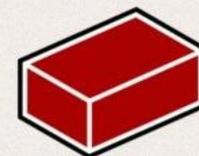


What can I do with a Pi?

Lots!

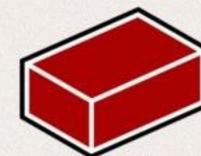


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All slides here

redbrick.dcu.ie/~edu



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Home server



Setting up a web server

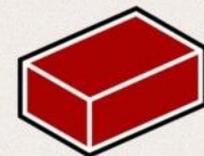
You can do this if you wanna host them things that redbrick don't allow ;)

or

You need more space than redbrick provides

or

You need real good site reliability ~~when~~ if redbrick goes down



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You want to put a cloud in your bedroom?

You'll be a real cool dude telling people down the pub that you have the cloud in your bedroom.

Set up a cloud server on a raspberry pi and do just that.



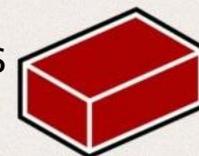
Where can I find this magic

These few tutorials and a lot of other basics you should learn and know can be found right here:

<http://www.instructables.com/id/Ultimate-Pi-Based-Home-Server/>

I used this tutorial a number of years ago and taught me an abundance* of the things that I know today

* Loosely used term mostly by helpdesk to overestimate their abilities



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Tv? What are we old people?

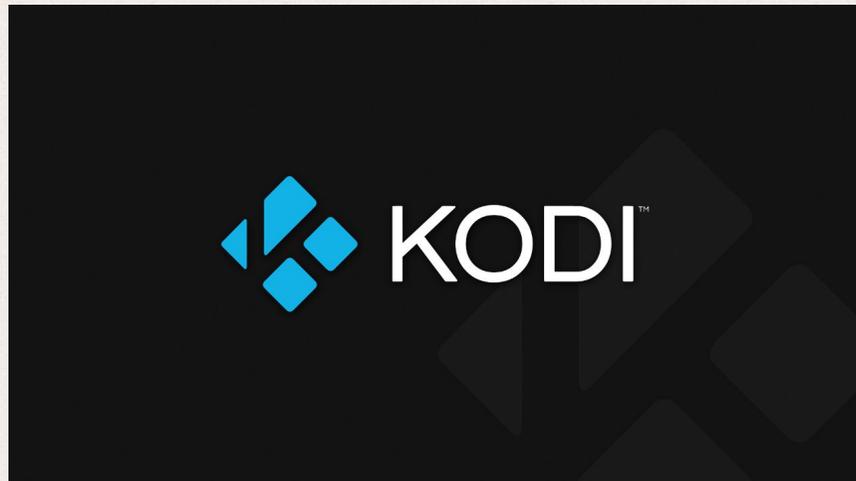


We want a media server

This is basically an interface for all your movies and music

You can point it to your local files or you can point it to other websites.

- http://kodi.wiki/view/raspberry_Pi



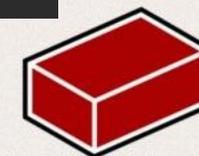
We want a media server

There is also another called plex

- <http://www.rasplex.com/>



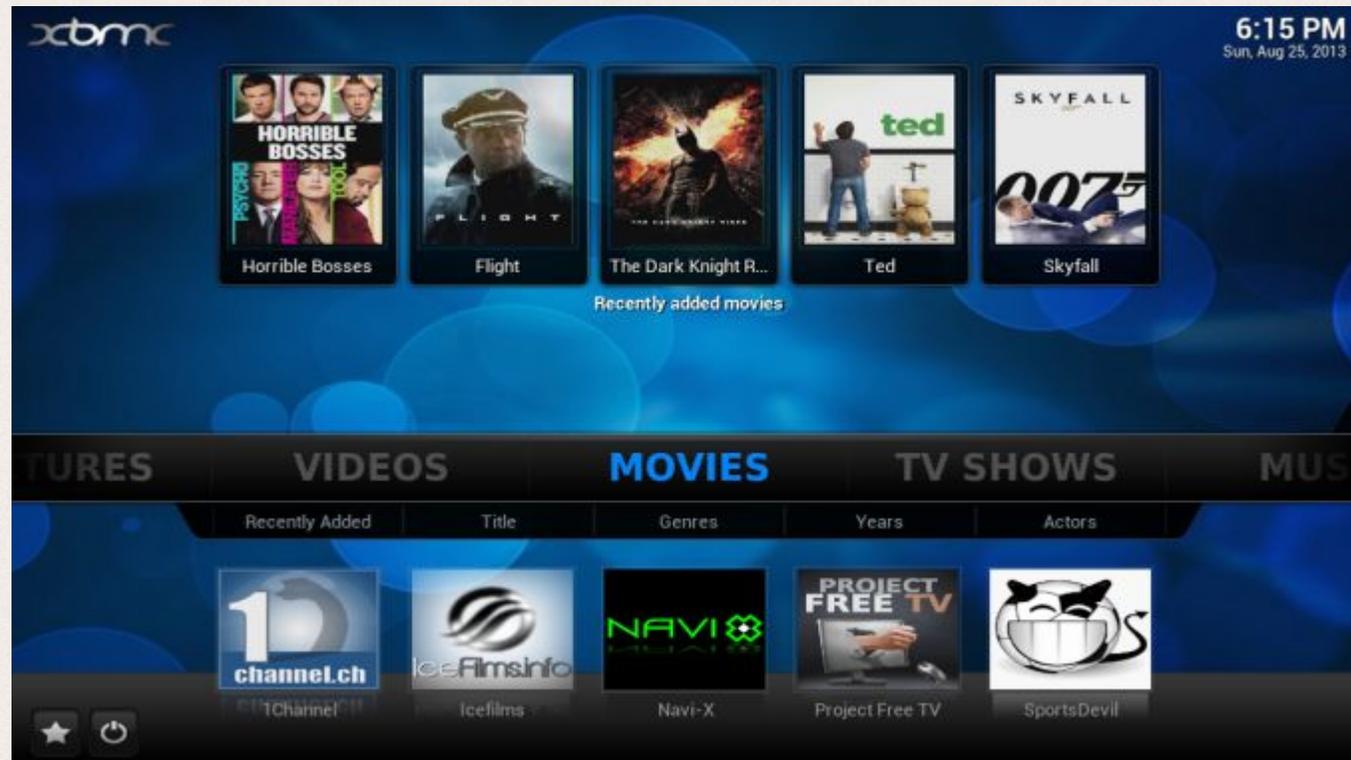
Which is better



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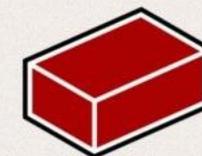
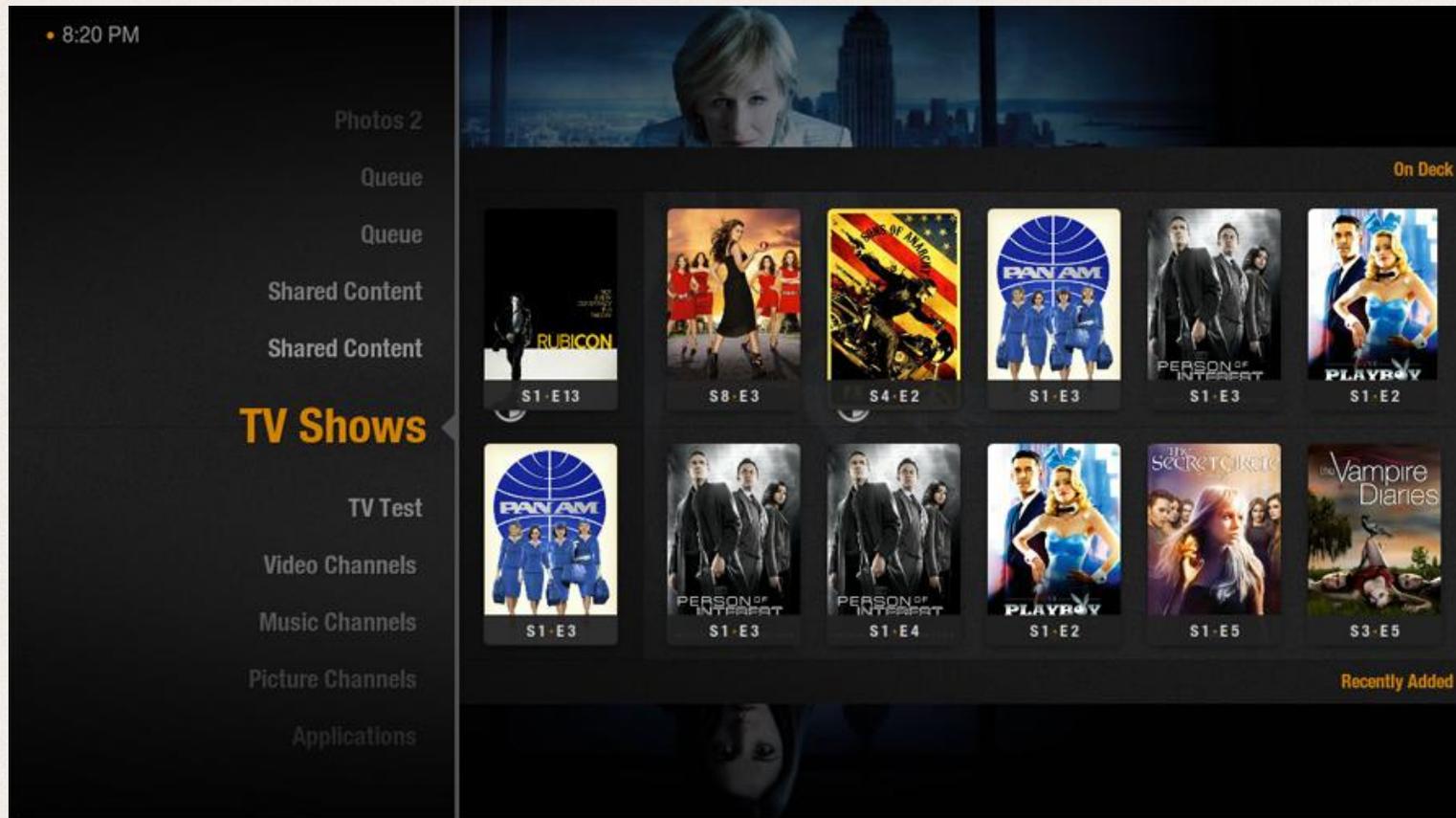
Key Differences

They Look different - Kodi



Key Differences

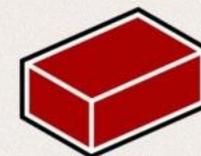
Plex



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Key differences

Kodi	Plex
Open Source	Closed source
Good for plugins	Pay for certain features
Skinnable	More 'family proof'



bittorrent server - Torrents are not illegal

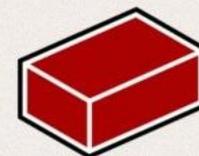
What the hell is a torrent then?

A bittorrent doesn't have to be illegal or for pirating things. It just makes that easier.

It just means that instead of downloading from one source you download from many making it faster.

A good way to get started is:

<http://www.howtogeek.com/142044/how-to-turn-a-raspberry-pi-into-an-always-on-bittorrent-box/>



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RETROPIE

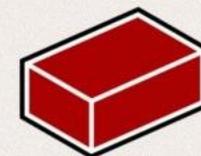
You can play my childhood on that thing?

Yup retro gaming on the pi is a thing and rather fun

- <https://retropie.org.uk/documentation/installing-retropie/>

You can play but not limited to:

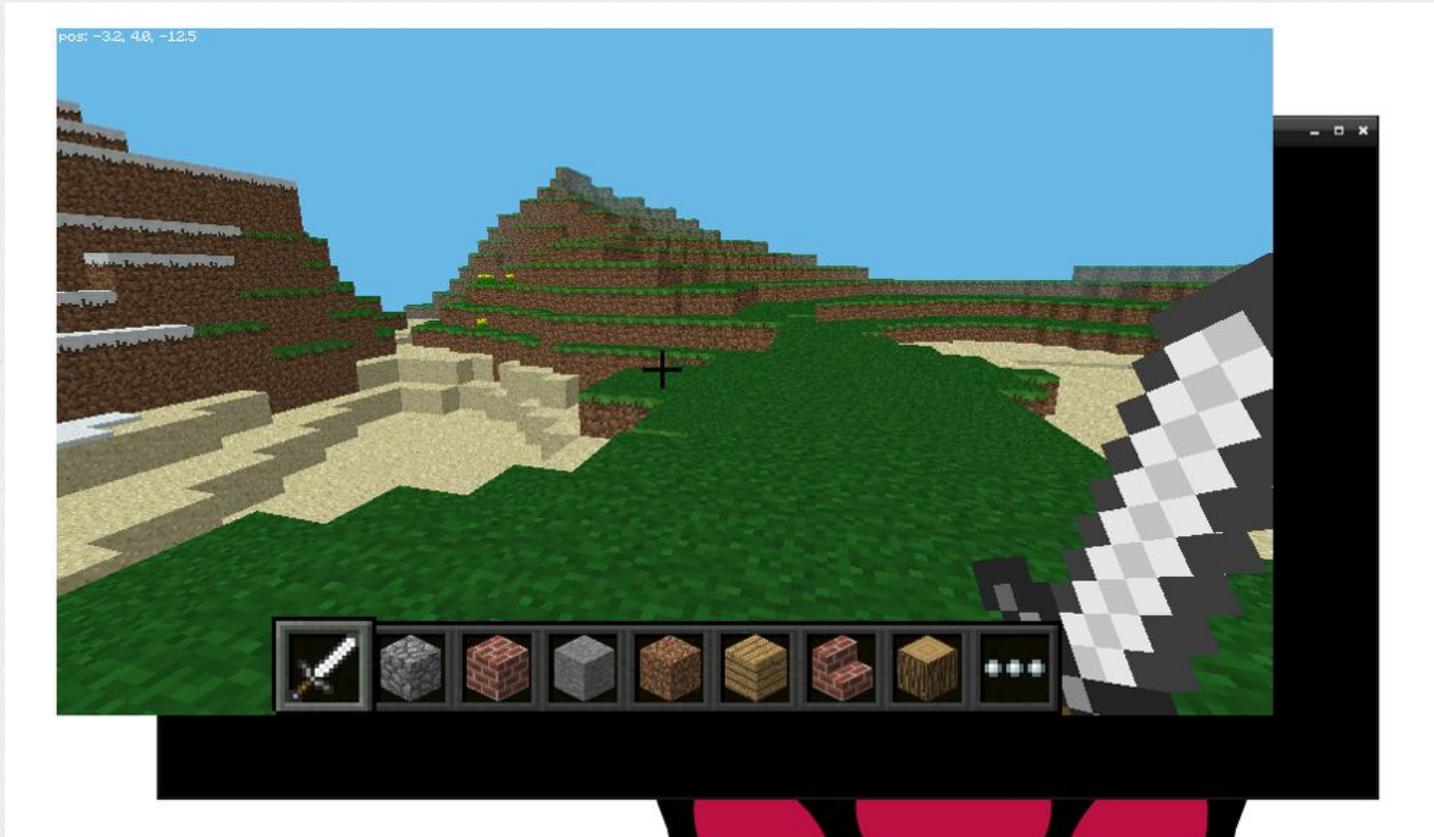
- Nintendo 64
- Playstation 1
- Nintendo DS
- Apple II
- Macintosh



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Speaking of games

We can also play minecraft.



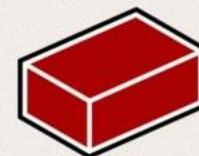
Minecraft

If you wanted to do really cool things you can manipulate minecraft with python

<https://www.raspberrypi.org/learning/getting-started-with-minecraft-pi/worksheet/>



You have an abundance of screens?



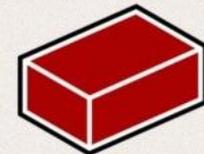
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You have an abundance of screens?

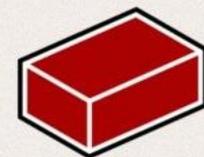
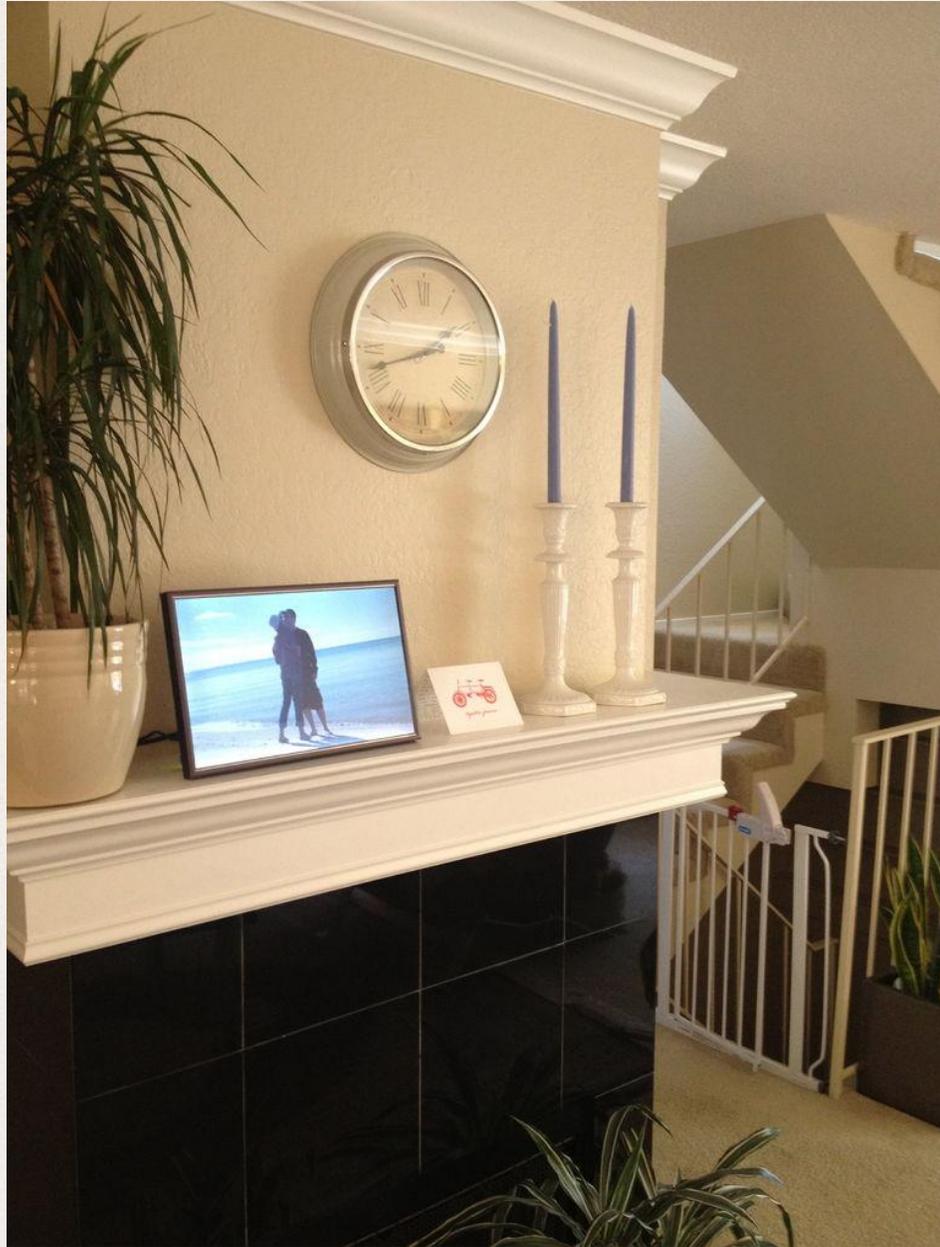
Turn them into something probably slightly a little more useful
Picture Panels

(You can make a webpage with weather or news either)

<http://www.instructables.com/id/How-to-Make-a-Raspberry-Pi-Media-Panel-fka-Digita/>



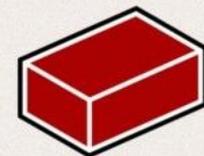
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Tor Router

- Good for anonymous browsing
 - You will use a pi as a portable router
 - You goin' need a pi, ethernet cable and wifi adapter
- Right so first you set up your pi as an access point:
<http://qcktech.blogspot.ie/2012/08/raspberry-pi-as-router.html>
- You can teach yourself a few things sometimes....



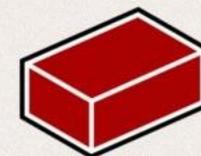
Tor

- `sudo apt-get update`
- `sudo apt-get install tor`



and follow instructions I'm not prepared to write:

<https://learn.adafruit.com/onion-pi/install-tor>



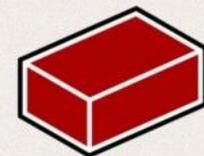
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Magic Mirror

Have you ever wanted to be updated on the weather while having a moment of self-loathing looking in the mirror?

Yes? Well now you can!

This is a pretty common but very cool one

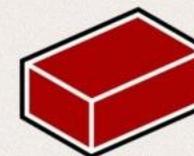
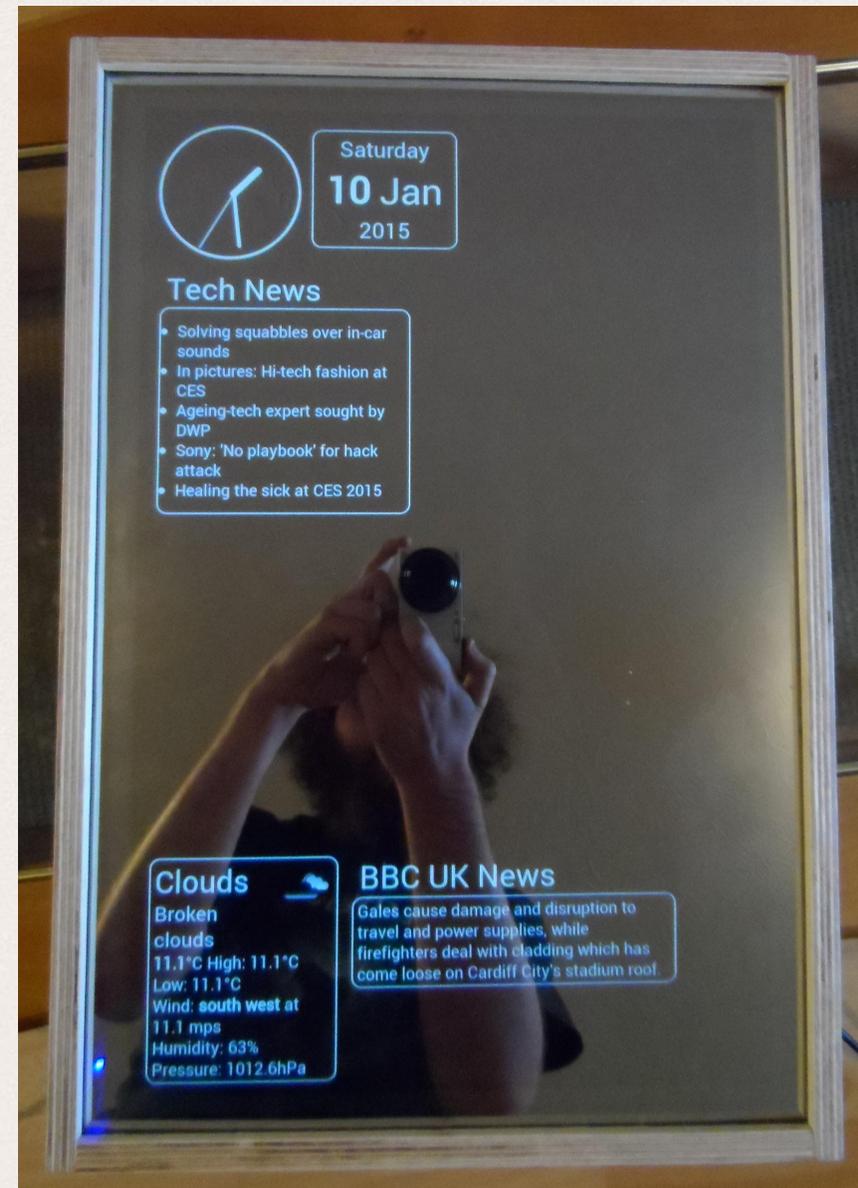


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You can do things like this.

Here's a link even though you could just search magic mirror and get dozens of results, literally dozens:

[Magic Mirror](#)



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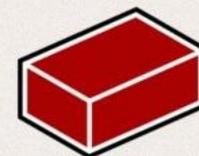
Digital Calendar

Remember that obscure picture of a picture frame like 5 slides back?

I hope you guessed that was pi doing that

So now we do that but instead of boring pictures we goin' put google calendar on that bitch

calendars, fuck yeah



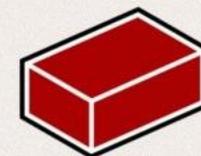
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link for the lazy:

[Calendar](#)



It's google calendar running constantly, shouldn't be too hard to figure out, but it could impress your mother or something I don't know



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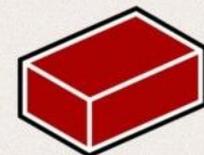
Home Automation

Home Automation requires a pi, but it also require lots of other hardware.

But if you still wanna be part of the new hyde 'IOT' then follow this link and let us know how it goes...

And if you heating get DOSed

<http://lifehacker.com/build-an-entire-home-automation-system-with-a-raspberry-1640844965>



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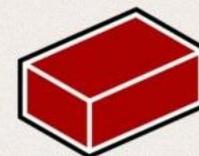
Programming & Linux

If you wanna learn linux but dual boot and VM's are too scary, you can use one of these.

You can always flash a new sd card and they are relatively cheap if you manage to brick it.

They run python well and can even run headless (no screen)

They can be left running because of low power consumption making them ideal for your first home server (power about €5 a year)

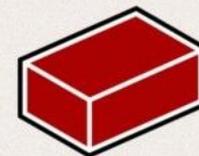


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Now to the admin Exam ;)

You should now be fully equipped to do the practical admin exam for redbrick

[The Happy Place](#)



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Questions



Cat Tax