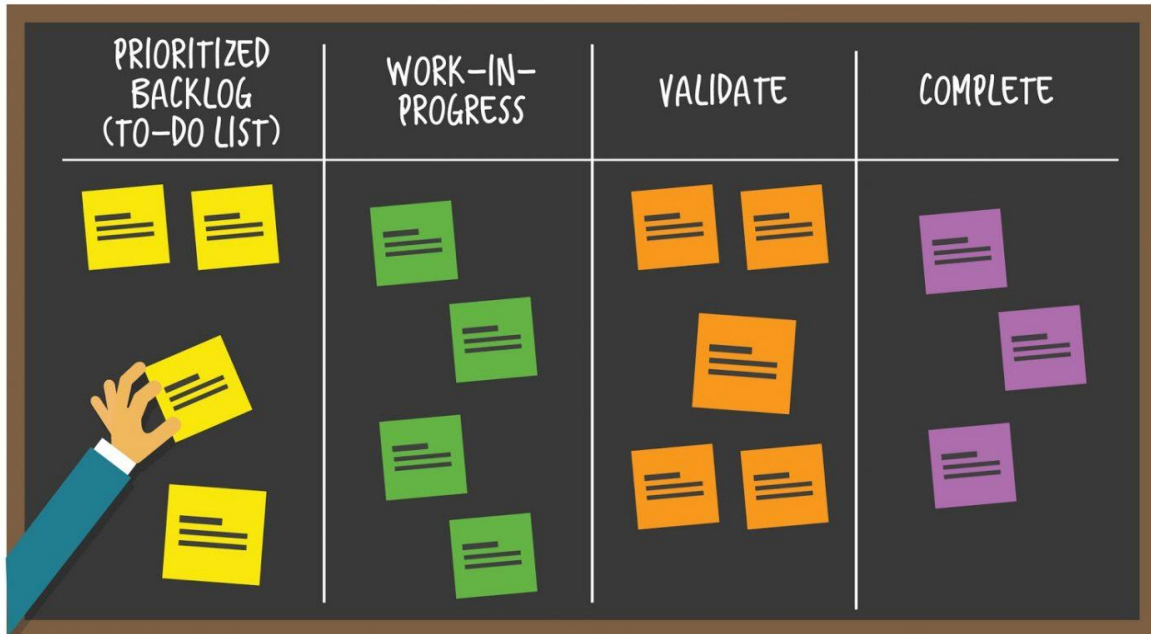


KANBAN-V2

FINAL PROJECT FOR APP DEV-2

KANBAN BOARD



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[Screencast Link](#)

INTRODUCTION

As a part of Final Project, I have made KanbanV2 Web Application which is used for tracking the progress of your tasks. The frontend is made with Vue Framework setup by Vue-CLI and backend by Flask. In Term 3 of 2021, I had made flash(k)ard project, so backend is created keeping the base of my flash(k)ard app.

PACKAGE DEPENDENCY

Following Packages have been used for making the Application:

1. **Vue-** To render components and routes. Other dependencies which are used in vue are
 - a. **vuevalidate:** to validate the form inputs
 - b. **jspdf-html2canvas:** to convert the summary page to pdf
 - c. **Routes:** to route to different pages
2. **Flask-** To create APIs and controllers providing and posting data in the database and also validations to frontend. Other Dependencies used with Flask are
 - a. **Flask-SQLAlchemy** - handling of a database connection across the app.
 - b. **flask-restful** - Extension of flask to create API Resource
 - c. **flask-bcrypt** - Extension of flask to create hashing and verifying the login-password
 - d. **flask-cors:** To accept cross-origin requests from frontend fetch requests. By default not accepted.
 - e. **flask-jwt-extended:** very easy library providing token authorisation
 - f. **Celery[redis]** and **redis:** To facilitate synchronous jobs like daily reminder and monthly progress.
 - g. **flask_weasyprint:** to create pdf report from html to send email to user
 - h. **flask-Caching:** used to improve performance by defining cached items which are queried frequently
3. **Bootstrap:** It is used for styling

MODELS

The following models are defined with their attributes:

1. User Model with id(primary key), username, email, password. Has relationship with List

model keeping lazy="subquery".(caching purpose)

2. List Model with id(primary key), title(String), deck_score(Integer), user_id(Foreign Key to user.id), review_time(Datetime)
3. Card Model with id(primary key), created_time, updated_time,completed_time,deadline,completed, title, content, deadline_days,list_id(Foreign Key)

FRONTEND

Project was setup with Vue-cli through its UI.App instance is create with main.js importing all dependencies.Home view is created with conditional rendering of Home component page with Login/Register option and Dashboard Option with NavBar. The Dashboard Component act as base component with its child component as List component and Card component as its grandchild component.Action for different components are as follows:

Component	Actions Available
Dashboard	Export of all cards and Summary Page and Logout Option.Adding list into dashboard
List	Edit Title, Delete List, Export List as csv and Add Card to List
Card	Edit Content of Card with option to move among the list, Delete Card and Export card contents

Frontend runs on the localhost-port 8080

BACKEND

Based on Flask, it provides API endpoint for the fetch request to the frontend actions. IT also validates the input data received from frontend form before committing to the database. It also performs performance improvement job through caching and synchronous jobs through celery workers. It runs on localhost-port 8081. To run

synchronous tasks celery workers and celery beat in parallel need to be run on the terminal. Hogmail is used as fake SMTP email receiver. Also for these tasks redis server need to be run in background.

REFERENCES & Links:

1. [Bootstrap5 Tutorial](#)
2. Documentation of dependencies
3. Stackoverflow for unlimited errors
4. ScreenCasts
5. [To Enable CORS on Flask servers](#)
6. [Token Based Authentication-flask on jwt extended](#)
7. [Vue emitting from child to parent](#)
8. [remove-an-object-from-an-array-with-javascript](#)
9. [how-to-center-content-in-a-bootstrap-column](#)
10. [Deadline validations](#)