# Livepapers - web programming exam project

**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 <u>Lively Wallpaper</u>, or other similar software.

#### **Features**

- 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.
  - o 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**

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

Python version: 3.9

Python packages: See requrements.txt

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

# **Databases**

#### **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
  - o 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
  - o Int, not null
- height
  - Wallpaper height
  - o Int, not null
- date
  - o Date added
  - o Date, not null
- views

- Counted views
- o 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
  - o 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:

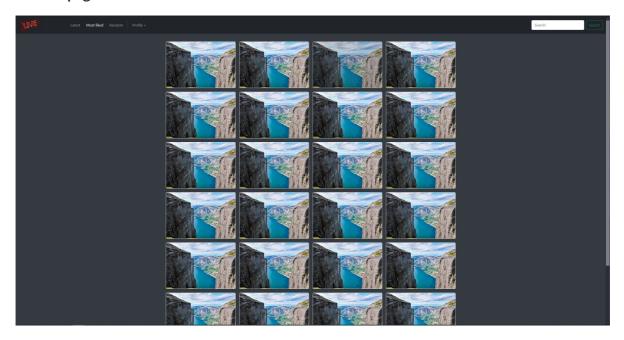
- tag
  - The tag
  - Text, primary key, not null
- aid
  - Id of the animated wallpaper
  - Int, foreign key (aid wallpapers), not null

tag and aid is a multi column unique constraint.

tag	aid
popcorn	2
candy	2
whale	1

# **Screenshots**

## **Browse page:**



## Wallpaper page:

