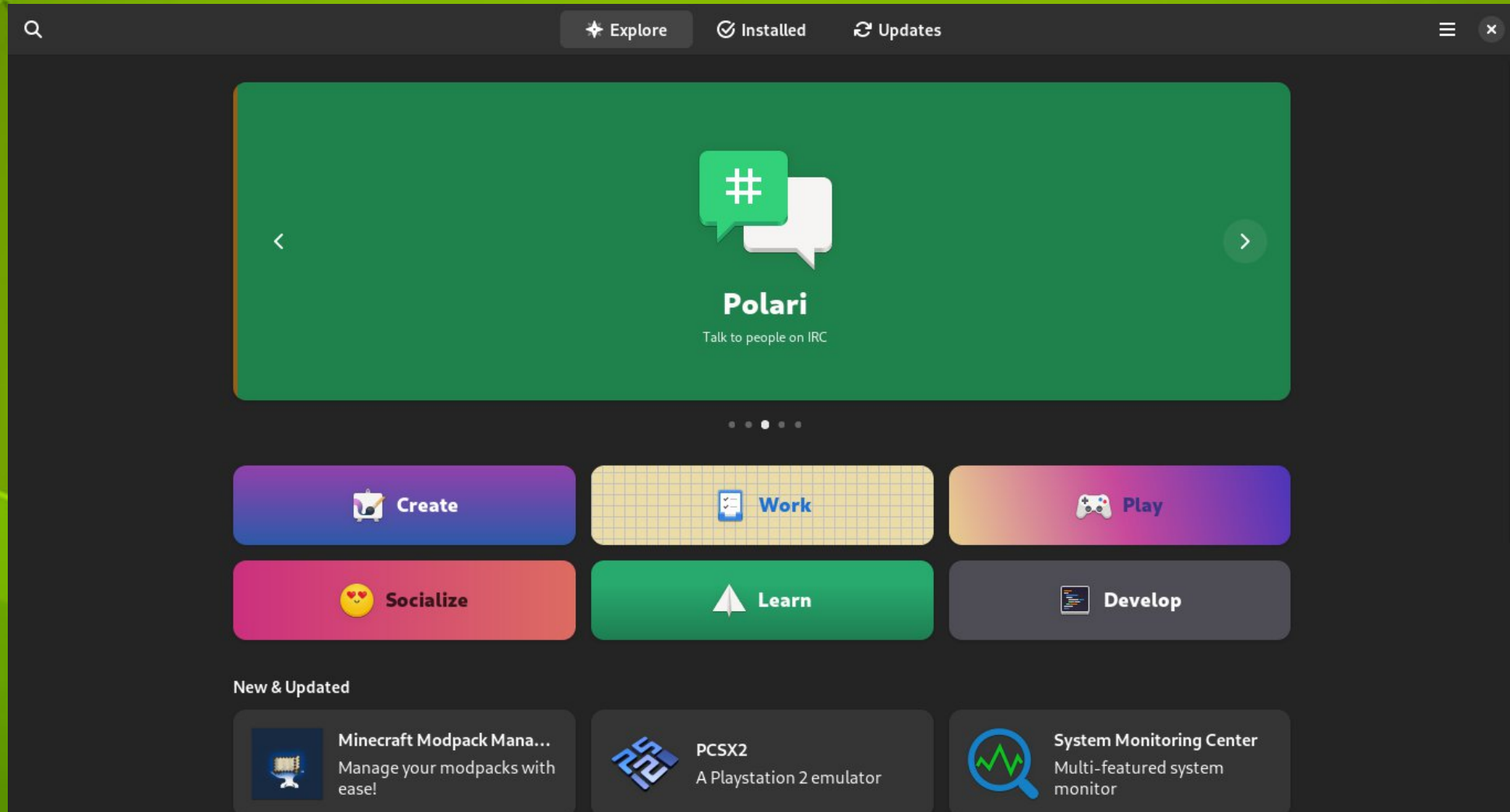
The screenshot shows the Google Play Store website for Android apps. The browser address bar displays <https://play.google.com/store/apps>. The page features a navigation bar with the Google Play logo and categories: Games, Apps (selected), Movies, Books, and Kids. Below the navigation bar, there are device selection buttons: Phone (selected), Tablet, TV, Chromebook, Watch, and Car. The main content area is titled "Top charts" and includes sub-sections for "Top free", "Top grossing", and "Top paid". The "Top free" section displays a grid of app listings with their icons, names, categories, and ratings. The "Recommended for you" section is partially visible at the bottom.

Rank	App Name	Category	Rating
1	Instagram	Social	4.3 ★
2	Meesho: Online Shopping App	Shopping	4.3 ★
3	Snapchat	Communication	4.1 ★
4	Normal VPN - Stable&Safe Proxy	Tools	4.2 ★
5	Flipkart Online Shopping App	Shopping	4.3 ★
6	PhonePe UPI, Payment, Recharge	Finance	4.4 ★
7	Facebook	Social	4.1 ★
8	Noizz: video editor with music	Tools	4.0 ★
9	Paytm: Secure UPI Payments	Finance	4.6 ★

App Store in iPhone



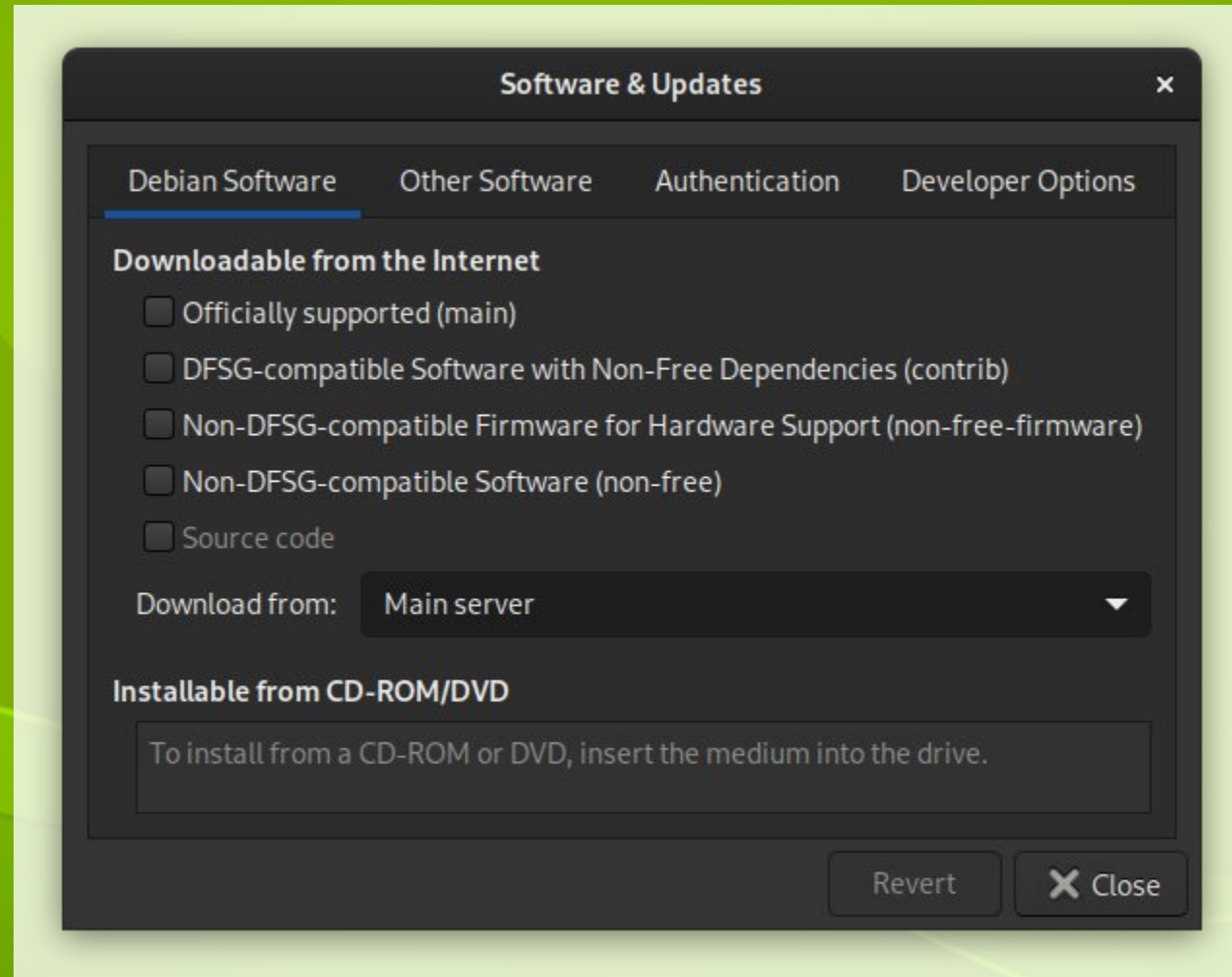
Software app on GNOME



apt/apt-get/aptitude

```
pravi@mahishi:~$ sudo apt install libreoffice
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
libreoffice is already the newest version (1:7.4.4-3).
0 upgraded, 0 newly installed, 0 to remove and 0 not up
graded.
pravi@mahishi:~$
```

Repositories



/etc/apt/sources.list

```
pravi@mahishi: ~$ cat /etc/apt/sources.list
deb http://ftp.de.debian.org/debian sid contrib non-free main
deb-src http://ftp.de.debian.org/debian sid main contrib
deb http://ftp.de.debian.org/debian experimental main contrib
deb-src http://ftp.de.debian.org/debian experimental main contrib
pravi@mahishi: ~$
```

APK file format



Create APK

Source code

+

Android Studio

=

APK

Inside APK

- Files => icon, program in machine language etc
- Metadata => version, certificates etc

.deb

- Similar in concept to *APK*
- Contents arranged differently

apk vs deb

Android Studio vs Many
different build tools

apk vs deb

Single Android (works on all custom roms) vs Many distros (so need many debs)

Why not a single deb?

- Flatpak
- Snap
- Omnibus
- Docker

Duplication or unpatched code

- Each app will have to take care of every dependency
- My app is special approach (earth revolves around my project)

Shared maintenance

Fix openssl once and every
app gets the fixed version

Single package manager

Just do a `apt dist-upgrade` to
update everything

Harder in practice

Many developers don't
want to update
dependencies to latest

Harder in practice

It is Free Software, so we do the update ourselves, which makes it harder.

Build from source

- Example <https://salsa.debian.org/debian/birdie-alarm-mobile>
- Wakeup Alarm app for mobiles
- <https://wiki.debian.org/BuildingTutorial>

Follow up

- Join groups via Matrix/XMPP/IRC:
<https://wiki.debian.org/Javascript/Mentors>
- Contact me directly via Email/XMPP:
praveen@debian.org