Sprint-5 Artifact

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Feature: (analytics to implement)
- The average trading rates of a crypto during a given week/month/year.
- The ratio of volume to a market cap of a crypto coin from a given month.
- The most popular crypto trading for a given day of the week/month/year.

User test case: (for testing the analytics)
- **Feature 1 Test Cases:** As a user, I need to be able to click on a button to find the average trading rates of a crypto during a given week/month/year.
  - **Test case 1:** As a user, in the crypto data page, there is a drop down option button to select which crypto data you want to look at.
    Correct Output: The website will display an option button to display the different kinds of coins.
  - **Test case 2:** As a user, I search for a crypto name while selecting a given week/month/year.
    Correct Output: The website sends a search request to the backend for the given week/month/year that was entered for a certain crypto.
  - **Test case 3:** As a user, I click on a given option for finding the average trading rates of an already selected crypto name and week/month/year.
    Correct Output: The website will display an option button to display the average trading rates of a crypto during a given week/month/year in text, and display graphs or charts.
- **Feature 2 Test Cases:** As a user, I need to be able to click on a button to find the ratio of volume to a market cap of a crypto coin from a given month.
  - **Test case 1:** As a user, in the crypto data page, there is a drop down option button to select which crypto data you want to look at.
    Correct Output: The website will display an option button to display the different kinds of coins.
  - **Test case 2:** As a user, I click on an option button which will allow me to select volume ratio to analyze further data.
    Correct Output: The website should send a request to the backend to retrieve data about the ratio of volume of a certain coin with the given month.

- ○ **Test case 3:** As a user, I click on a given option for finding the ratio of volume to a market cap of a crypto coin from a given week/month/year.
  Correct Output: The website will display an option button to display the ratio of volume to a market cap of a crypto coin from a given week/month/year in text, and display graphs or charts.
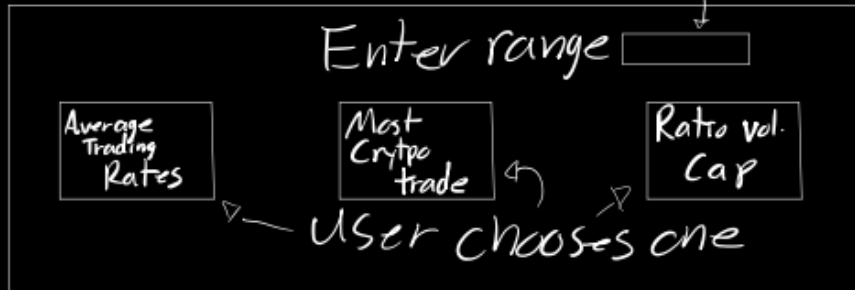
- **Feature 3 Test Cases:** As a user, I need to be able to click on a button to find the most popular crypto in terms of trade volume and market cap for a given day of the week/month/year.
    - ○ **Test case 1:** As a user, in the crypto data page, there is a drop down option button to select which crypto data you want to look at.
      Correct Output: The website will display an option button to display the different kinds of coins.
    - ○ **Test case 2:** As a user, I click on the search bar to search the entry that I enter for the given days/months/years.
      Correct Output: The website sends a search request to the backend for the given day,month and year that were accurate and corresponds with the input that was entered.
    - ○ **Test case 3:** As a user, in the crypto data page, there is an option button to see the top performing crypto volume with the entry of a given month.
      Correct Output: The website will display an option button to display the top performing crypto volume of a coin with the entry of a given month with a chart to show how much it outperformed other well performing coins. It will now send the information to the backend, where the correctness of the information will be checked.

GUI design: (for testing the analytics)
- ● (check the next page)

Option   Range will
                              be entered

Enter range [_____]

┌──────────┐   ┌──────────┐   ┌──────────┐
│ Average │   │ Most   │   │ Ratio vol.│
│ Trading │   │ Crytpo   │   │ Cap   │
│ Rates   │   │ trade   │   │   │
└──────────┘   └──────────┘   └──────────┘
                  User chooses one

User Choosing trade
                    ⇓

┌───┐
│ The average for month/day/week   │
│   │
│   "Printed value"   │
│   │
└───┘

┌───┐
│   ratio of Volume   │
│   │
│   "shown volume"   │
│   │
└───┘

graph will
display for
all

Done list of last sprint:
- Front End work: Daniel, Giovanni, Alexander and Ryan
- Back End work: Daniel, Amirreza,
- We were able to click on a button to find the average growth of a coin while entering a given month, with a drop down menu of whatever coin and given month they desired.
- Able to click on a button to find the average decline(loss) in price while entering a given month.
- Click on the search bar to search the entry that the user entered to ensure that it is the correct information being sent out.

ToDo task list for the next sprint:
- Add graphs/charts to the analytics for the features.
- Ensure correctness of each feature analytic implementation, such as the average trading rates of a crypto during a given week/month/year, the ratio of volume to a market cap of a crypto coin from a given month and the most popular crypto trading for a given day of the week/month/year.
- Front end, develop the necessary drop down menus / buttons for the new information.