

Dynamic metadata driven react form

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OBJECTIVE

Create a simple MERN stack application that creates a metadata-driven dynamic form using react. The metadata is stored in a mongo DB. Once someone submits the forms, the Mongo table is updated with those dynamic column names. Assume, that you are creating an application like Google Form (excluding the form creation part).

GOALS

1. Meta data driven JSON form to be fetched from backend service.
2. Display the form as received from backend service and make a post request to store the data with the dynamic fields.

TECH STACK

MERN STACK (MongoDB, Express Framework, ReactJS, NodeJS)

THIRD-PARTY PACKAGES

styled-components

axios

prop-types

concurrently

formik

yup

cors

express

mongoose

APPROACH

Creating multiple instances of different types of input handlers (text,select,checkbox,radiobutton,multiselect,textarea) into components, which when further combined to render the form using a Parent component making the others act as child component.

For handling the state of form, package - Formik is used and for schema validation, package - yup is used.

The frontend service runs on “http://MY_IP:3000” or “localhost:3000”

The backend service runs on “http://MY_IP:3001” or “localhost:3001”

App.js is the main file that is responsible for rendering the dynamic form content using custom component DynamicForm which accepts the JSON object for field information and onSubmit for handling prior of submission.

In App.js, changing “192.168.0.131” to your OWN_IP_ADDRESS is required in both getUrl and postUrl

getUrl is the URL to fetch the form information

postUrl is the URL to make a post request to backend service to send/save the form data into the database.

SAMPLE JSON

```
const formData = {

  formName:"Aspirant Form",

  formDescription: "This form is about basic information for aspirants.",

  data:[

    {

      id: "name",

      label: "Name",

      placeholder: "Enter full name",

      type: "text",

      validationType: "string",

      value: "",

      validations: [

        {

          type: "required",

          params: ["Name is required"],

        },

      ],

    },

    {

      id: "email",

      label: "Email",

      placeholder: "Enter email",
```

```
    type: "text",

    validationType: "string",

    value: "",

    validations: [

        {

            type: "required",

            params: ["E-mail is required"],

        },

    ],

},

{

    id: "fatherName",

    label: "Father's Name",

    placeholder: "Enter name",

    type: "text",

    validationType: "string",

    value: "",

},

{

    id: "motherName",

    label: "Mother's Name",

    placeholder: "Enter name",

    type: "text",

    validationType: "string",
```

```
        value: "",
    },
    {
        id: "gender",
        label: "Gender",
        placeholder: "Select Gender",
        type: "radio",
        options: ["Male", "Female", "Others"],
        value: "",
    },
    {
        id: "highQual",
        label: "Your highest qualification",
        placeholder: "Select Qualification",
        type: "select",
        validationType: "string",
        options: ["10", "12", "Under Graduate", "Post Graduate", ],
        value: "",
    },
    {
        id: "hobbies",
        label: "Select your hobbies",
        placeholder: "Select hobbies",
        type: "multiselect",
```

```
        value: "",

options: ["Football", "Coding", "Gaming", "Drawing", "Cricket", "Singing", "Eating", "Dancing", "Sleeping"]

    },

    {

        id: "aboutMe",

        label: "About Me",

        placeholder: "Write here",

        type: "textarea",

        validationType: "string",

        value: "",

    },

    {

        id: "agree",

        label: "Declaration",

        type: "checkbox",

        value: "",

        options: ["I agree that I have entered all details correctly."]

    },

    ]});

module.exports=formData;
```

App.js

```
import React, { useState, useEffect } from "react";

import axios from "axios";

import { formData } from "../components/formData";

import DynamicForm from "../components/form";

function App() {

  const getUrl="http://192.168.0.131:3001/formData";

  const postUrl="http://192.168.0.131:3001/formSubmit";

  const [form, setForm] = useState(formData);

  useEffect(() => {

    getFormData();

  }, []);

  const getFormData = () => {

    axios.get(getUrl).then((response) => {

      setForm(response.data);

      console.log("Data", form);

    });

  };

  const handleSubmit = (val) => {

    console.log("Values : ", val);

    axios.post(postUrl, val)

    .then(function (response) {

      console.log(response);

    })

  })
```

```
};

return (

  <div style={{ paddingLeft: 50 }}>

    <h1>{form.formName}</h1>

    <h2>{form.formDescription}</h2>

    <DynamicForm fields={form.data} onSubmit={handleSubmission} />

  </div>

);
}

export default App;
```