

Backend Design Document

Home Page Cron Job:

The 3 file system:

The content in s3 bucket will be split into three parts:

- One file which stores all the list of festivals and their details. This is static and will be permanently persisted. Only updated in case new festivals are to be included.
- A second file which will provide the data of festivals for the current day. The filename will be the date it corresponds to in DDMMYYYY format.
- A third file which will contain a list of data of the previous day(reason for maintaining a 3rd file further explained). The filename will also be the date it corresponds to in DDMMYYYY format.

The 3 file system will avoid the need of picking the relevant data to be showcased everyday by the FE. This will reduce the render time of the home page.

The 2nd and 3rd file will be updated everyday by a cron job at 12 midday. This can be directly read by FE and then further operations can be performed on it.

Both current and previous day files are maintained for precaution in case the website is accessed at around midnight, which might lead the website to pull data either from 2nd or 3rd file in a matter of minutes

Details:

Frequency: once in 24hrs

Time: 12:00 p.m.(Midday)

Task: Delete the already existing previous day file and create a new file for the next day.

Ex:

On 5th Jan it will have these two files before 12pm.:

- 04012023
- 05012023

After 12pm., The old file belonging to 4th Jan(previous day) will be deleted and a new file corresponding to 6th Jan(next day) will be created:

- 05012023
- 06012023

Expectation: FE will use the date of request to fetch the corresponding file as needed.

Note: Filtering, sorting and searching will have to be handled in FE side

User data clearance Cron Job:

- The user can upload images and create wishes on the website. But this will be persisted only for a brief time period from creation(3 days).

Details:

Frequency: once in 24hrs

Time: 12:00 a.m.(Midnight)

Task:

- Delete the wishes created by the user if it has exceeded 3 days. This includes clearing the resource and invalidating the URL.
- Delete the images uploaded if it has exceeded 3 days. This includes removing the image from s3.

Database Tables:

- **Templates(templates):**

- template_id(Primary key)
- animation_id
- image_id
- party_effect_id
- text_message
- festival_id
- icon_id

- **Images(images):**

- image_id(primary)
- festival_id
- uploaded: Boolean(True if user uploaded, False if ours)

- upload_datetime(Optional, present only if user uploaded)

- **Wishes(wishes):**

- url_code(Primary key)
- animation_id
- image_id
- party_effect_id
- text_message
- creation_datetime

Softwares and Tools to Use(Debatable):

- **BE APIs: Python Flask**
- **Cron Jobs: Airflow service(dags written via python library)**
- **Database: PSQL**
- **Image, animation and effects data: Amazon S3**