Technical Researcher Task

Task 1: Programmatically list the top 10 NFTs/Collections based on a metric(s) that you think is important. As an example you may use the OpenSea Seaport Ethereum subgraph as a data source.

For each NFT/Collection list its
a. Contract address
b. Name and/or Symbol
c. Metric(s) value

Response:
For this task, I have used the subgraph data source to get the data. Here is my query to fetch the data.

```
{
  marketplaces(first: 1) {
    id
    name
    slug
    network
  }
  collections(first: 10, orderBy: cumulativeTradeVolumeETH, orderDirection: desc) {
    id
    name
    symbol
    cumulativeTradeVolumeETH
  }
}
```

Why cumulativeTradeVolumeETH is selected as an metric:
It's important to consider the market volume of the NFT industry. From January 2022 to September 2022, NFT trading volume collapsed by 97 per cent, from $17 billion in value to just $466 million, according to data provided by Bitay. The rise or fall of this number is heavily dependent on the type of NFTs being purchased regularly. The trading volume is an important factor to take into account if you want to buy an NFT and makes the collection important. The Cumulative trading volume of NFT provides information regarding the total trades and it must increase with time.

Output:


```
{
  "data": {
```

```
"marketplaces": [
  {
    "id": "0x00000000006c3852cbef3e08e8df289169ede581",
    "name": "Seaport",
    "slug": "seaport",
    "network": "MAINNET"
  }
],
"collections": [
  {
    "id": "0xbc4ca0eda7647a8ab7c2061c2e118a18a936f13d",
    "name": "BoredApeYachtClub",
    "symbol": "BAYC",
    "cumulativeTradeVolumeETH": "101830.17427205754760402"
  },
  {
    "id": "0x34d85c9cdeb23fa97cb08333b511ac86e1c4e258",
    "name": "Otherdeed",
    "symbol": "OTHR",
    "cumulativeTradeVolumeETH": "70677.883147420768348249"
  },
  {
    "id": "0x60e4d786628fea6478f785a6d7e704777c86a7c6",
    "name": "MutantApeYachtClub",
    "symbol": "MAYC",
    "cumulativeTradeVolumeETH": "66195.989523142488520622"
  },
  {
    "id": "0xa7d8d9ef8d8ce8992df33d8b8cf4aebabd5bd270",
    "name": "Art Blocks",
    "symbol": "BLOCKS",
    "cumulativeTradeVolumeETH": "47325.20700038959181923"
  },
  {
    "id": "0x57f1887a8bf19b14fc0df6fd9b2acc9af147ea85",
    "name": null,
    "symbol": null,
    "cumulativeTradeVolumeETH": "47140.134474603255495584"
  },
  {
    "id": "0x49cf6f5d44e70224e2e23fdcdd2c053f30ada28b",
    "name": "CloneX",
    "symbol": "CloneX",
    "cumulativeTradeVolumeETH": "35114.518855453265447664"
  },
  {
    "id": "0x23581767a106ae21c074b2276d25e5c3e136a68b",
    "name": "Moonbirds",
    "symbol": "MOONBIRD",
```

```
      "cumulativeTradeVolumeETH": "28187.966086798711108945"
    },
    {
      "id": "0xed5af388653567af2f388e6224dc7c4b3241c544",
      "name": "Azuki",
      "symbol": "AZUKI",
      "cumulativeTradeVolumeETH": "24777.983188276160388241"
    },
    {
      "id": "0x8a90cab2b38dba80c64b7734e58ee1db38b8992e",
      "name": "Doodles",
      "symbol": "DOODLE",
      "cumulativeTradeVolumeETH": "20999.754968953444444336"
    },
    {
      "id": "0x495f947276749ce646f68ac8c248420045cb7b5e",
      "name": "OpenSea Shared Storefront",
      "symbol": "OPENSTORE",
      "cumulativeTradeVolumeETH": "20583.074927913831506732"
    }
  ]
}
```


Task2: In your preferred programming language, write a program that outputs a chart of the last 30 days' price action of the closing price for BTCUSDT using the Binance API. You may use any package/lib you want to generate the chart.

> **If you have time:** Plot the trading volume for the same period of time in the same chart on a second Y-axis.

Response:

I have used JS to implement this task and here is the link to the github repo for code and output.I am fetching data from Binance API and using apex charts to plot data. The output of the task is shown in the image below. On x-axis, it shows the dates from Dec 20, 2022 to Jan 18, 2023. On the primary y-axis, closing price is plotted along with trading volume on the secondary y-axis. The closing price of the pair started increasing before the mid of jan. The same data is also shown in tabular form below the graph.

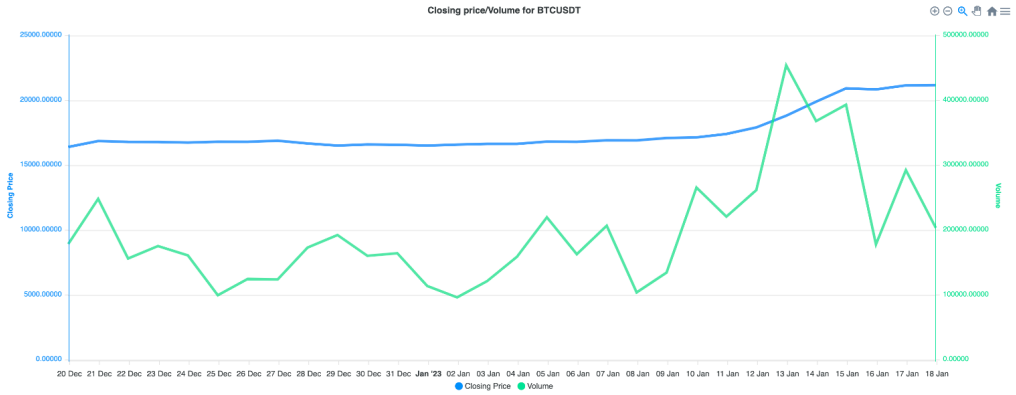
Closing Price Representation

Line

Volume Representation

Line

Apply



#	Closing Price	Volume	Date
1	16438.88000000	179094.28305000	20/12/2022
2	16895.56000000	248808.92324000	21/12/2022
3	16824.67000000	156810.96362000	22/12/2022
4	16821.43000000	176044.27235000	23/12/2022
5	16778.50000000	161612.00947000	24/12/2022
6	16836.12000000	100224.29096000	25/12/2022
7	16832.11000000	125441.07202000	26/12/2022
8	16919.39000000	124564.00656000	27/12/2022
9	16706.36000000	173749.58616000	28/12/2022
10	16547.31000000	193037.56577000	29/12/2022
11	16633.47000000	160998.47158000	30/12/2022
12	16607.48000000	164916.31174000	31/12/2022
13	16542.40000000	114490.42864000	01/01/2023
14	16616.75000000	96925.41374000	02/01/2023
15	16672.87000000	121888.57191000	03/01/2023
16	16675.18000000	159541.53733000	04/01/2023
17	16850.36000000	220362.18862000	05/01/2023
18	16831.85000000	163473.56641000	06/01/2023
19	16950.65000000	207401.28415000	07/01/2023
20	16943.57000000	104526.56880000	08/01/2023
21	17127.83000000	135155.89695000	09/01/2023
22	17178.26000000	266211.52723000	10/01/2023
23	17440.66000000	221382.42581000	11/01/2023
24	17943.26000000	262221.60653000	12/01/2023
25	18846.62000000	454568.32178000	13/01/2023
26	19930.01000000	368615.87823000	14/01/2023
27	20954.92000000	393913.74951000	15/01/2023
28	20871.50000000	178542.22549000	16/01/2023
29	21185.65000000	293078.08262000	17/01/2023
30	21199.73000000	204159.60254000	18/01/2023