

# Livepapers - web programming exam project

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**Livepapers** is a webpage developed by Joachim Andreassen as a exam project in the web programming course. The purpose of this webpage is to provide animated wallpapers to users. Animated wallpapers can be put to use using [Lively Wallpaper](#), or other similar software.

## Features

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- Browse page where the user can browse animated wallpapers.
  - Shows static images first, which changes to video of the wallpaper on hover.
  - Sort by *latest*, *most liked* and *random*.
  - Searchable by tags, colors and uploader.
  - Filter by date, views, ratio, width and height.
- Wallpaper page where the user can view the animated wallpaper and info about it.
  - Button to download the wallpaper.
  - Button to favorite the wallpaper, if logged in.
- Settings page for users not logged in.
  - Settings is stored in cookie.
- Profile page where the user can view user information.
  - Ability to upload animated wallpaper.
  - Ability to remove wallpapers uploaded by current user.
  - Change user settings.
    - Settings stored in database as json.
  - View uploaded wallpapers and favorited wallpapers.
  - Admin and manager settings.
    - Admins and managers can delete wallpapers and block users.
    - Managers can delete wallpapers for all users (including admins and managers), and block all kinds of users.

## Technical

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**How to run:** run `python3 app.py` from the `./flaskr` directory.

**Python version:** 3.9

**Python packages:** See requirements.txt

**Style:** Bootstrap (bsstyle.css) and custom css (style.css)

## Databases

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## Users database:

Stores information about users. The table contains the following columns:

- username
  - Username of the user
  - Text, primary key
- pwhash
  - Hashed password
  - Text, not null
- type
  - Account type
  - Int, not null
- settings
  - Json formatted user settings
  - Text

**Type** contains an binary value that describes the account state and what the user can do on the page:

- **000001**: Add wallpapers
- **000010**: Remove wallpapers
- **000100**: Admin - Manage users
- **001000**: Manager - Manage admins
- **010000**: Blocked

username	pwhash	type	settings
joachim	fa8g97dya9hukasdf	15	{"color": "dark"}

## Wallpapers database:

Stores information about animated wallpapers. The table contains the following columns:

- aid
  - Id of the animated wallpaper
  - Int, primary key
- username
  - Username of the user that added the wallpaper.
  - Text, foreign key (*username* users)
- width
  - Wallpaper width
  - Int, not null
- height
  - Wallpaper height
  - Int, not null
- date
  - Date added
  - Date, not null
- views

- Counted views
- Int, not null

aid	username	width	height	date	views
1	joachim	1920	1080	14.04.21	68

## Likes database:

Stores information about likes on animated wallpapers. The table contains the following columns:

- lid
  - Id of the like
  - Int, primary key
- aid
  - Id of the animated wallpaper
  - Int, foreign key (*aid* wallpapers), not null
- username
  - Username of the user that added the wallpaper.
  - Text, foreign key (*username* users), not null

**aid** and **username** is a multi column *unique constraint*.

lid	aid	username
1	2	joachim
2	1	joachim

## Tags database:

Stores information about the tags for animated wallpapers. The table contains the following columns:

- tag
  - The tag
  - Text, primary key, not null
- aid
  - Id of the animated wallpaper
  - Int, foreign key (*aid* wallpapers), not null

**tag** and **aid** is a multi column *unique constraint*.

tag	aid
popcorn	2
candy	2
whale	1

# Screenshots

## Browse page:



## Wallpaper page:

