WEB)) 61776 - טכנולוגיות אינטרנט מתקדמות

Group: A7

MoreThanWallet - www.morethanwallet.com/app/892

Github - https://www.github.com/mahersalman/Web_61776

Topic:

Personal Crypto Portfolio Tracker: an application where users can monitor their personal cryptocurrency portfolio. Integrate real-time price updates, historical performance analysis, and provide insights on the best-performing assets for user wallet.

תז	שם חבר/ת הצוות
207606872	מאהר סלמאן
	System Engineer
212263289	נור עמורי
314656919	אסד ספורי
323004895	עומר סאלח
212016125	עבד אללטיף זועבי

תקציר הפרויקט:

הפרויקט מתמקד בפיתוח מערכת לניהול ושקיפות של נכסי קרפטו עבור משתמשים פרטיים. המערכת מציעה מגוון פונקציות עיקריות המיועדות לשפר את חוויית המשתמש ולהבטיח ניהול אפקטיבי של הנכסים הדיגיטליים.

פונקציות עיקריות של האתר:

1. משתמשי פרטיים:

חיבור ארנק קריפטו: נתנו שתי אפשרות לחיבור לאתר. דרך חיבור ישיר
 של ארנק קיים בעזרת walletConnect Api והשני חיפוש לפי כתובת ארנק.

: תומך בשתי רשתות 🏻 💍

- Ethereum .1
- Binance Smart Chain .2
- צפייה בנתונים מרכזיים: המערכת מספקת תצוגה מפורטת של התיק
 הנוכחי עם כל המבעות שקיימים בארנק וניתוחים של ביצועי הנכסים וגם
 מציגה סכום כולל בדולאר עבור הראנק.
- צפייה בהיסטוריית עסקאות :המשתמשים יכולים לעיין בהיסטוריה של כל העסקאות שביצעו.
- צפייה במטבעות עם הביצועים הטובים ביותר :המערכת נתנת אפשרות להצגת טבלה עם 10 המטבעות הקריפטו המובילים שנמצאים בארנק וגם את האפשרות לבחור פלטר לפי (יום\שבוע\חודש)

<u>Implementation - Key Technologies in the Project:</u>

Development Environment

VS Code and React.js

Styling

Tailwind CSS

Version Control

Git / GitHub

APIs

- CoinGecko: Fetch icons and real-time price data
- Ethplorer: Fetch wallet data such as tokens and transactions

Wallet Integration

• WalletConnect with Wagmi: Connect wallets to the website

מהנדס המערכת: מאהר סלמאן בעל רקע בתחום הקריפטו ובלוקציין, הוסמך לתפקיד זה בזכות ניסיונו. במהלך העבודה על הפרויקט, נוהל ממשק פעיל בין חברי הצוות באמצעות פלטפורמת zoom שבה חולקנו את העבודה למטלות בלתי תלויות אחת בשנייה, דבר שתרם לייעול התהליך. כל העדכונים שבוצעו הועלו ל GitHub, עם עדכון שוטף של חברי הצוות בכל שינוי.

בתהליך הקבצת הקוד, ננקטו צעדים קפדניים להבטחת איכות, כולל ביצוע בדיקות שוטפות ותיקון בעיות או באגים שהתגלו. כאשר הגיע הזמן לאיחוד הקוד, התכנסנו או ב zoom -או במכללה כדי לבצע את האיחוד בצורה חלקה ויעילה.

התקשורת המתמשכת ושיתוף הפעולה האפקטיבי בצוות תרמו להשלמת המשימות באופן מקצועי ומוצלח, תוך שמירה על איכות גבוהה בכל שלב.

משימות שהושלמו	משימות שהוקצו	שם חבר הצוות
All	Wallet connect ,	מאהר סלמאן
	fetch main data	
All	Transactions History	עומר סאלח
		System Engineer
All	Fetch wallet Assets ,	נור עמורי
	assets data .	
All	Best performing	אסד ספורי
	assets	
All	Use case diagram +	עבד אלטיף זועבי
	architecture design	

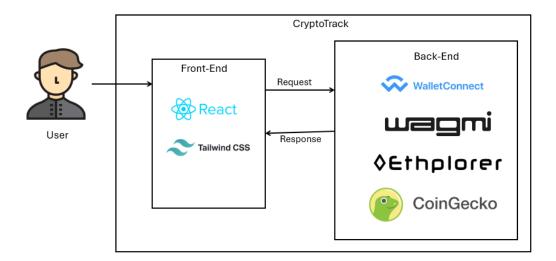
Names	Names Tasks	
Maher Salman	 Search for relevant	completed
Omar Saleh	Transactions HistoryTableFees Table	completed
Noor Amori	Assest TableSwitch Network (Eth,BNB)	completed
Asad Safori	Best performingTableDarkMode	completed
AbdAltef Zoabi	HomePage with connect options	completed

Requirements

<u>דרישות פונקציונליות</u>	
The system allows adding cryptocurrency holdings .	1
The system allows viewing token prices in real time .	2
The system allows viewing portfolio details and analytics.	3
The system allows viewing the best-performing assets.	4
The system allows viewing the wallet Transaction Histories.	5
The system allows Depositing and Withdraws assets.	6
The system allows to connect external wallet	7

	דרישות לא פונקציונליות	
1	The system shall fetch current prices of cryptocurrencies from a reliable external API (CoinGecko API).	Interoperability
2	The system shall support viewing historical price data over various time ranges (1 day, 1 week, 1 month, 1 year).	Usability
3	The System support multiple cryptocurrency networks (e.g., Bitcoin, Ethereum, BNB) to enable users to manage assets across different blockchain platforms.	Interoperability
4	Provide users with the ability to view detailed information for each transaction, including source address, destination address, network, amount, and fee, within the application interface	Usability
5	The user interface should be intuitive and easy to navigate for first-time users	Usability
6	The application must obtain user permission for each operation involving the wallet, including data retrieval and transactions.	Security

Architecture System:



Frond-End

- ReactJS: Create the user interface using ReactJS for structure,
 Tailwind for styling, and JavaScript for interactivity.
- Tailwind CSS: Utilize Tailwind CSS for quickly styling your UI components.

BackEnd - API

- CoinGecko API: Used to fetch real-time cryptocurrency data, including token icons and prices, which are displayed on the website to provide users with up-to-date market information.
- WalletConnect with wagmi: Integrates secure wallet connection functionality into the website, enabling users to connect their cryptocurrency wallets seamlessly and interact with decentralized applications.

 Ethplorer API: Utilized to retrieve detailed wallet data such as token balances and transaction histories, allowing users to view and manage their assets directly on the website.

Deployment:

Deployment with Vercel: The website is deployed using Vercel, ensuring a fast and reliable hosting solution with seamless integration for continuous deployment and easy updates.

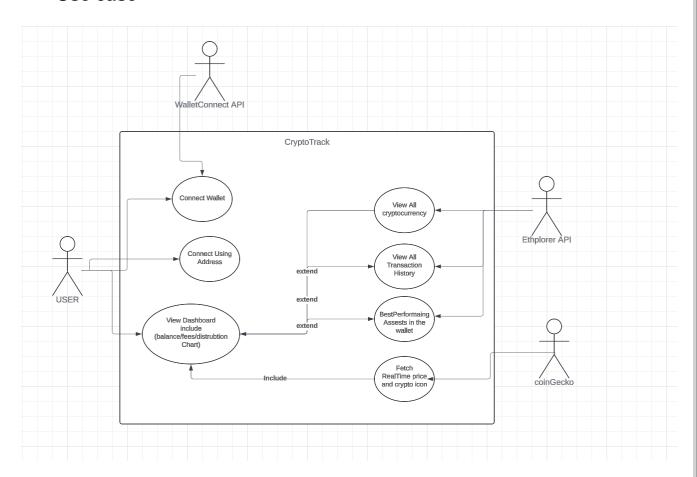
Project Files Sturcuture:

```
icon
App.jsx
                                                                    bnb.png
index.css
                                                                    eth.png
main.jsx
                                                                    Moon.svg
                                                                    Sun.svg
assets
    react.svg
                                                                    AppStyles.js
AssetsTableStyle.js
components
                                                                    BannerStyle.js
    AssetsTable.jsx
                                                                    BestPerformingTableStyle.js
    Banner.jsx
BestPerformingRow.jsx
                                                                    CarouselStyle.js
ChooseNetworkStyle.js
DisconnectButtonStyle.js
    BestPerformingTable.jsx
Carousel.jsx
                                                                    MainDataStyles.js
                                                                    NavBarStyle.js
SearchAddressStyle.js
    ChooseNetwork.jsx
    DisconnectBtn.jsx
                                                                    TabButtonsStyle.js
    DistributionChart.jsx
                                                                    TokenRowStyle.js
TransactionTableStyles.js
     MainData.jsx
    NavBar.jsx
                                                                    WalletAddressStyle.js
WalletConnectStyle.js
    SearchUsingAddress.jsx
     TabButtons.jsx
                                                                    WalletFeesStyle.js
    ThemeToggleButton.jsx
                                                              -utils
    TokenRow.jsx
                                                                    addressUtils.js
     TransactionTable.jsx
                                                                    bestperformingTableUtils.js
    WalletAddress.jsx
                                                                    carouselUtils.jsx
    WalletConnectComponent.jsx
                                                                    coinGecko.js
DistributionChartUtils.js
    WalletData.jsx
                                                                    feesUtils.js
mainDataUtils.js
    WalletFees.jsx
                                                                    transactionService.js
-config
    Web3ModalProvider.jsx
                                                                    transactionUtils.jsx
                                                                    urlUtils.js
walletUtils.js
```

Explain:

- · components folder include all react component
- config include walletconnect configuration
- Icon include icon used in the project
- styles include all tailwind css styles used in the project, and utiles include utilites and helper function.

Use case



תיק מתכנת

א. תיעוד והסבר של הפונקציות המרכזיות בקוד

App.jsx:

- The main component that serves as the entry point of the application:
 - This file sets up the layout and manages the state across the application. It includes routing, global state management, and renders the main structure of the site. It may also handle context providers, such as theme or authentication contexts, to maintain a consistent state across the app.

Main Components:

1. AssetsTable.jsx:

- Functionality: Displays a table of assets that include token names, amounts, 24h change, price in USD, and total value in USD. The data is fetched from external APIs and rendered in a user-friendly format.
- Styling: Integrates with AssetsTableStyle.js for applying specific styles related to layout, colors, and text formatting.

2. WalletConnectComponent.jsx:

- Functionality: Manages the wallet connection process using WalletConnect and the wagmi library. It handles user interactions for connecting and disconnecting the wallet and ensures that the connection state is maintained across the application.
- Features: Includes buttons for connecting/disconnecting, and shows the wallet address and network status.

3. ChooseNetwork.jsx:

- Functionality: Allows users to select between Ethereum and BNB networks, with appropriate icons representing each network. The component ensures that the selected network is stored and can be used for subsequent transactions or data fetching.
- Styling: Custom styles are applied to the dropdown and icons, ensuring they are visually appealing and user-friendly.

4. DistributionChart.jsx:

- Functionality: Utilizes the ECharts library to display a visual representation of token distribution data. It includes features like tooltips, labels, and responsiveness to window resizing.
- Purpose: Helps users quickly understand the distribution of their assets within their wallet.

5. TransactionTable.jsx:

- Functionality: Displays a list of transactions related to the connected wallet in a table format. The component handles pagination to ensure smooth navigation through a potentially large number of transactions.
- Styling: Integrates with TransactionTableStyle.js for styling the table rows, columns, and pagination controls.

6. NavBar.jsx:

- Functionality: Provides navigation across the app. Includes links to different sections such as Home, Assets, Transactions, etc.
- Features: Responsive design, dropdown menus, and integration with the app's routing system.

7. SearchUsingAddress.jsx:

- Functionality: Allows users to search for wallet data by entering an Ethereum or BNB wallet address. It validates the address and fetches the relevant data from APIs.
- Purpose: Enables users to view data for wallets other than the one currently connected.

8. WalletFees.jsx:

- Functionality: Displays detailed information about gas fees associated with transactions in the wallet. It aggregates data from multiple sources and presents it in a clear, concise manner.
- Styling: Custom styles are applied through WalletFeesStyle.js.

9. TabButtons.jsx:

- Functionality: Provides tabbed navigation within certain sections of the app, allowing users to switch between different views or datasets.
- Purpose: Enhances user experience by organizing related data into separate tabs.

10. SearchUsingAddress.jsx:

- Functionality: Enables the user to enter and search for Ethereum or BNB wallet addresses, displaying relevant data such as balances and transactions.
- Purpose: Useful for viewing and analyzing wallet information without needing to connect directly.

Styles:

The styles directory contains individual style files for each component. This
modular approach ensures that styles are isolated and can be easily managed or
updated without affecting other components. Tailwind CSS is used extensively for
rapid styling and to ensure the application is responsive across various screen
sizes.

Utilities:

1. walletUtils.js:

- Purpose: Contains functions related to wallet management, including connecting to different networks, validating wallet addresses, and handling wallet-related API requests.
- Usage: These functions are critical for ensuring that wallet connections are handled securely and correctly across the application. They also assist in maintaining the user's session and wallet state.

2. coinGecko.js:

- Purpose: Integrates with the CoinGecko API to fetch real-time cryptocurrency prices, market data, and token icons.
- Usage: Functions from this file are used to display accurate and up-to-date token data in various components like AssetsTable.jsx. The data retrieved from CoinGecko is crucial for providing users with financial information about their assets.

3. transactionService.js:

- Purpose: Manages the fetching, filtering, and formatting of transaction data from external APIs. This includes handling API requests, processing the returned data, and preparing it for display in components like TransactionTable.jsx.
- Usage: This utility ensures that transaction data is presented in a clear and organized manner, with features like pagination and sorting handled efficiently.

4. feesUtils.js:

- Purpose: Provides functions for calculating and formatting gas fees associated with transactions. It may include conversion tools for displaying fees in different currencies or aggregating fees over multiple transactions.
- Usage: Used in components like WalletFees.jsx to give users insight into the costs of their transactions, ensuring they have a clear understanding of their gas expenses.

5. urlUtils.js:

- Purpose: Contains utility functions for managing and constructing URLs, particularly for API requests. This may include creating URLs with query parameters or parsing URLs to extract necessary information.
- Usage: This utility simplifies the process of making API requests by ensuring that the correct URLs are constructed dynamically based on user inputs or application state.

6. addressUtils.js:

- Purpose: Focuses on validating Ethereum and BNB wallet addresses, ensuring they meet the required format before making any API requests.
- Usage: These functions are used throughout the application, especially in components like SearchUsingAddress.jsx, to verify that user-entered addresses are valid and can be safely used in API calls.

7. bestperformingTableUtils.js:

- Purpose: Likely contains functions that assist with data processing and logic specific to the BestPerformingTable.jsx component, which displays topperforming assets.
- Usage: These utilities help to sort, filter, and format the asset data to highlight the best performers, ensuring the component displays the most relevant information.

8. carouselUtils.js:

- Purpose: Contains utility functions that support the Carousel.jsx component, handling logic related to the display and animation of carousel items.
- Usage: Helps in organizing and managing the content within the carousel, ensuring smooth transitions and proper display of items.

9. DistributionChartUtils.js:

- Purpose: Includes functions that support the DistributionChart.jsx component, likely handling data manipulation and configuration for the ECharts library.
- Usage: These utilities ensure that the token distribution data is processed correctly and visualized in an effective and informative manner.

10. mainDataUtils.js:

- Purpose: Provides utility functions to handle data processing and logic for the MainData.jsx component.
- Usage: These utilities might aggregate and format the primary data displayed in the main section of the application, ensuring that users see an accurate and comprehensive overview.

11. transactionUtils.js:

- Purpose: Contains helper functions specific to transactions, possibly extending the logic found in transactionService.js.
- Usage: These utilities assist in handling transaction data more granularly, possibly including additional filtering, sorting, or calculations needed for the TransactionTable.jsx.

12. walletConnectUtils.js:

- Purpose: Likely contains functions to assist with WalletConnect and wagmi integration in WalletConnectComponent.jsx.
- Usage: These utilities ensure smooth wallet connections and manage related events, like detecting connection status changes and handling disconnects.

ב. פירוט ה ,API, קישור ל ,DB וסביבות מיוחדות שהתקנתם

APIs:

• CoinGecko API:

- o **Usage**: Fetches real-time price data and icons for various cryptocurrencies.
- Integration: Used in components like AssetsTable.jsx and utility functions in coinGecko.js.

Ethplorer API:

- Usage: Retrieves wallet data, including tokens and transaction history, specifically for Ethereum-based addresses.
- Integration: Used in walletUtils.js and transactionService.js for displaying wallet information and transactions.

WalletConnect with wagmi:

- Usage: Facilitates the connection of Ethereum wallets to the application, allowing users to interact with decentralized applications (dApps).
- Integration: Managed within WalletConnectComponent.jsx for handling wallet connections and disconnections.

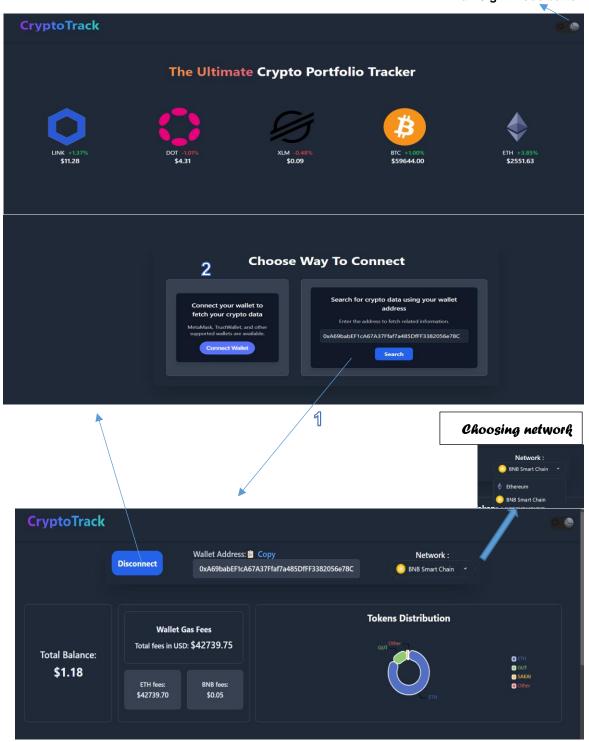
Special Environments:

- VS Code with React: Development environment using Visual Studio Code, focusing on React.js for front-end development.
- **Vercel**: Deployment environment for hosting the project, allowing for continuous integration and delivery.
- **Git**: Version control system used to manage the codebase, track changes, and collaborate with other developers.

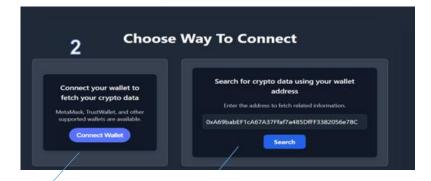
תיק משתמש

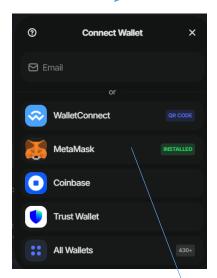
Home page

Dark\light mode button

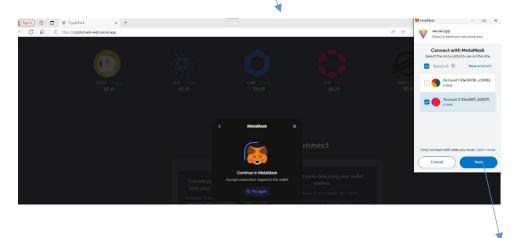


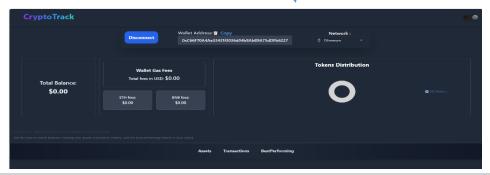
connect דרך 2 לעשות

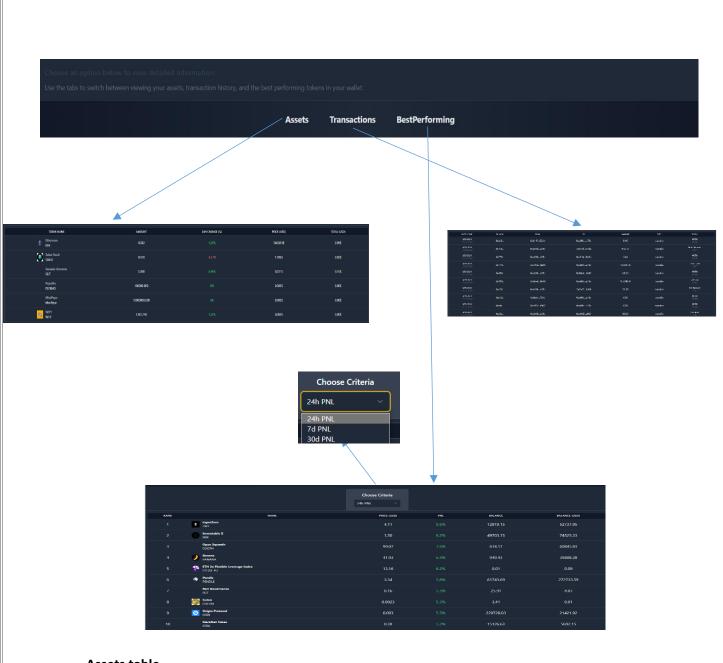




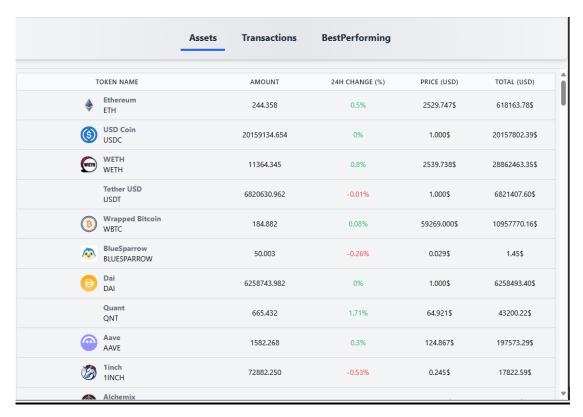
לבחור ולאשר את הארנק





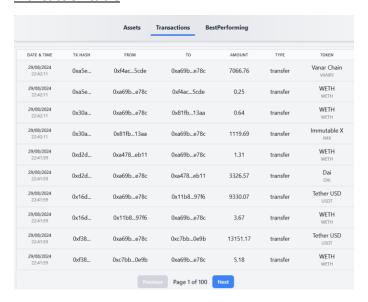


Assets table



הטבלה מציגה סקירה מסודרת של כל המטבעות שבארנק המחובר. מיוצג שם המטבע, הכמות שיש, שינוי האחוזים במחיר ב-24 השעות האחרונות, המחיר הנוכחי בדולרים, והסכום הכולל שהשקעת במטבע זה. מידע זה מאפשר לעקוב אחרי ביצועי ההשקעות ולבצע ניתוחים פיננסיים בצורה slider נוחה.בטבלה גודלה יש אפשרות מעבר על ידי

Transaction table



הטבלה זו מציגה רשימה של transactions, עם פרטים כמו תאריך ושעה, קוד ההזמנה (Tx Hash), כתובת השולח והמקבל, הכמות של המטבעות המעורבים, סוג transaction. בטבלה גדולה המעבר הוא מדף לדף

Best performing table

	А	Assets Transactions	BestPerfor	ming	
	Choose Criteria				
		24h PNL	~		
RANK	NAME	PRICE (USD)	PNL	BALANCE	BALANCE (USD)
1	Value VALU	0.025	38.0%	5.00	0.13
2	DeFiPulse Index DPI	72.71	10.7%	4946.26	359663.95
3	LayerZero ZRO	4.20	10.0%	13574.42	57049.32
4	ConstitutionDAO PEOPLE	0.069	6.6%	0.01	0.00
5	Super Best Friends SUBF	0.00	5.6%	420690.00	0.00
6	Digix Gold DGX	48.93	4.6%	0.70	34.04
7	Pendle PENDLE	3.35	4.3%	79911.99	268015.84
8	Reputation REP	0.37	4.2%	651.62	243.64
9	Banana BANANA	42.24	4.0%	914.23	38618.00
10	Wrapped Centrifuge WCFG	0.34	3.1%	1157226.19	388958.99

הטבלה זאת מציגה את המטבעות בעלות הביצועים הטובים ביותר בהתאם .כל שורה בטבלה מייצגת מטבע ומציגה את המדדים הבאים: דירוג, שם המטבע, המחיר הנוכחי בדולרים, אחוז השינוי במחיר לפי קריטריון הזמן הנבחר (24 שעות, שבוע, או חודש), הכמות של המטבעות שברשותך, והסכום הכולל.

Dark Mode

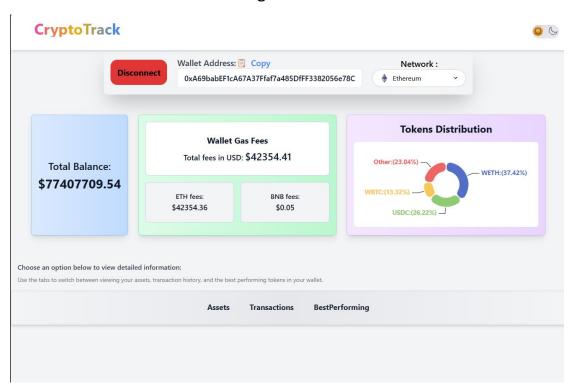
יש אפשרות שינוי תצוגדה על ידי הכפתור ב NavBar



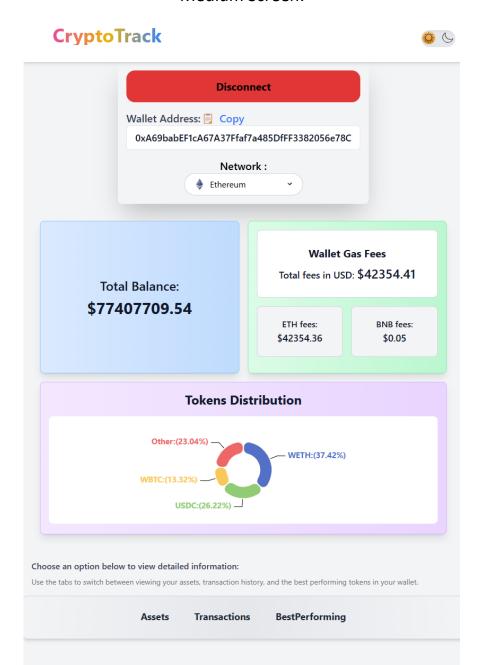
Responsive:

יש שלושה אפשרות להגת האתר לפי גודל מסך:

Large Screen:



Medium Screen:



Small Screen

