SE 3XA3: Module Interface Specification CryptoMetrics

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Contents

1 Button Module

1.1 Module

Button

1.2 Uses

None

1.3 Semantics

1.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the button
className	string	Additional CSS classes for the button
onClick	function	The function to run when button is pressed
type	string	The type of the button
disabled	boolean	Whether the button is disabled

1.3.2 State Variables

None

1.3.3 State Invariant

None

1.3.4 Assumptions

None

2 ToggleButton Module

2.1 Module

ToggleButton

2.2 Uses

Button

2.3 Semantics

2.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the button
setActive	function	The function to set the button active
active	string	The id of the function that is currently active
id	string	Unique identifier for the button
className	string	Additional CSS classes for the button

2.3.2 State Variables

None

2.3.3 State Invariant

None

2.3.4 Assumptions

None

3 FilterButton Module

3.1 Module

FilterButton

3.2 Uses

Button

3.3 Semantics

3.3.1 Environment Variables

Name	Type	Description
icon	node	The icon to be displayed
onClick	function	The function to run when this button is pressed

3.3.2 State Variables

None

3.3.3 State Invariant

None

3.3.4 Assumptions

None

4 CryptoChartCard Module

4.1 Module

CryptoChartCard

4.2 Uses

PlaceholderSkeleton
Queries

4.3 Semantics

4.3.1 Environment Variables

Name	Type	Description
currencyName	string	The name of the cryptocurrency
currencyId	string	The id of the cryptocurrency
symbol	string	The symbol of the cryptocurrency
icon	string	The icon of the cryptocurrency
info	string	Any specific info for the cryptocurrency
detail	string	Any specific detail for the cryptocurrency
detailColor	string	A color for the detail text
options	object	The options for the embedded chart
type	string	The type of the chart

4.3.2 State Variables

None

4.3.3 State Invariant

None

4.3.4 Assumptions

None

5 CompareChart Module

5.1 Module

CompareChart

5.2 Uses

ToggleButton
Dropdown
Queries

5.3 Semantics

5.3.1 Environment Variables

None

5.3.2 State Variables

Name	Type	Description
timerange	string	The current timerange for the chart
firstCrypto	string	The id of the first cryptocurrency to compare
secondCrypto	string	The id of the second cryptocurrency to compare

5.3.3 State Invariant

$firstCrypto \neq null \wedge secondCrypto \neq null \wedge timerange \neq null$

5.3.4 Assumptions

None

6 CryptoRowLineChart Module

6.1 Module

CryptoRowLineChart

6.2 Uses

Queries

6.3 Semantics

6.3.1 Environment Variables

Name	Type	Description
currencyId	string	The id of the cryptocurrency
color	string	The color of the chart

6.3.2 State Variables

None

6.3.3 State Invariant

None

6.3.4 Assumptions

None

7 Container Module

7.1 Module

Container

7.2 Uses

None

7.3 Semantics

7.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the container

7.3.2 State Variables

None

7.3.3 State Invariant

None

7.3.4 Assumptions

None

8 Main Module

8.1 Module

Main

8.2 Uses

None

8.3 Semantics

8.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the container

8.3.2 State Variables

None

8.3.3 State Invariant

None

8.3.4 Assumptions

None

9 Wrapper Module

9.1 Module

Wrapper

9.2 Uses

None

9.3 Semantics

9.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the container

9.3.2 State Variables

None

9.3.3 State Invariant

None

9.3.4 Assumptions

None

10 Dropdown Module

10.1 Module

Dropdown

10.2 Uses

DropdownItem
Hooks

10.3 Semantics

10.3.1 Environment Variables

Name	Type	Description
list	array of objects	The list of options in the dropdown
value	string	The current selected option in the dropdown
setValue	function	The function to call when an option is selected
disabled	array of strings	The id(s) of objects to disable in the dropdown
className	string	Additional CSS classes for the button

10.3.2 State Variables

Name	Type	Description
open	boolean	Whether the dropdown component is open or closed

10.3.3 State Invariant

$open = true \lor open = false$

10.3.4 Assumptions

None

11 DropdownItem Module

11.1 Module

DropdownItem

11.2 Uses

None

11.3 Semantics

11.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the DropdownItem
onClick	function	The function that is called when clicked on Dropdown-Item
selected	boolean	A boolean that represents if the DropdownItem is selected
disabled	boolean	A boolean that represents if the DropdownItem is disabled

11.3.2 State Variables

None

11.3.3 State Invariant

None

11.3.4 Assumptions

None

12 FilterDropdown Module

12.1 Module

FilterDropdown

12.2 Uses

SecondaryFilterDropdown

12.3 Semantics

12.3.1 Environment Variables

Name	Type	Description
filterOptions	object	The options to display in the dropdown
setOpen	function	The function to open/close the dropdown
addFilter	function	The function to add the filter
dropdownRef	node	Reference to the dropdown

12.3.2 State Variables

Name	Type	Description
selectedFilter	string	The id of the selected filter
radioValue	string	The value of the selected radio field
inputValue	string	The value of the input field

12.3.3 State Invariant

None

12.3.4 Assumptions

None

13 SecondaryFilterDropdown Module

13.1 Module

SecondaryFilterDropdown

13.2 Uses

Button Module
RadioInputForm Module

13.3 Semantics

13.3.1 Environment Variables

Name	Type	Description
open	boolean	Whether the dropdown is open or closed
onSelectedFilterChange	function	The function to call when a filter is modified
radioOptions	object	The options for the radio fields
radioValue	string	The value of the radio field
onRadioChange	function	The function to call when radio value changes
inputValue	string	The value of the input field
onInputChange	function	The function to call when input value changes
onFilterAdd	function	The function to call when a filter is added
inputLeftSymbol	string	The symbol to display on the left side of the input field
inputRightSymbol	string	The symbol to display on the right side of the input field
inputType	string	The type of the input field

13.3.2 State Variables

None

13.3.3 State Invariant

None

13.3.4 Assumptions

None

14 Filter Module

14.1 Module

Filter

14.2 Uses

Button

14.3 Semantics

14.3.1 Environment Variables

Name	Type	Description
subject	string	The subject of the filter
condition	string	The condition of the filter
value	string	The value of the filter
symbolLeft	string	Any symbol on the left of the value
symbolRight	string	Any symbol on the right of the value
buttonIcon	node	The icon for the button
onButtonClick	string	The function to call when button is clicked

14.3.2 State Variables

None

14.3.3 State Invariant

None

14.3.4 Assumptions

None

15 Filters Module

15.1 Module

Filters

15.2 Uses

None

15.3 Semantics

15.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the component

15.3.2 State Variables

None

15.3.3 State Invariant

None

15.3.4 Assumptions

None

16 Input Module

16.1 Module

Input

16.2 Uses

None

16.3 Semantics

16.3.1 Environment Variables

Name	Type	Description
className	string	Additional CSS classes for the input
placeholder	string	The placeholder for the input field
type	string	The type of the input field
onChange	function	The function to call when input value changes
initialValue	string	The initialValue of the input field
symbolLeft	node	The icon to display on the left side of the input field
symbolRight	node	The icon to display on the right side of the input field

16.3.2 State Variables

None

16.3.3 State Invariant

None

16.3.4 Assumptions

None

17 SearchInput Module

17.1 Module

SearchInput

17.2 Uses

Input

17.3 Semantics

17.3.1 Environment Variables

Name	Type	Description
onChange	function	The function to call when input value changes

17.3.2 State Variables

None

17.3.3 State Invariant

None

17.3.4 Assumptions

None

18 RadioInputForm Module

18.1 Module

RadioInputForm

18.2 Uses

Radio
Input

18.3 Semantics

18.3.1 Environment Variables

Name	Type	Description
inputLeftSymbol	string	The symbol to display on the left side of the input field
inputRightSymbol	string	The symbol to display on the right side of the input field
inputType	string	The type of the input field
options	object	The options for the radio fields
radioValue	string	The value of the radio field
onRadioChange	function	The function to call when radio value changes
inputValue	string	The value of the input field
onInputChange	function	The function to call when input value changes
onSubmit	function	The function to call when the form is submitted

18.3.2 State Variables

None

18.3.3 State Invariant

None

18.3.4 Assumptions

None

19   Radio Module

19.1   Module

Radio

19.2   Uses

None

19.3   Semantics

19.3.1   Environment Variables

Name	Type	Description
selected	string	It represents the value of the selected radio
radioValue	string	It represents the value of the radio
radioLabel	string	It represents the label of the radio
onChange	function	It is run everytime the radio value changes

19.3.2   State Variables

None

19.3.3   State Invariant

None

19.3.4   Assumptions

None

20 PlaceholderSkeleton Module

20.1 Module

PlaceholderSkeleton

20.2 Uses

None

20.3 Semantics

20.3.1 Environment Variables

Name	Type	Description
className	string	Additional CSS classes for the skeleton

20.3.2 State Variables

None

20.3.3 State Invariant

None

20.3.4 Assumptions

None

21 Sidebar Module

21.1 Module

Sidebar

21.2 Uses

SidebarItem

21.3 Semantics

21.3.1 Environment Variables

Name	Type	Description
active	string	The id of the SidebarItem that is currently active

21.3.2 State Variables

None

21.3.3 State Invariant

None

21.3.4 Assumptions

None

22 SidebarItem Module

22.1 Module

SidebarItem

22.2 Uses

None

22.3 Semantics

22.3.1 Environment Variables

Name	Type	Description
title	string	The title of the SidebarItem
icon	node	The icon of the SidebarItem
active	boolean	It represents if the SidebarItem is active
to	string	It represents the link to the respective SidebarItem page

22.3.2 State Variables

None

22.3.3 State Invariant

None

22.3.4 Assumptions

None

23 Table Module

23.1 Module

Table

23.2 Uses

Button

23.3 Semantics

23.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the table
className	string	Additional CSS classes for the table

23.3.2 State Variables

None

23.3.3 State Invariant

None

23.3.4 Assumptions

None

24 TableHeader Module

24.1 Module

TableHeader

24.2 Uses

None

24.3 Semantics

24.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the table header
className	string	Additional CSS classes for the table header

24.3.2 State Variables

None

24.3.3 State Invariant

None

24.3.4 Assumptions

None

25　TableRow Module

25.1　Module

TableRow

25.2　Uses

None

25.3　Semantics

25.3.1　Environment Variables

Name	Type	Description
children	node	The content inside the table row
className	string	Additional CSS classes for the table row

25.3.2　State Variables

None

25.3.3　State Invariant

None

25.3.4　Assumptions

None

26 TableCell Module

26.1 Module

TableCell

26.2 Uses

None

26.3 Semantics

26.3.1 Environment Variables

Name	Type	Description
children	node	The content inside the table cell
className	string	Additional CSS classes for the table cell

26.3.2 State Variables

None

26.3.3 State Invariant

None

26.3.4 Assumptions

None

27 Tab Module

27.1 Module

Tab

27.2 Uses

None

27.3 Semantics

27.3.1 Environment Variables

Name	Type	Description
content	node	The content to display
onClick	function	The function to run when tab is clicked
activeTab	string	The id of the currently active tab
id	string	Unique identifier for the tab

27.3.2 State Variables

None

27.3.3 State Invariant

None

27.3.4 Assumptions

None

28 Tabs Module

28.1 Module

Tabs

28.2 Uses

Tab

28.3 Semantics

28.3.1 Environment Variables

Name	Type	Description
children	array of nodes	The Tab elements to group together

28.3.2 State Variables

Name	Type	Description
tab	string	The id of the currently active tab

28.3.3 State Invariant

$tab \neq null$

28.3.4 Assumptions

None

29 BoldGradientHeading Module

29.1 Module

BoldGradientHeading

29.2 Uses

None

29.3 Semantics

29.3.1 Environment Variables

Name	Type	Description
children	string	The text displayed inside the header

29.3.2 State Variables

None

29.3.3 State Invariant

None

29.3.4 Assumptions

None

30 Home Module

30.1 Module

Home

30.2 Uses

Container
Main
SearchInput
BoldGradientHeading
Queries
CryptoChartCard
Wrapper
Sidebar
Tabs
Tab
Hooks
FilterDropdown
Filter
Filters
FilterButton
CryptoRowLineChart
Table
TableCell
TableHeader
TableRow

30.3 Semantics

30.3.1 Environment Variables

30.3.2 State Variables

Name	Type	Description
dropdownOpen	boolean	Whether the dropdown is open
searchText	string	The string to store the text being searched
filters	object	The object for storing the applied filters

30.3.3   State Invariant

None

30.3.4   Assumptions

None

31 Hooks Module

31.1 Module

Hooks

31.2 Uses

None

31.3 Syntax

31.3.1 Exported Constants

None

31.3.2 Exported Types

None

31.3.3 Exported Access Programs

Routine name	In	Out	Exceptions
useFilters	Seq of objects		
useOnClickOutside	node, function	object, function, function	

31.4 Semantics

31.4.1 State Variables

None

31.4.2 State Invariant

None

31.4.3 Assumptions

None

31.4.4 Access Routine Semantics

useFilters(Seq of objects):

- output: An object representing the applied filters, and two methods to add and remove a filter

- exception: none

useOnClickOutside(node ref, function handler):

- output: none

- exception: none

32 Queries Module

32.1 Module

Queries

32.2 Uses

None

32.3 Syntax

32.3.1 Exported Constants

None

32.3.2 Exported Types

None

32.3.3 Exported Access Programs

Routine name	In	Out	Exceptions
useCryptoTimeSeriesData	String, integer, String	Object	
useCryptoTimeSeriesRangeData	String, String, String	Object	
useCryptoList	String, integer, boolean	Object	

32.4 Semantics

32.4.1 State Variables

None

32.4.2 State Invariant

None

32.4.3 Assumptions

None

32.4.4 Access Routine Semantics

useCryptoTimeSeriesData(String name, integer days, String interval):

- output: An object consisting of the fetched API data

- exception: none

useCryptoTimeSeriesRangeData(String name, String from, String to):

- output: An object consisting of the fetched API data

- exception: none

useCryptoList(String currency, integer numberOfCurrencies, boolean sparkline):

- output: An object consisting of the fetched API data

- exception: none

33 Major Revision History

March 14, 2022 - Rough draft created of the sections
March 18, 2022 - Final draft of all of the sections complete
April 6, 2022 - Finalized MIS