

ABSTRACT

The idea of the process is to build a web application for introducing HDO decoration, which is a fictional company, as publicly on the internet so that authorized employees can publish past project pictures on the web application. Another objective of the process is that web users can send emails via the contact form on the web application.

Authorized employees do not want to deal with technically uploading pictures by updating the website so as a developer there has to find a service to use as social media that Cloudinary comes to the stage. Cloudinary is a media server where the picture can be uploaded and Cloudinary can give back the URL of the uploaded picture which serves past project requirements of the web application.

Another expected result is to send email via the contact form, to solve it Sendgrid service is used, and Sendgrid is SMTP (Simple Mail Transfer Protocol) that can send email via a verified email account, a free Gmail account is used for issued web applications.

JavaScript technologies are used for implementation, which is Nuxt.js server-side framework with Vuetify component-based framework for the front-end, and for the server-side Node.js is used with Express.js. The reason to choose Nuxt.js framework is the possibility of SEO (search engine optimization) possibilities of future demand from stakeholders as it is a server-side rendering framework.

First requirement, as the web application starts to run, it directly triggers the back-end of the REST end-point to send a request for pictures in Cloudinary and it forwards a response to the client-side framework to display uploaded past pictures. Vuetify component-based and Bootstrap CSS (Cascading style sheet) framework is used for front-end which help to write clean code. When the user clicks on the displayed pictures on the application s/he gets a full-width picture with a pop-up dialog window.

Second functionality for evaluation is when the application user intends to send an email to fill-up the form for the required fields as there is form validation on the front-end. when the form validated with required fields send button get activated and user can click on it, after click to send button all the field values are erased so that send button will become disable again and user can't click send button frequently which let the developer to control user action. Send button triggers the REST end-point of the back-end to send field values as HTML (Hypertext Markup Language) to the Sendgrid server via back-end, so that email can be sent through a verified account of Sendgrid. The email receiver account is supposed to be a company authorized employee who is responsible to get company email but in this case receiver account is the email field value typed on contact form for demonstration purposes. When the server-side Sendgrid library returns a successful message, the back-end redirects the success message to the front-end so that it can be displayed to the user as feedback.

Axios library is used for data transmission between backend and front-end via REST end-point, another technical point is asynchronous function is used for JavaScript as JavaScript is single thread so that it keeps waiting to get response when it sends request to back end. To prevent Cors (cross-origin resource sharing) error, Cors middleware is used as a wrapper of an application.

Lessons learned from the issued project are such as, the asynchronous function and its meaning in the JavaScript, how the data transmission is realized between back-end and front-end, the implementation of Api (Application Programming Interface). HTTP methods learned as well like POST, GET, PUT, PATCH, DELETE however only POST method is used for request on current project because of its more secure than GET method. Meaning of cors error and how to prevent it, to use GitHub effectively for documentation by learning markdown language for the Readme.md file. Drawing UML (unified modelling language) and architectural diagrams helped to build an efficient project by indicating components and its relationships. Heroku free account is used for deployment projects so deployment process is learned as well which contains the secret keys of Sendgrid and Clouinary.