

# Design Documentation for picoDB

I hate doing this shit for school, let's see if it's more fun on a personal project™

## Description of purpose and user requirements

PicoDB will be a website with QR codes that link directly to the package files for Nintendo 3DS home-brew applications, for use with the "FBI" installation utility, which can install programs directly to the SD card using such a QR code.

The site must be easy to navigate, using features such as a search box, and categorisation - for example, is the application a game, a utility, or something else entirely. In addition, it should be possible for users to suggest applications to add to picoDB, by submitting an application URL, and in addition, the name of the application, if it cannot be automatically guessed, or if they wish to override the automatic guess.

## Product ideas

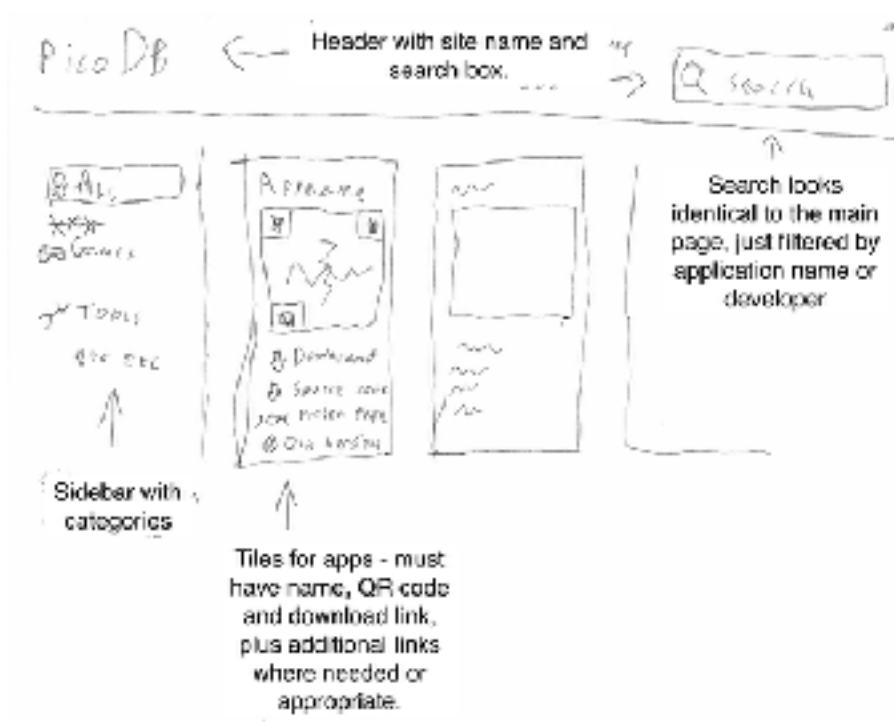
picoDB will be roughly based on "TinyDB" by eiphax, as TinyDB is a very similar website - however, when TinyDB went down, it became much harder to install third-party applications on modified consoles, as there was no easy way to install applications over the internet.

One of the drawbacks of tinyDB, at least in my opinion, is that the "CIA" (Citra Importable Archive, the application format used by the 3DS, named after the console's codename of Citra) and 3DSX (3DS executable) files were hosted on TinyDB's servers. This means that if TinyDB's hard drive becomes corrupted - as is the case in the most recent outage - then the whole website must be rebuilt from scratch, as backups are likely to contain outdated versions of applications.

I will attempt to avoid this by hosting next to nothing on picoDB's server, save for the QR codes used by the application. picoDB will instead use external hosting - one such source will be GitHub, which is used by many developers to host 3DS home-brew applications. GitHub has an easily accessible API, which will make it easy for picoDB to serve a QR code for the latest version of a 3DS home-brew application, by querying the API to get the latest available version of an application. I will likely also add other automatically-updating sources in the future, but for now, GitHub will be the primary focus, as that is where most home-brew applications are hosted.

The site will also be able to link to other hosting platforms, as long as a URL to a valid 3DS application file is provided. I will need to ensure that "dead" links (links that are no longer available, either due to the file being removed or due to the server being unavailable) are not shown to the user, as this may cause confusion.

## Storyboard



## Asset Table

Asset Name	Asset Location	Asset Source	Description
QR codes	On the "tile" for each application	Will be generated automatically as needed by the application.	A QR code which directly links to the file for the relevant application.
App icons	See above.	Either sourced from the application's GitHub repository, or supplied manually from various sources.	The icons for each application provided through picoDB
Category icons	Next to the category names in the sidebar	TBC	Monochrome pictographic icons, used as a way of representing each category
Search icon	In the search box	TBC	Monochrome pictographic icon of a magnifying glass, used to show that this box is a search box

## Colour schemes

I have not yet decided on a colour scheme for picoDB - if one is used, this section of the design documentation will be updated at a later date.