

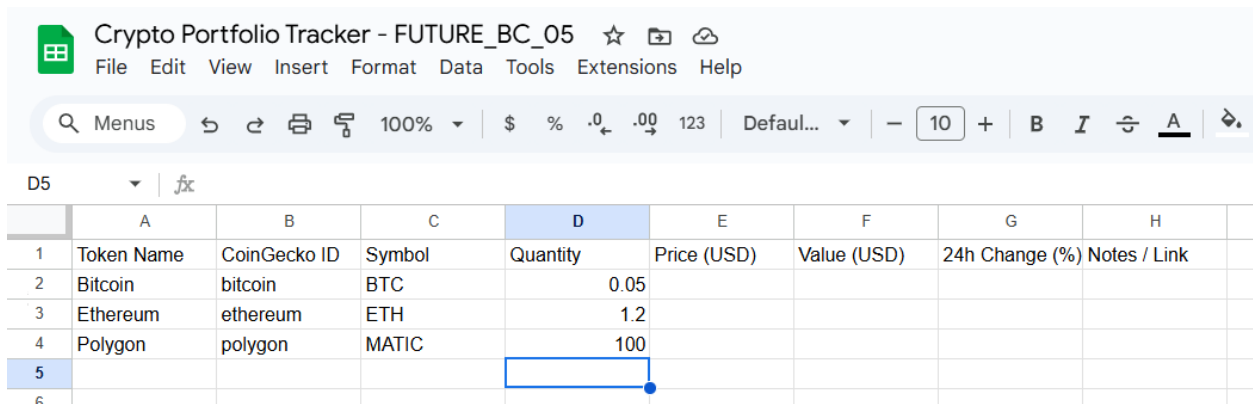
## Task 5

**Overview:** Learned about APIs, Google Apps Script, and spreadsheet automation.

Studied how to fetch real-time crypto prices from CoinGecko API, process JSON responses, and auto-calculate portfolio value in Google Sheets.

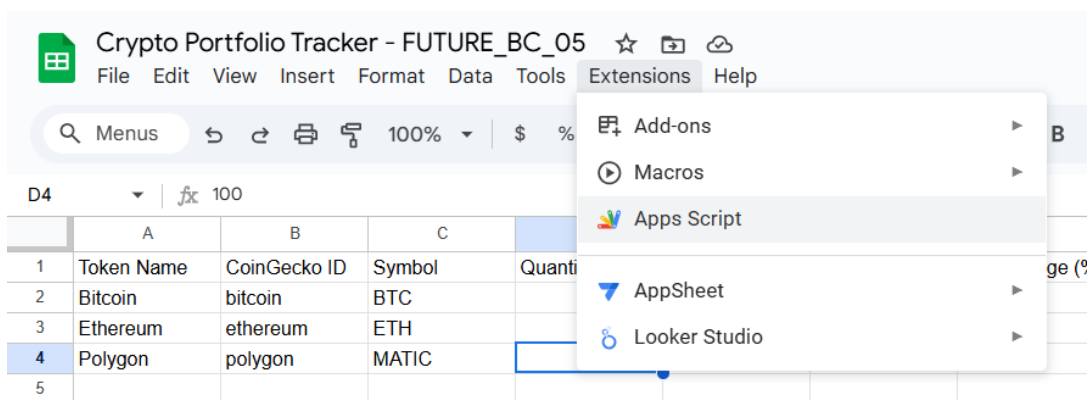
### Steps:

1. Create a google sheet with name Crypto Portfolio Tracker – FUTURE\_BC\_05.



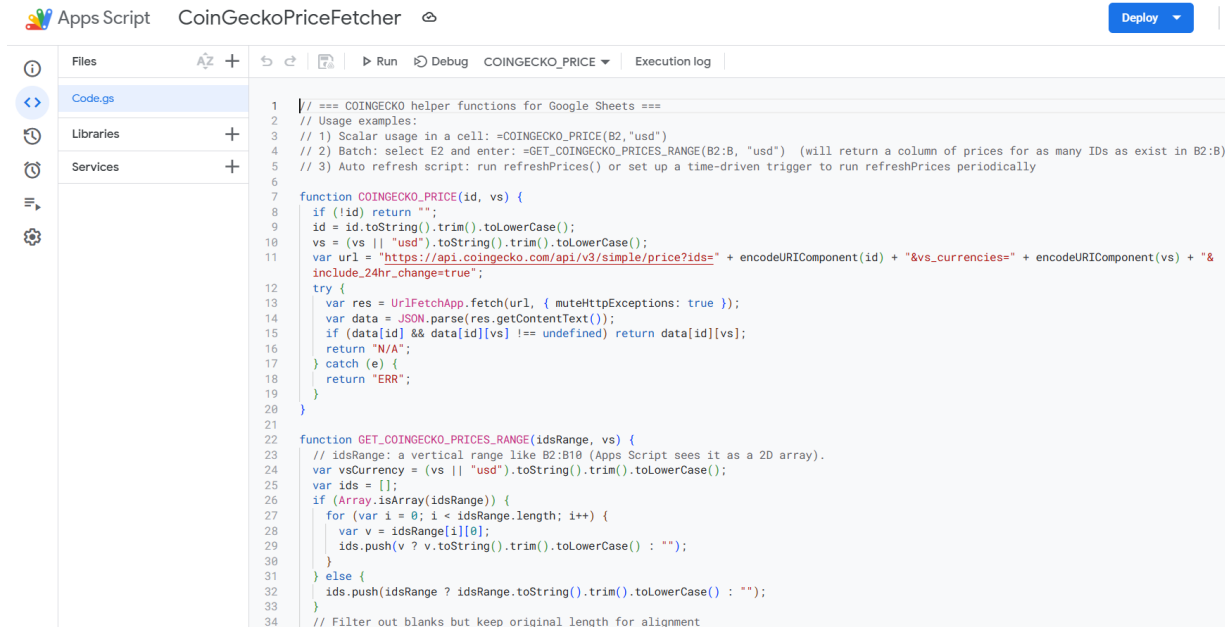
	A	B	C	D	E	F	G	H
1	Token Name	CoinGecko ID	Symbol	Quantity	Price (USD)	Value (USD)	24h Change (%)	Notes / Link
2	Bitcoin	bitcoin	BTC	0.05				
3	Ethereum	ethereum	ETH	1.2				
4	Polygon	polygon	MATIC	100				
5								
6								

2. Click on Extensions -> Apps Script.



	A	B	C	D	E	F	G	H
1	Token Name	CoinGecko ID	Symbol	Quantity	Price (USD)	Value (USD)	24h Change (%)	Notes / Link
2	Bitcoin	bitcoin	BTC					
3	Ethereum	ethereum	ETH					
4	Polygon	polygon	MATIC					
5								

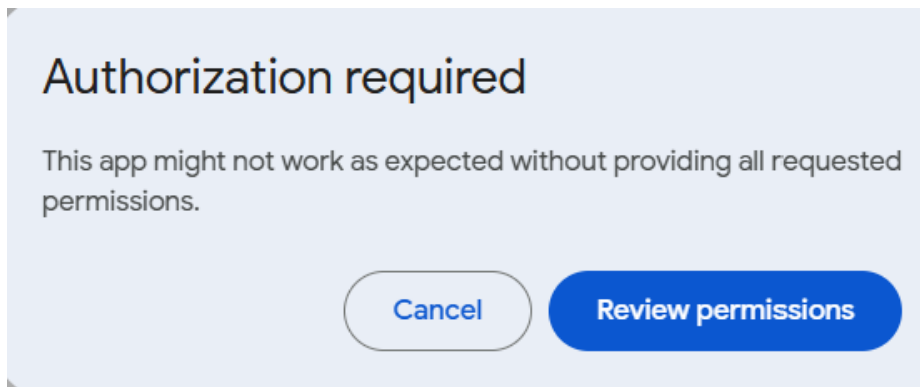
3. Write script to fetch price of cryptocurrencies.
4. Click on Run to run the code.



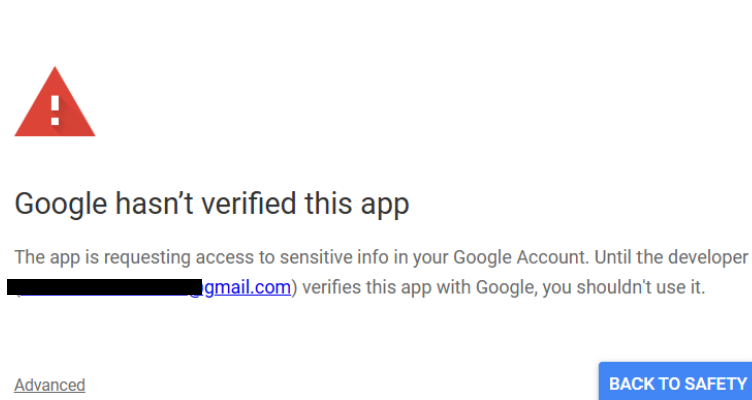
The screenshot shows the Google Apps Script editor interface. At the top, it says 'Apps Script' and 'CoinGeckoPriceFetcher'. There is a 'Deploy' button on the right. On the left, there is a sidebar with 'Files', 'Code.gs', 'Libraries', and 'Services'. The main area displays the following JavaScript code:

```
1 // == COINGECKO helper functions for Google Sheets ==
2 // Usage examples:
3 // 1) Scalar usage in a cell: =COINGECKO_PRICE(B2,"usd")
4 // 2) Batch: select E2 and enter: =GET_COINGECKO_PRICES_RANGE(B2:B, "usd") (will return a column of prices for as many IDs as exist in B2:B)
5 // 3) Auto refresh script: run refreshPrices() or set up a time-driven trigger to run refreshPrices periodically
6
7 function COINGECKO_PRICE(id, vs) {
8   if (!id) return "";
9   id = id.toString().trim().toLowerCase();
10  vs = (vs || "usd").toString().trim().toLowerCase();
11  var url = "https://api.coingecko.com/api/v3/simple/price?ids=" + encodeURIComponent(id) + "&vs_currencies=" + encodeURIComponent(vs) + "&include_24hr_change=true";
12  try {
13    var res = UrlFetchApp.fetch(url, { muteHttpExceptions: true });
14    var data = JSON.parse(res.getContentText());
15    if (data[id] && data[id][vs] !== undefined) return data[id][vs];
16    return "N/A";
17  } catch (e) {
18    return "ERR";
19  }
20 }
21
22 function GET_COINGECKO_PRICES_RANGE(idsRange, vs) {
23   // idsRange: a vertical range like B2:B10 (Apps Script sees it as a 2D array).
24   var vsCurrency = (vs || "usd").toString().trim().toLowerCase();
25   var ids = [];
26   if (Array.isArray(idsRange)) {
27     for (var i = 0; i < idsRange.length; i++) {
28       var v = idsRange[i][0];
29       ids.push(v ? v.toString().trim().toLowerCase() : "");
30     }
31   } else {
32     ids.push(idsRange ? idsRange.toString().trim().toLowerCase() : "");
33   }
34   // Filter out blanks but keep original length for alignment
```

5. Authorize your google account and review its permission.



6. Click on Advanced and then continue.



7. It will start fetching price of cryptocurrency.

F6		fx =SUM(F2:F4)					
	A	B	C	D	E	F	G
1	Token Name	CoinGecko ID	Symbol	Quantity	Price (USD)	Value (USD)	Notes / Link
2	Bitcoin	bitcoin	BTC	0.05	N/A		
3	Ethereum	ethereum	ETH	1.2	\$4,487.03	\$5,384.44	
4	Polygon	polygon	MATIC	100	N/A		
5							
6					Total Portfolio Value:	5384.436	
7							

**Conclusion:** This task improved my skills in API integration and automation.

I built a fully functional, shareable crypto tracker that updates prices automatically, which is a valuable tool for anyone monitoring their digital assets.