

Project 2 Manual

Introduction and Setup

This project deals with local storage, Linking, Brushing, Cut< Copy, Paste and such other additional features and functionalities, building up from Project 1.

To begin, I added another Database to my MongoDB cluster to add the collections of datasets with the schema we are following for the project which is:

```
{
  fileName: String,
  fileContent: {
    type: Object,
    properties: {
      title: String,
      data: {
        type: Array,
        items: {
          type: Object
        }
      }
    }
  }
},
}
```

So these were the 3 initial Dataset Collections that I loaded.

DATABASES: 1 COLLECTIONS: 3

+ Create Database

Search Namespaces

CS3744

Datasets

P2Datasets

items

CS3744.P2Datasets

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 1005B TOTAL DOCUMENTS: 3 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

Filter Type a query: { field: 'value' }

QUERY RESULTS: 1-3 OF 3

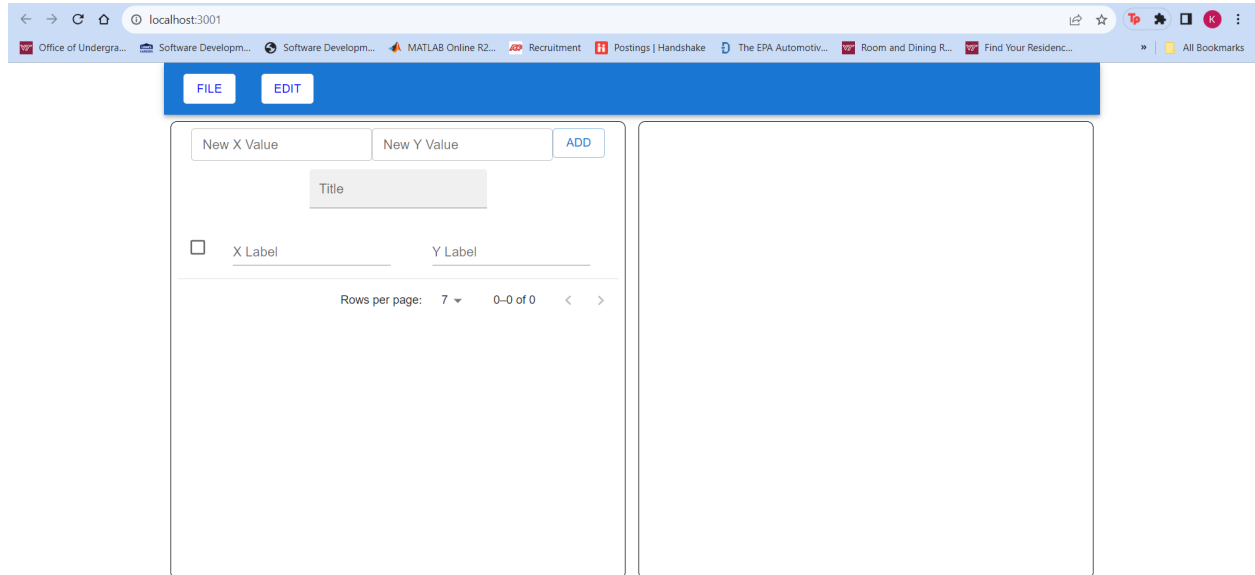
```
{
  "_id": ObjectId('656fa970e308f96df9cf2a95'),
  "fileName": "empty_dataset",
  "fileContent": {}
}
```

```
{
  "_id": ObjectId('656fa9ffe308f96df9cf2a97'),
  "fileName": "world_population_dataset",
  "fileContent": {}
}
```

```
{
  "_id": ObjectId('65715a89ec3612e71941b286'),
  "fileName": "grades_dataset",
  "fileContent": {}
}
```

To start the project first we need to start the backend and then frontend on another terminal by the command 'npm start'. Since backend will run on port 300, the frontend will run on 3001
Frontend- <http://localhost:3001/>

By default you will see this page:



The screenshot shows a web browser at localhost:3001. The application has a blue header bar with two buttons: 'FILE' and 'EDIT'. Below the header, there is a form with the following elements:

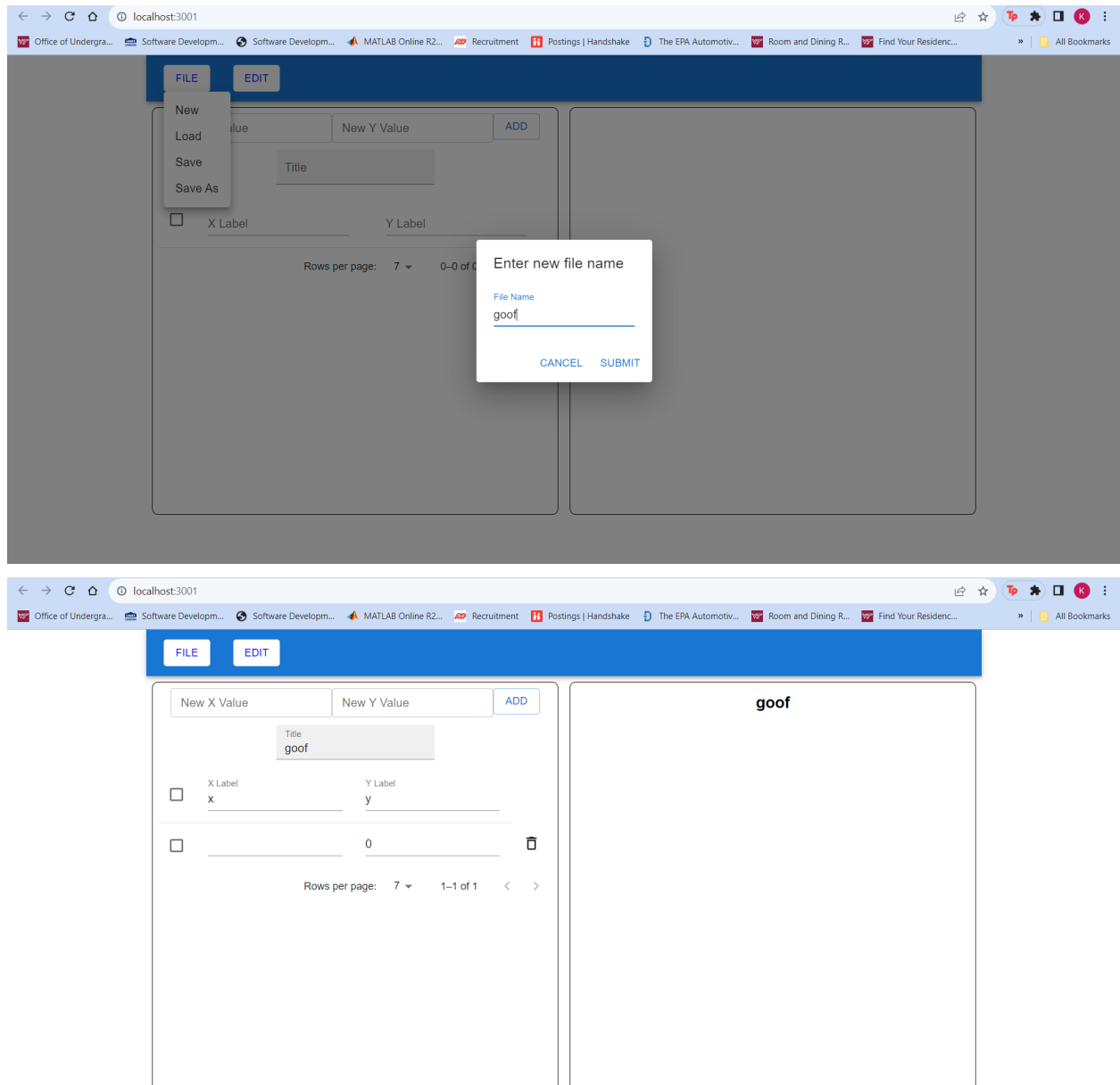
- Two input fields: 'New X Value' and 'New Y Value', followed by an 'ADD' button.
- A 'Title' input field.
- Two checkboxes: 'X Label' and 'Y Label', each followed by a text input field.
- At the bottom of the form, it displays 'Rows per page: 7' and '0-0 of 0' with navigation arrows.

To the right of the form is a large, empty rectangular area, likely intended for a plot or visualization.

Functionalities

File>New:

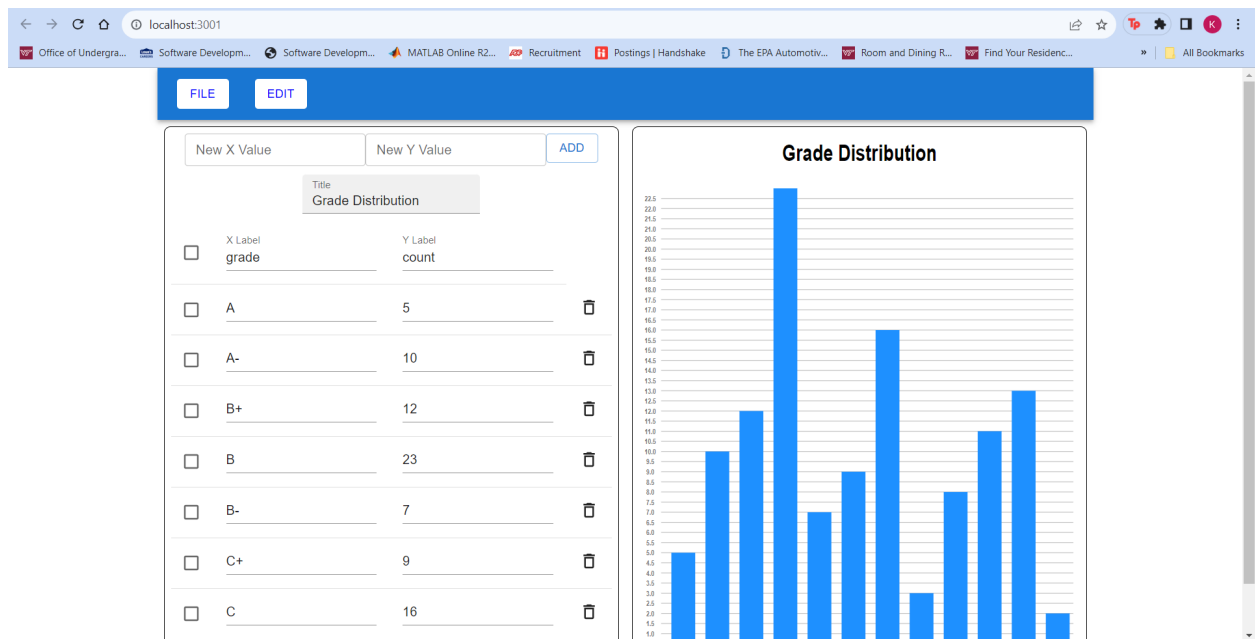
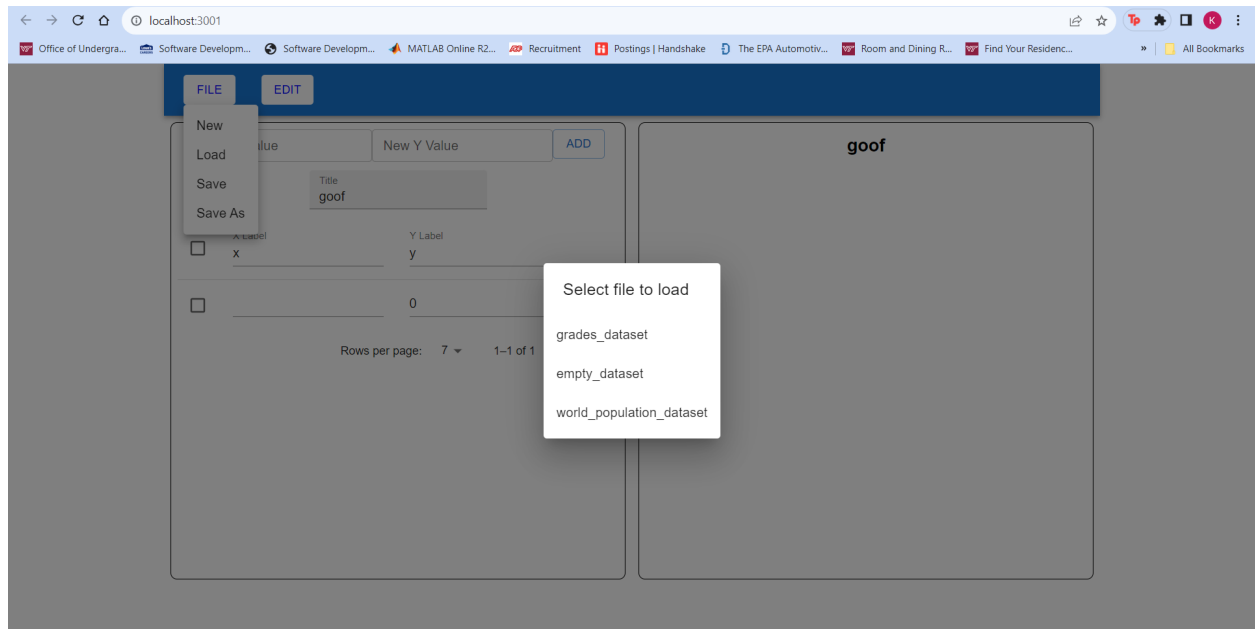
This is supposed to make a new empty file with the fileName the user enters in the prompt.



It won't save on the mongodb database until the user does "SaveAs".

File>Load

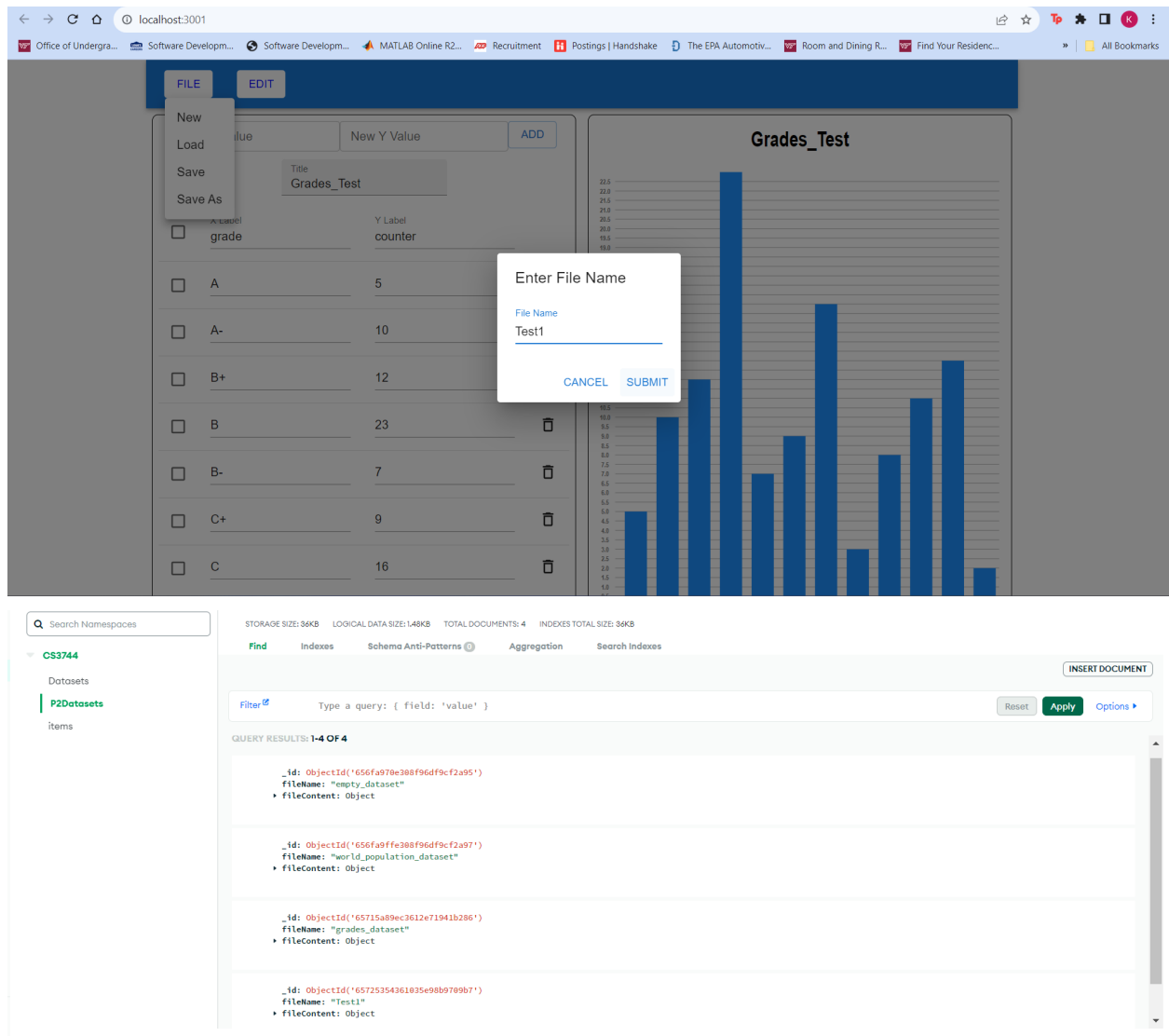
This is supposed to load or open a new file from the database collections. Here you will see the files saved in my database.



File>SaveAs:

This is supposed to create a new Dataset collection in the database with the current values updated/added in the editor. I Loaded Grades dataset and edited the y label and the title to

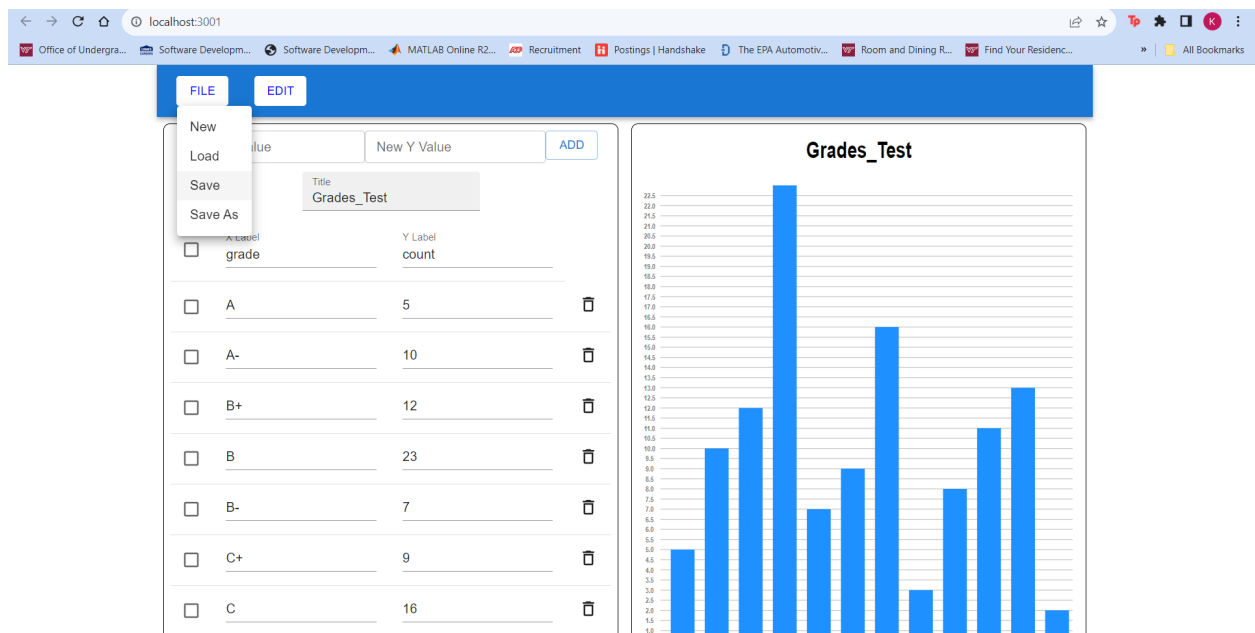
'Grades_Test'. This added the new and updated dataset to my database in mongodb.



```
_id: ObjectId('65725354361035e98b9709b7')
fileName: "Test1"
▼ fileContent: Object
  title: "Grades_Test"
  ▼ data: Array (12)
    ▼ 0: Object
      grade: "A"
      counter: 5
    ▶ 1: Object
    ▶ 2: Object
    ▶ 3: Object
    ▶ 4: Object
    ▶ 5: Object
    ▶ 6: Object
```

File>Save:

This is supposed to overwrite the database file open right now, with the edits made by the user. So to test, now the file that I just saved as, 'Test1', if I edit the y label again to count, it will overwrite Test1 with it.

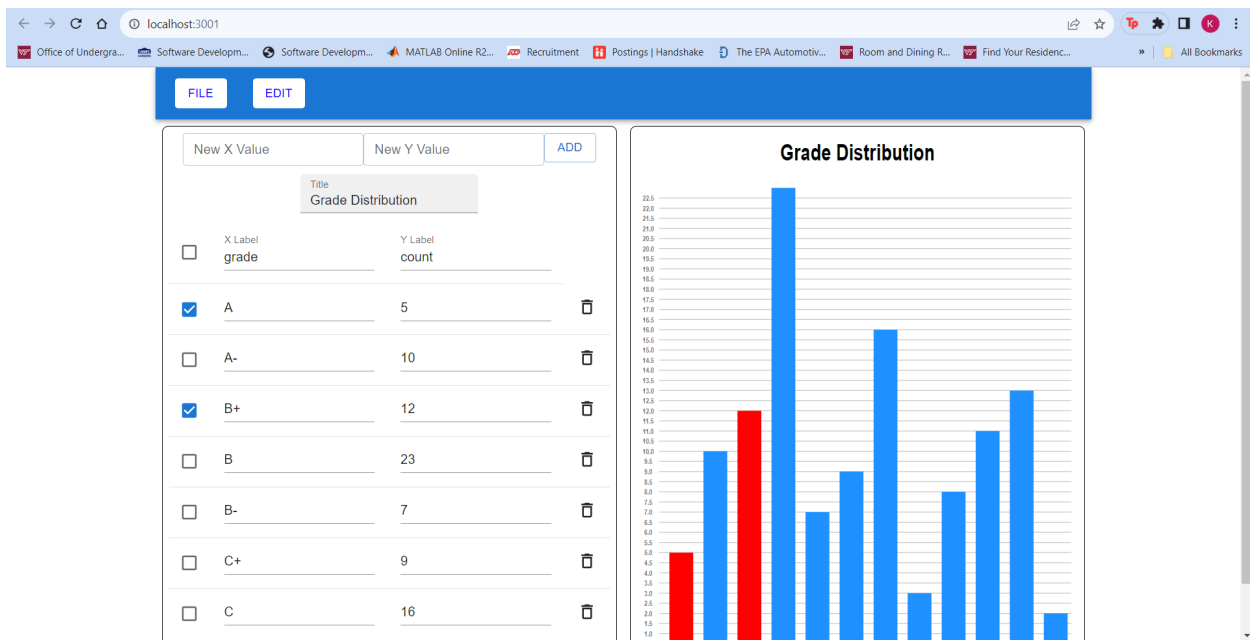


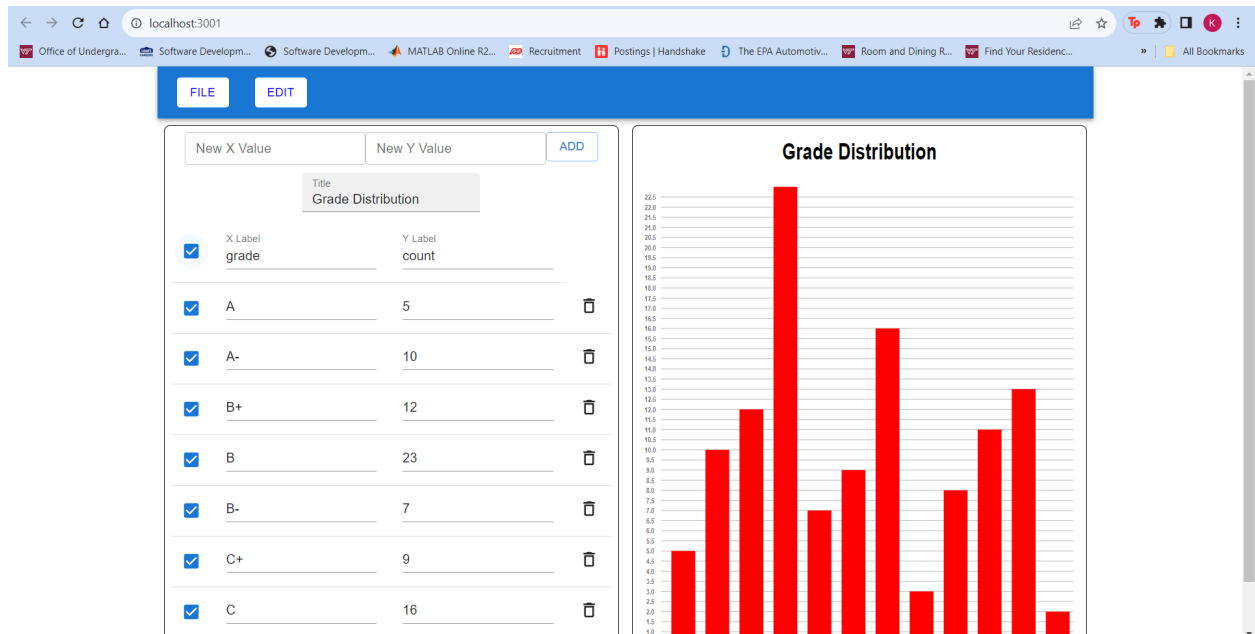
```
_id: ObjectId('6515a89ec3612e1941b286')
fileName: "grades_dataset"
▶ fileContent: Object

▶ _id: ObjectId('65725354361035e98b9709b7')
fileName: "Test1"
▼ fileContent: Object
  title: "Grades_Test"
  ▼ data: Array (12)
    ▼ 0: Object
      grade: "A"
      count: 5
    ▶ 1: Object
    ▶ 2: Object
    ▶ 3: Object
    ▶ 4: Object
    ▶ 5: Object
    ▶ 6: Object
    ▶ 7: Object
    ▶ 8: Object
    ▶ 9: Object
    ▶ 10: Object
    ▶ 11: Object
```

Linking and Brushing:

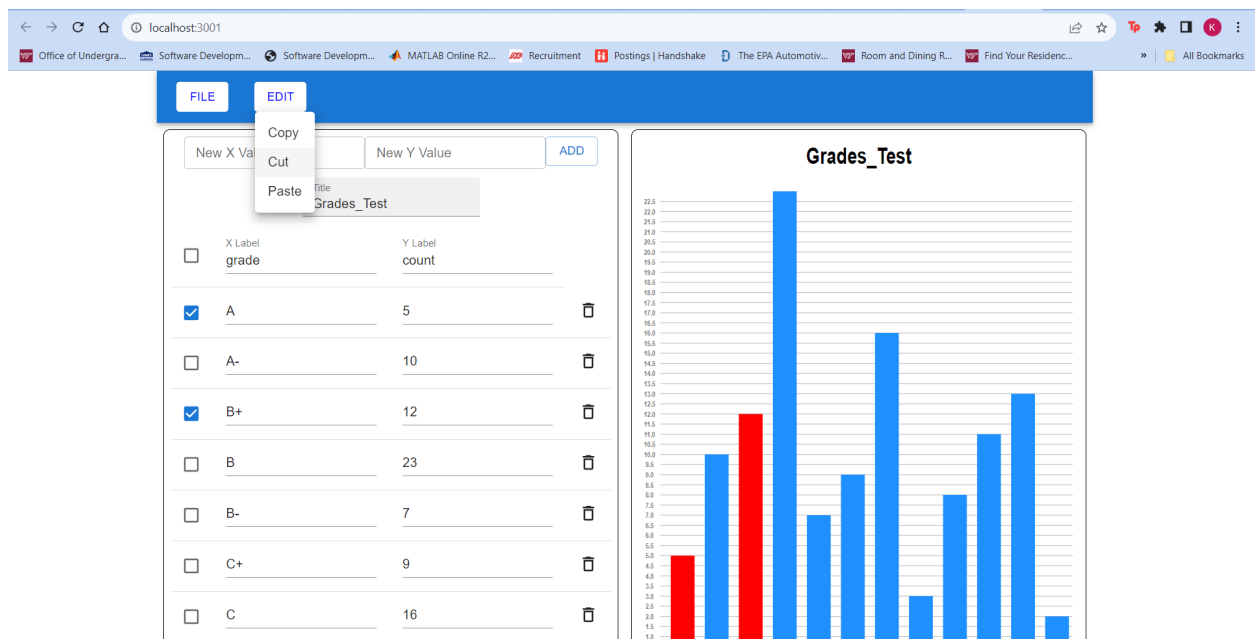
Users can select the row(s) of data on the editor by checking the box(es), and the corresponding bar(s) will get selected in red too. Vice-versa, one can click on the bar(s) to select them, and the corresponding row(s) of data will get selected too. This will be useful for other Edit functionalities, elaborated and shown below.



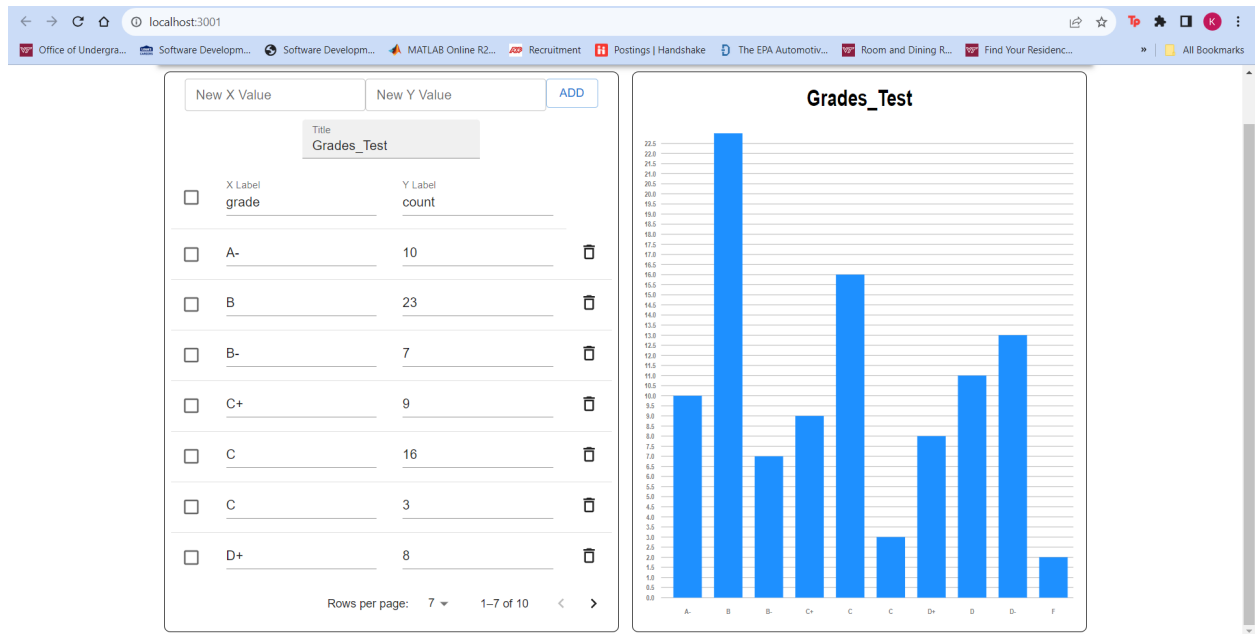


Edit>Cut and Edit>Paste:

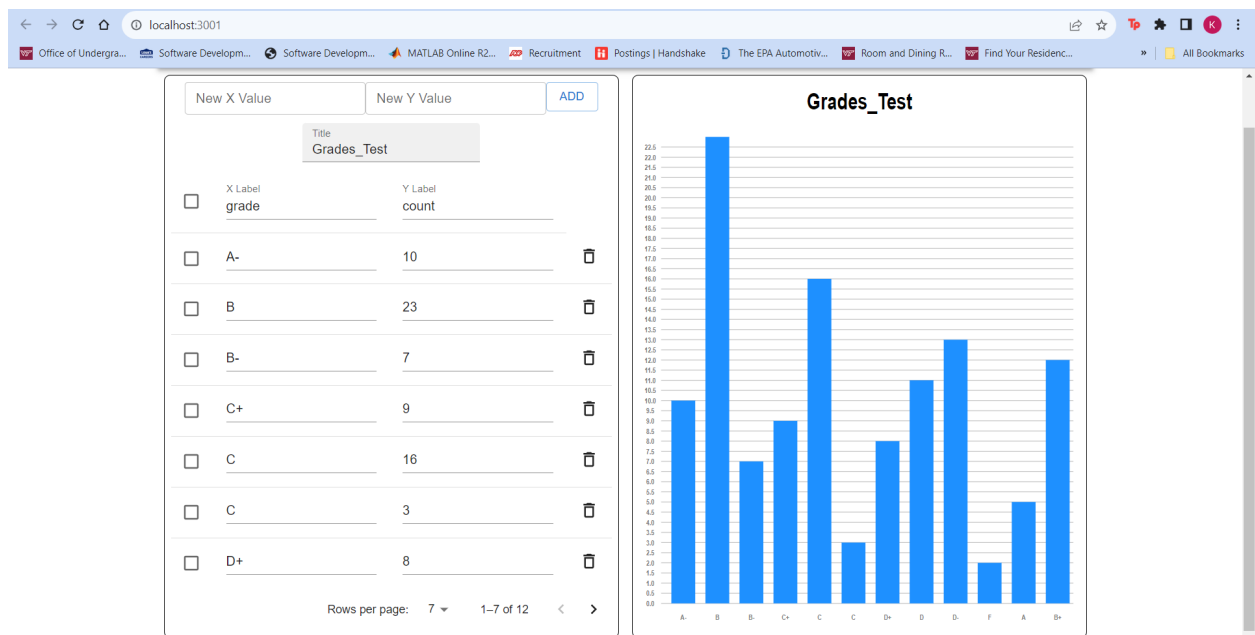
To test this, I will select two rows, and then cut them, when pasted, they will paste to the end of the dataset.



A and B+ are cut below:

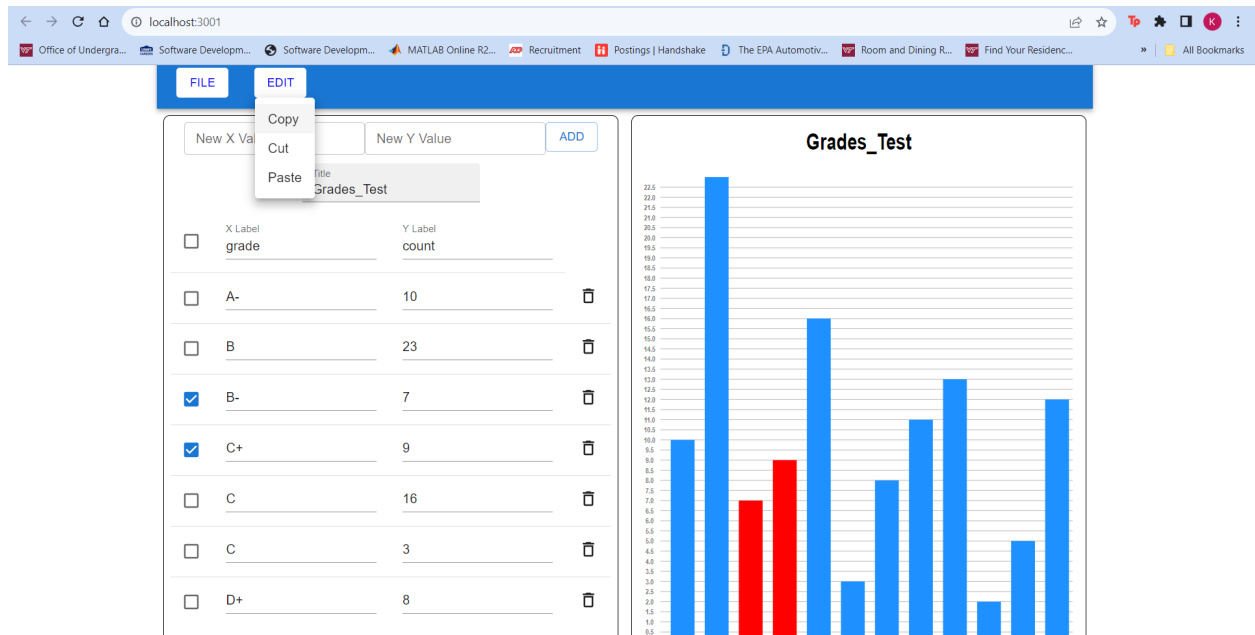


Now when pasted:

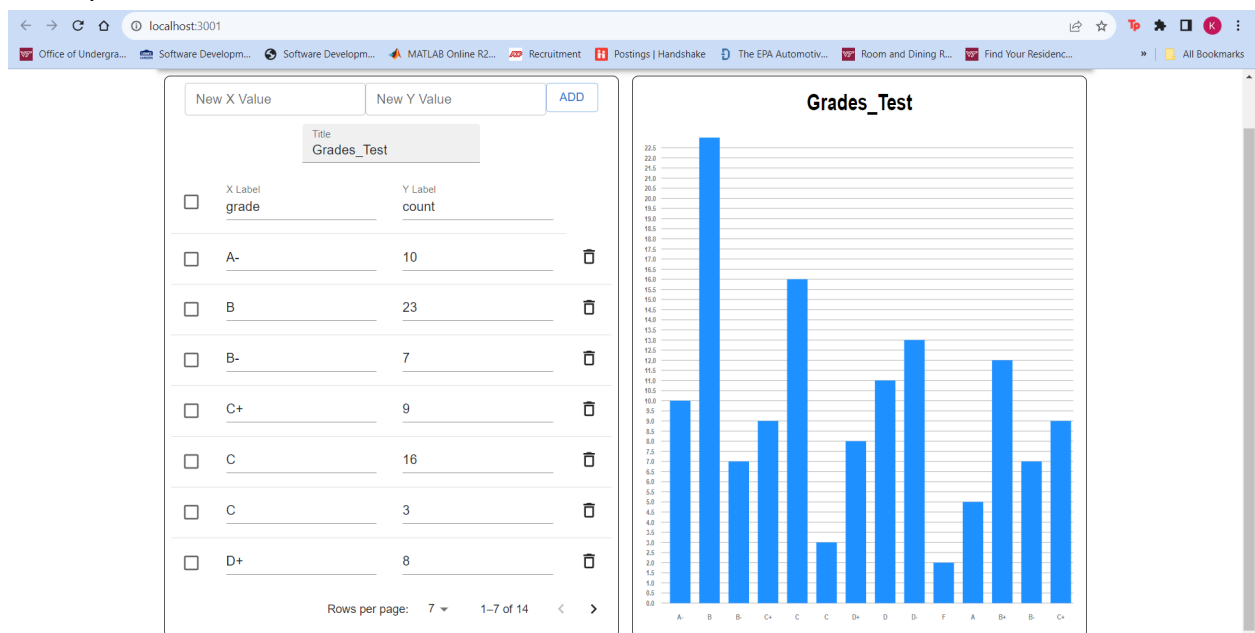


Edit>Copy and Edit>Paste:

I will now select other two, and paste them:



When pasted:



Limitations

- When using SaveAs, you cannot save the FileName starting with letters : S, N or L. This is a consequence of default key accelerators for New (N), Load (L), and Save/Save As (S) that can be disabled to avoid this issue.
- Selecting everything and cutting, would crash the page
- On the default page, you cannot enter any title or labels, this issue persisted and came from the solution/starter files provided. It is because of setting values to null on default.
- When dealing with a new file, save does not save the file in the database, until you do saveAs. This should be an easy fix to implement in the future by adding a check and adding SaveAs functionality to Save if the file is not already saved, but has been avoided right now to avoid any consequent complications.