

Project: Investment Portfolio and Asset Track

Statement of Work

Team:

Solution Architect: Máximo Abreu

Customer Representative: Daniel Pérez

Developers: Kevin Maldonado / Luis Pérez Méndez / Manuel Liriano / Ovidio Giles

Objective

1. **Problem Statement:** The Ksquare group is looking to develop an investment portfolio and asset track application to track personal investments in Salesforce. The solution should provide an easy way for seeing the current portfolio status. Things like the portfolio asset division, the amount invested in the different assets, a list of recent investments and a list of the fixed-rate investments that will end soon are required.
2. **Current Pain Points:**
 - Lack of overall and dedicated data visibility, no reports or dashboards.
 - Repetitive unnecessary processes including data entry and research of updated data.
 - Complex manual calculations to get important data.
 - Not mobile friendly information.
3. **Solution:** We will develop a Salesforce mobile and web application to save records of any transaction and compare in real time the performance and profit of your portfolio. The application will have intuitive and easy to use design, including important data indicators, reports and dashboards of all your assets. All calculations will be automated and integrated to TradingView API to save user's time.

Solution Architecture Diagram (High level diagram)



Please review Appendix A for a detailed scope.

Reports and Dashboards

Salesforce keeps you updated with customized reports that you can build with ease. Just drag and drop the fields, filters, groupings, and charts that you want, and get an immediate real-time view. Track assets performance with dashboards and reporting tools, and quickly make changes to components to get the most important information front and center.

Data Integration

Seamlessly integrated and updated trusted third party data sources (Trading View, Binance API and GoldAPI). The data integrated can be managed by the user with clicks, not code, and the graphics directly from trading view are updated continuously and automatically. You can look at Silver precious metal graphics, you can also see real-time graphics for prices of every cryptocurrency available in binance, and you can choose which one to view, add trading indicators and look for the binance code to add a new one to your portfolio.

Mobile functionality

Make critical decisions from anywhere. Use the salesforce mobile application to help you check on your key portfolio metrics from anywhere. Check your balance, performance, end-dates, total amount invested, and what is it worth today for each of your assets including precious metals, cryptocurrency, and fixed-rate bonds right on your hands.

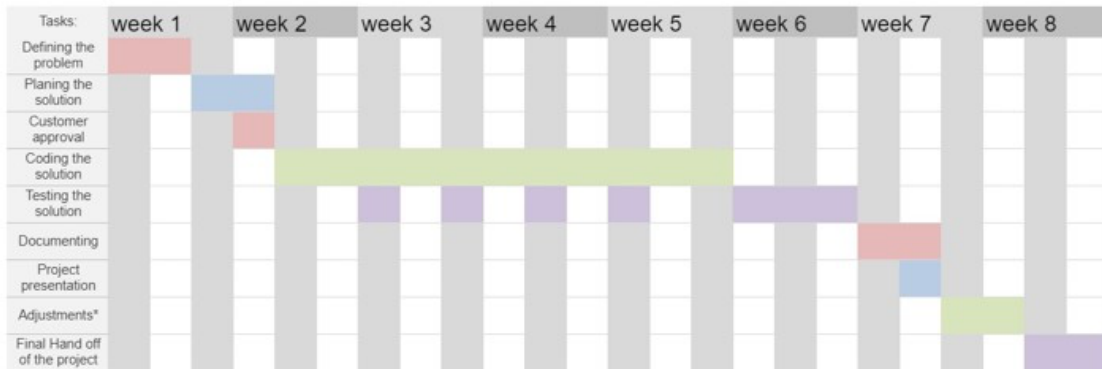
Project Scope

Functional Area / EPIC	Tasks / Activities	Category	Assumptions
Project Build/Execution	<ul style="list-style-type: none"> -System Design -Collect User stories -Create Supporting Object Model -Feature implementation, UAT and QA 	Feature Implementation	Client is able to provide requirements and to join discovery session.
Reports & Dashboards	<ul style="list-style-type: none"> -Define reports and dashboards to be created within the system 	Business Process Review	Client will have reports that shows all the information required.
Integration	<ul style="list-style-type: none"> -Define scope, frequency and type of integrations -Build integration with external system 	System Integration	Client has established clear requirements for External System needs like trading view.
Process Automation	<ul style="list-style-type: none"> -Define standard and custom processes associated with portfolio management -Define graphics and real time widgets -Define forecasting and reporting features 	System Configuration	Client will have automatic profit calculations depending on transactions performance.
UAT Testing and Training	<ul style="list-style-type: none"> -Review configurations and confirm all user stories succeed -Provide training to PO 	UAT and System Testing	<p>Client can attend and review training materials and documentation.</p> <p>Client can validate each functionality and test solutions as developed.</p>

Timeline & Procedure

Investment Portfolio and Asset Track Project

Start Date: 7/5/2021



Appendix A

Scoped User Stories

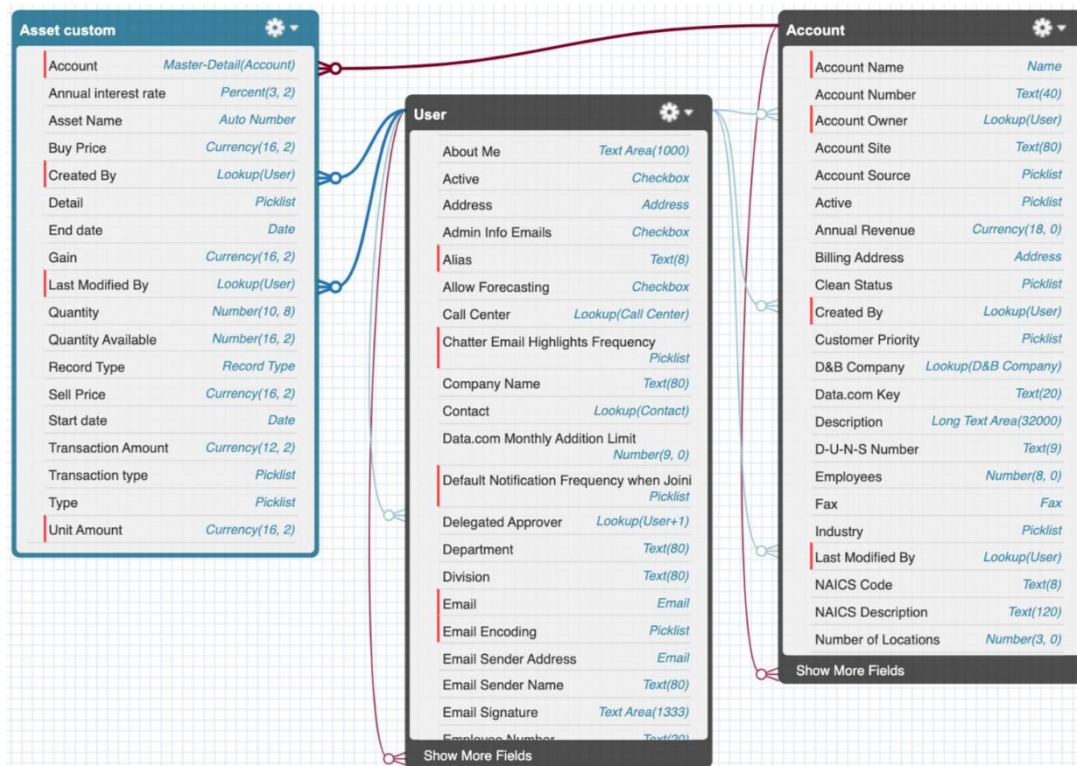
- As a user I want to see all my assets in one place so that I can manage all my investments
- As a user I want to see all assets in a homepage so that I can get into the dedicated tabs from there to manage it more accurately
- As a user I want to see details for each asset in a dedicated tab so that I can manage it more accurately
- As a user I want to be able to put in the information about any asset I did invest in so that I can track it and see how much profit I made.
- As I user I want to be able to see reports about any asset I did invest in so that I can track it and see how much profit I made.
- As I user I want to be able to see real time price and graphics for the last 3 months for every crypto currency I did invest in so that I can avoid going to TradingView and wasting more time.
- As I user I want to be able to define an end-date for the fix-rate investment so that I can see the interest rate generated from that investment
- As a user I want to be able to type the info about the item I bought so that I can track it also and see dedicated reports in a dedicated tab.

-As a user I want to distinguish investment, so that I have tabs and that I can see dedicated info for every asset.

-As a user I want to be able to check everything in my phone and it should be user friendly and easy to distinguish and track investment, so that I know the profit I made and the money I have invested in each asset.

Documentation

Documentation Deliverables will be provided as images attached with description, Screencasts, User Test examples, architectural diagrams and components description for each tab. **Object Model Customizations**



Programmatic Customizations

Aura components:

Templates:

-homeTemplate: It is an Aura component to define the home page template for desktop and phones.

-tabTemplate: Aura component to define the tab template for the assets tabs in desktop and phones.

Trading View Integrations:

Each TV graphic or widget require an aura component and a visualforce page with the same name and also a mobile visualforce page with same name plus mobile (for example: TVComplexGraphMobile) if the widget needs to be visible for mobile phones.

Aura components corresponding to desktop layout:

-TVComplexGraph: Crypto assets complex graph for Cryptocurrency tab with up to 3 trading indicators.

-TVHeaderChart: widget tickers that appears showing 4 different cryptocurrency asset prices in real-time

-TVNews: widget that shows news about investments

-TVSilverGraph: widget that shows silver price in real-time

Visualforce pages corresponding to desktop and phone layout:

-TVComplexGraph: Crypto assets complex graph for Cryptocurrency tab with up to 3 trading indicators.

-TVComplexGraphMobile: Crypto assets complex graph for Cryptocurrency tab mobile.

-TVHeaderChart: widget tickers that appears showing 4 different cryptocurrency asset prices in real-time

-TVNews: widget that shows news about investments

-TVNewsMobile: widget that shows news about investments for mobile

-TVSilverGraph: widget that shows silver price in real-time

-TVSilverGraphMobile: widget that shows silver price in real-time for mobile

Apex Class:

-frbProfitTrigger: It is an Apex trigger on Asset__c object for *before update and before insert* context.

Handler class: frb_TriggerController **Method:**

frbProcessor, qtyVerification

Supporting Test Class: frb_TriggerControllerTest

Trigger and Handler 100% code coverage.

-PreciousMetalsController: It is an Apex class on Asset__c object for *Assets Logic*. **Method:** getQuantityAvailable, avgPrice, getFrbTotalInvested, getFrbTotalGain, getNearestEndDate,
Supporting Test Class: frb_PreciousMetalsControllerTest

100% code coverage.

-PerformanceClass: It is an Apex class to get performance calculations for precious metals and Cryptocurrency.

Method: getPortfolioPerformance, getCryptoValuesFromRecords, getCurrentPrice, getSilPerformance
Supporting Test Class: AssetRecordsTest

89% code coverage.

-GoldAPI: It is an Apex class on Asset__c object for *GoldAPI Integration for Precious metals live price calculation and Logic*.

Method: getDataFromEndpoint, getSilverPrice, getFrbTotalGain, getNearestEndDate,
Supporting Test Class: GoldAPITest

100% code coverage.
(GoldAPI)

--BinanceRequest: It is an Apex class for *Binance API Integration for Assets live price calculation and Logic*.

Method: getDataFromEndpoint, getCryptocurrencyPrice **Supporting Test Class:** BinanceRequestTest

100% code coverage.
(Binance, 2021-08-12)

-AssetRecords: It is an Apex class to show the last 10 transactions in a table with filters for each asset type.

Method: getRecentRecords, getRecordTypes, getRecordTypeIdByName **Supporting Test Class:** AssetRecordsTest

100% code coverage.

Lightning Web Components:

Home page LWCs:

- assetPrice: shows data about precious metals.
- cryptoWidget: shows data about Cryptocurrency.
- frbWidget: shows data about Fixed-rate bonds.
- listOfRecentRecords: shows data about the last 10 transactions for each asset.
- Investments Report Home: Is a report that shows total amount of money invested in each kind of asset.

Precious Metals Tab LWCs:

- performancePmWidget: shows data about precious metals performance.
- TVSilverGraph: shows data about real-time silver ounce price.
- listOfPreciousMetals: shows data about the last 10 transactions.

Cryptocurrency Investment Tab LWCs:

- TVHeaderChart: shows data about real-time price of crypto coins.
- performanceCryptoWidget: shows data about your cryptocurrency investments performance.
- TVComplexGraph: shows real-time price in graphics of every cryptocurrency coin you search, lets you use up to 3 trading indicators and lets you know the coins binance code to add it to your portfolio.
- listOfCrypto: shows data about the last 10 transactions.

Fixed-rate bonds Tab LWCs:

- performanceFrbWidget: shows data about fixed-rate bonds performance.
- Fixed Rate Bonds Report: report that shows you graphics about fixed-rate bonds investments including amount invested, months generating interests sum of gain for each transaction and also the end dates of each fixed-rate bond.
- listOfBonds: shows data about the last 10 transactions.

News Tab LWCs:

- TVNews: let you see up to date investments news.

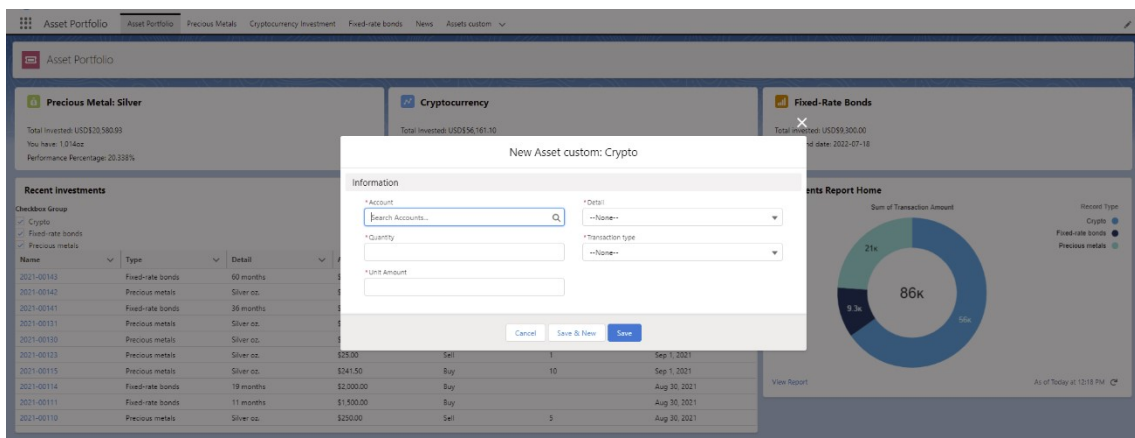
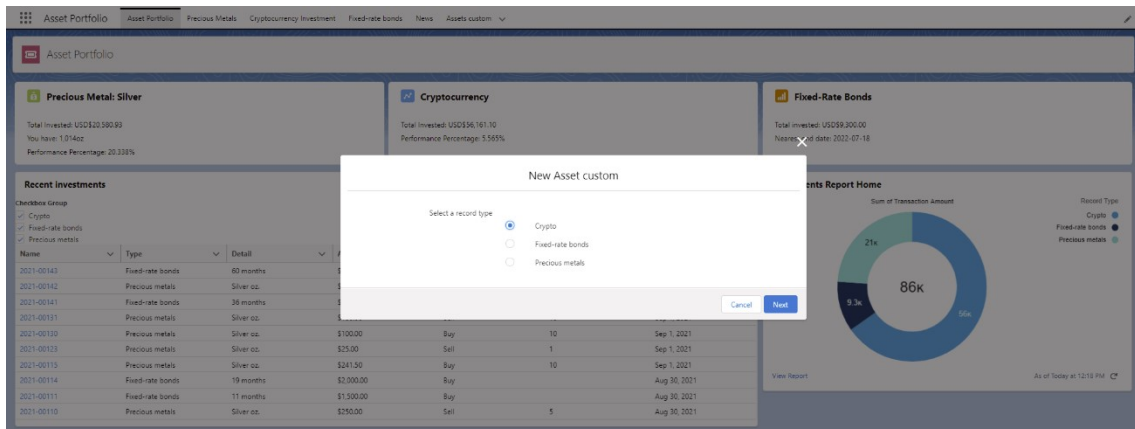
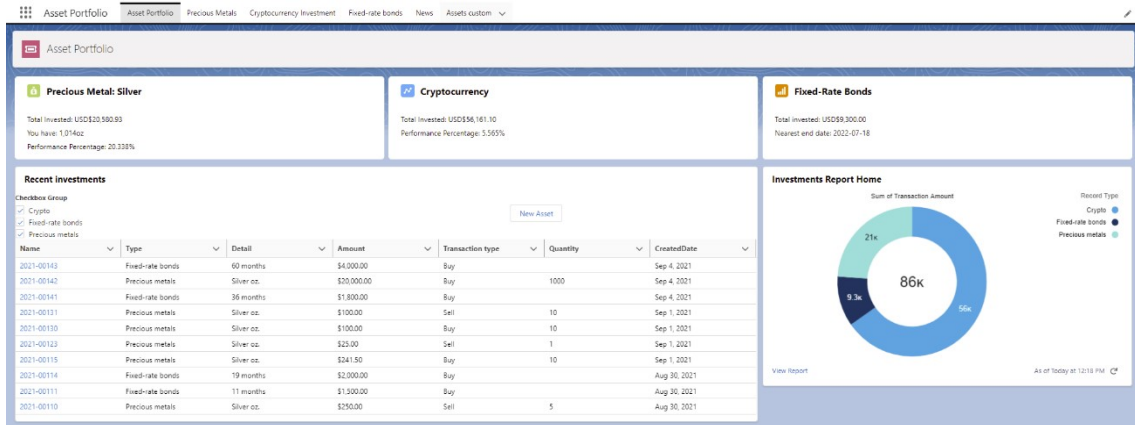
Iframe:

- Iframe LWC is to help the TV real-time graphics show up like a LWC in mobile phones instead of visualforce pages.

Tabs

Asset Portfolio (Home Page):

In the home page you will see the most important information for your assets, including: Total Invested, Total Quantity left, Performance, and the last 10 transactions done for each kind of asset with the ability to filter between each one and also create a new one or go to the assets object and edit or delete assets records.



Asset Portfolio

Asset Portfolio

Precious Metals

Cryptocurrency Investment

Fixed-rate bonds

News

Assets custom

Asset Portfolio

Precious Metal: Silver

Total Invested: USD\$10,500.93

You have: 1.014oz

Performance Percentage: 20.338%

Cryptocurrency

Total Invested: USD\$56,161.10

Performance Percentage: 2.585%

Fixed-Rate Bonds

Total Invested: USD\$9,300.00

Reinvested date: 2022-07-18

Recent investments

Checkbox Group

☒ Crypto

☒ Fixed-rate bonds

☒ Precious metals

Name	Type	Detail	Price	Quantity	Buy/Sell	Unit	Date
2021-00143	Fixed-rate bonds	60 months					
2021-00142	Precious metals	Silver oz.					
2021-00141	Fixed-rate bonds	36 months					
2021-00131	Precious metals	Silver oz.					
2021-00130	Precious metals	Silver oz.	\$100.00	Buy	10		Sep 1, 2021
2021-00123	Precious metals	Silver oz.	\$23.00	Sell	1		Sep 1, 2021
2021-00115	Precious metals	Silver oz.	\$241.50	Buy	10		Sep 1, 2021
2021-00114	Fixed-rate bonds	19 months	\$2,000.00	Buy			Aug 30, 2021
2021-00111	Fixed-rate bonds	11 months	\$1,500.00	Buy			Aug 30, 2021
2021-00110	Precious metals	Silver oz.	\$250.00	Sell	5		Aug 30, 2021

Investments Report Home

Sum of Transaction Amount

21%

86k

9.3%

5%

View Report

As of Today at 12:18 PM

New Asset custom: Fixed-rate bonds

*Account

Search Accounts...

*Annual Interest rate

*Start date

*Detail

1 month

*Unit Amount

Cancel

Save & New

Save

Asset Portfolio

Asset Portfolio

Precious Metals

Cryptocurrency Investment

Fixed-rate bonds

News

Assets custom

Asset Portfolio

Precious Metal: Silver

Total Invested: USD\$10,500.93

You have: 1.014oz

Performance Percentage: 20.338%

Cryptocurrency

Total Invested: USD\$56,161.10

Performance Percentage: 2.585%

Fixed-Rate Bonds

Total Invested: USD\$9,300.00

Reinvested date: 2022-07-18

Recent investments

Checkbox Group

☒ Crypto

☒ Fixed-rate bonds

☒ Precious metals

Name	Type	Detail	Price	Quantity	Buy/Sell	Unit	Date
2021-00143	Fixed-rate bonds	60 months					
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Investments Report Home

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21%

86k

9.3%

5%

View Report

As of Today at 12:18 PM

New Asset custom: Precious metals

*Account

Search Accounts...

*Detail

Silver oz.

*Quantity

*Transaction type

--None--

*Unit Amount

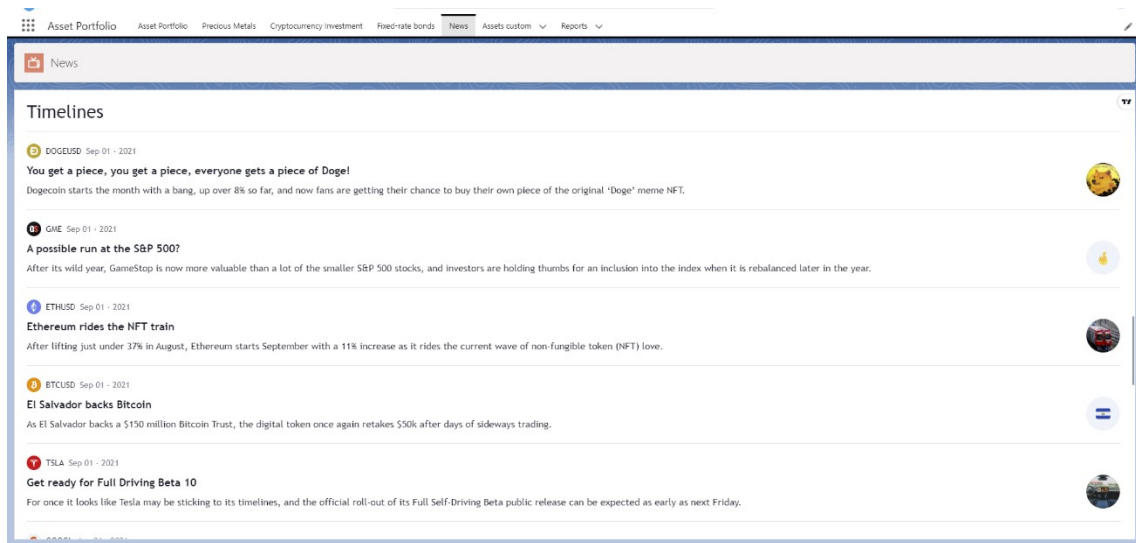
Cancel

Save & New

Save


News Tab:

From the news tab you will be able to see news related to investments directly from trading view!, also you can click it and see more information about it.



Detailed information after clicked:

Sep 01
2021




You get a piece, you get a piece, everyone gets a piece of Doge!

Dogecoin starts the month with a bang, up over 8% so far, and now fans are getting their chance to buy their own piece of the original 'Doge' meme NFT.

The crypto market made a comeback in August, sending Doge up just under 35% for the month and continuing those gains into September with a lift of over 8% in two days. As a reward, the owner of the original Doge meme, which sold as an NFT in June for around \$4 million, is now available for [fractional ownership](#).

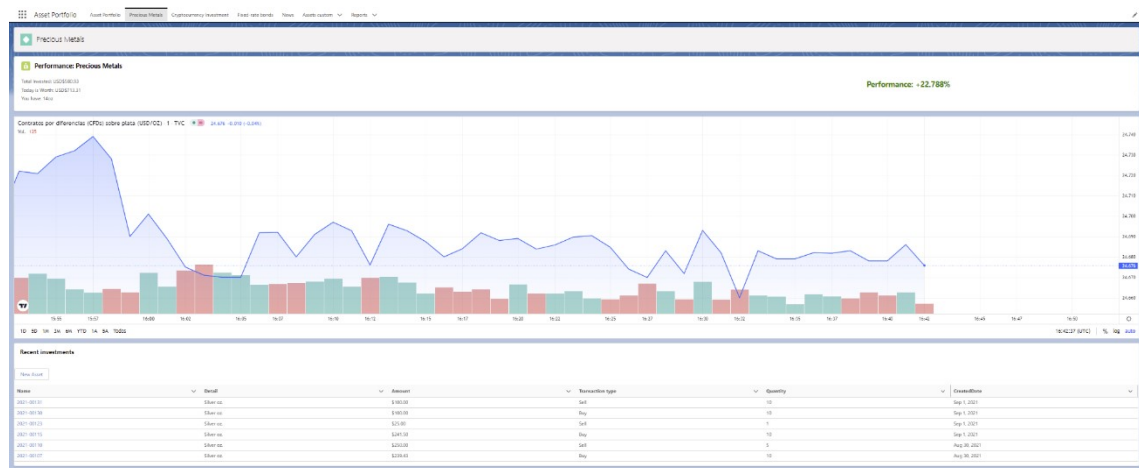
PleasrDOA, a collective of early NFT collectors and digital artists that bought the Doge NFT, is offering fans the chance to buy a \$1 piece of the historic meme. Sharing is caring.



Executium / Unsplash

Precious Metals Tab:

For precious metals tab you will be able to see silver oz performance, total invested, what it is worth today and the total amount of silver ounces you have. Also, you can see real time and customizable point and click graphics, and at the end you will see the last 10 transactions made for precious metals and adding the ability to create a new transaction or even go to any transaction in the assets object to edit, create or delete any assets records.



Cryptocurrency tab:

For the cryptocurrency tab you will see real-time price for cryptocurrency and point and click graphics to analyze and even to search for any cryptocurrency real-time price from the Binance API, and also you can see the last 10 Cryptocurrency transactions with the ability to add another one or go to the asset record and add, edit or delete any record.

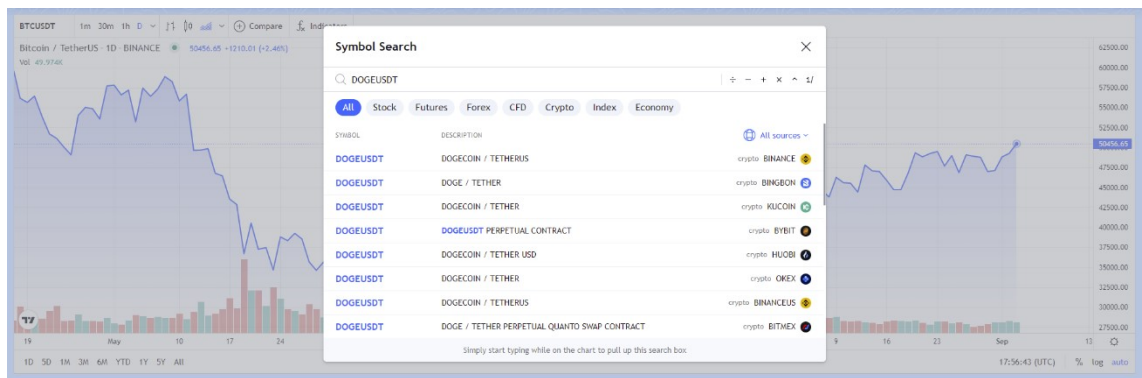


Add a new Cryptocurrency asset:

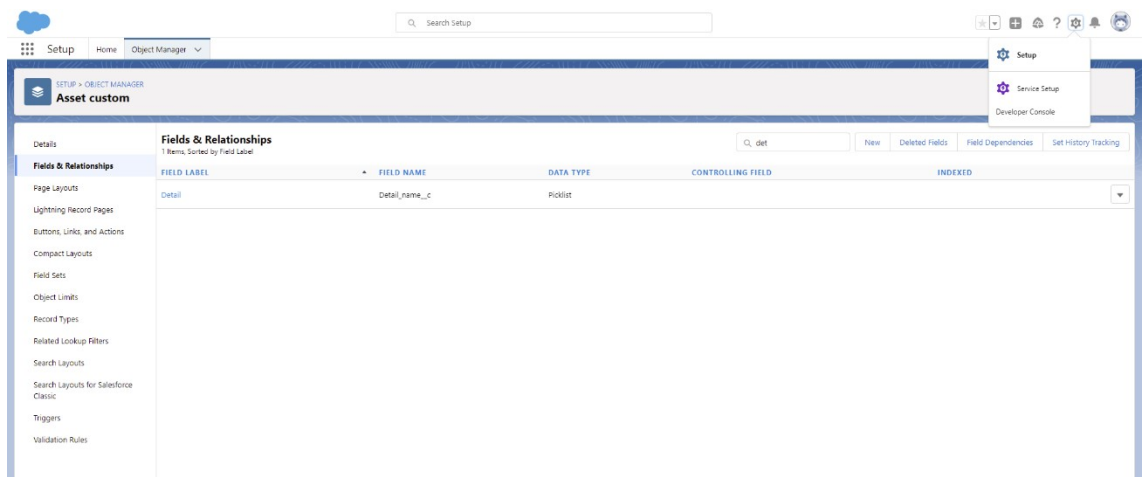
First you will need to click on Symbol Search inside the graphic left upper button:



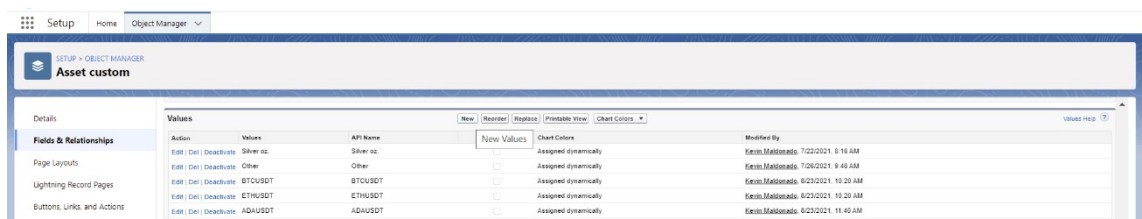
Next you will need to search for the Binance code for that asset: (Calculations for performance are made with Tether, please make sure you selected Tether “USDT” instead of just USD, for example DOGEUSDT)



Then you need to go to setup -> object manager -> Field and Relationships -> detail



And add a new value:



Enter the code, and in “Record Type Name” select Crypto to add the value, then click save.

Setup Home Object Manager

SETUP > OBJECT MANAGER
Asset custom

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

Search Layouts for Salesforce Classic

Triggers

Validation Rules

Add Picklist Values
Detail

Add one or more picklist values below. Each value should be on its own line and it is used for both a value's label and API name.

If a value matches an inactive value's API name, that value is reactivated with its previous label.

If a value matches an inactive value's label but not the API name, a new value is created.

DOGEUSD1

To add the new value to the picklist values for a particular Record Type, check the appropriate boxes below.

☐ Record Type Name

☒ Crypto

☐ Fixed-rate bonds

☐ Precious metals

Save Cancel

Now you can go back, update the page and when you click on the “new asset” button you will see the new asset detail in the picklist:

Asset Portfolio Asset Portfolio Precious Metals Cryptocurrency Investment Fixed-rate Bonds News Assets custom

15 16 17 24

1D 5D 1M 3M 6M YTD 1Y 5Y All

Recent Investments

New Asset

New Asset custom: Crypto

Information

*Account
Search Accounts...
Complete this field.

*Quantity

*Unit Amount

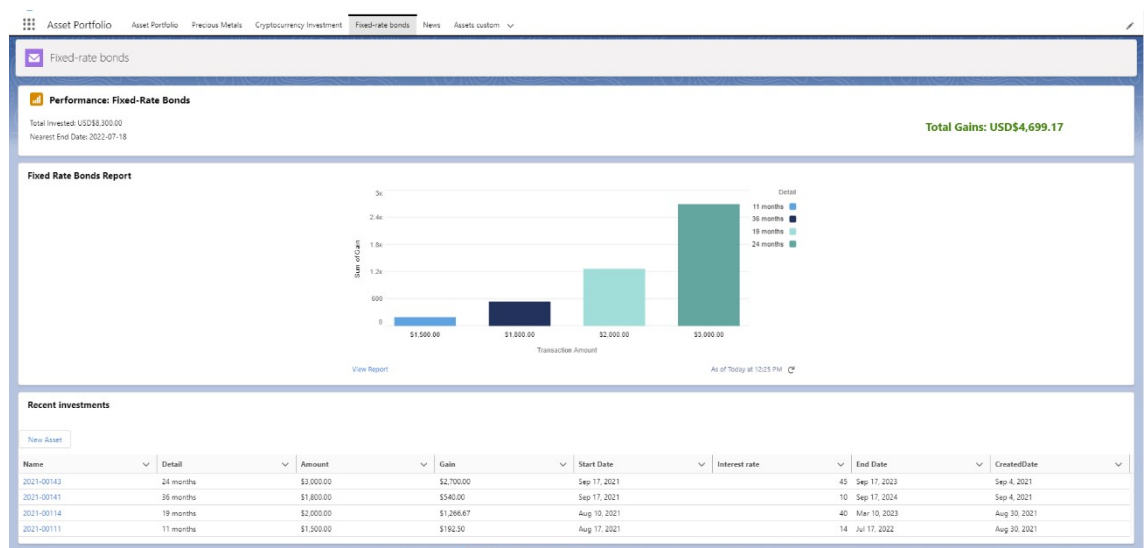
*Detail
--None--
✓ --None--
BTCUSD1
ETHUSD1
ADAUSD1
DOGEUSD1

Cancel Save & New Save

Name	Detail	Amount	Transaction type	Quantity	CreatedDate
2021-08138	DOGEUSD1	\$0.30	Sell	1	Sep 3, 2021
2021-08136	DOGEUSD1	\$0.25	Buy	1	Sep 3, 2021
2021-08041	ETHUSD1	\$1,718.78	Sell	0.1	Aug 23, 2021
2021-08040	ETHUSD1	\$6,675.10	Buy	2	Aug 23, 2021
2021-08039	BTCUSD1	\$49,000.00	Sell	1	Aug 23, 2021
2021-08038	BTCUSD1	\$98,972.00	Buy	2	Aug 23, 2021
2021-08037	BTCUSD1	\$49,496.00	Buy	1	Aug 23, 2021

Fixed-rate bonds tab:

For the Fixed-rate bonds tab you will see a component that shows total invested, nearest end date of the fixed-rate bonds and the total gains. Also, you will see a graphic report that will show the amount invested for each transaction, the details about the months it will be generating interests, the gain for each one and the end dates. At the bottom you will have a list of the last 10 transactions made and the ability to add another one or to go to each record and edit or delete it.



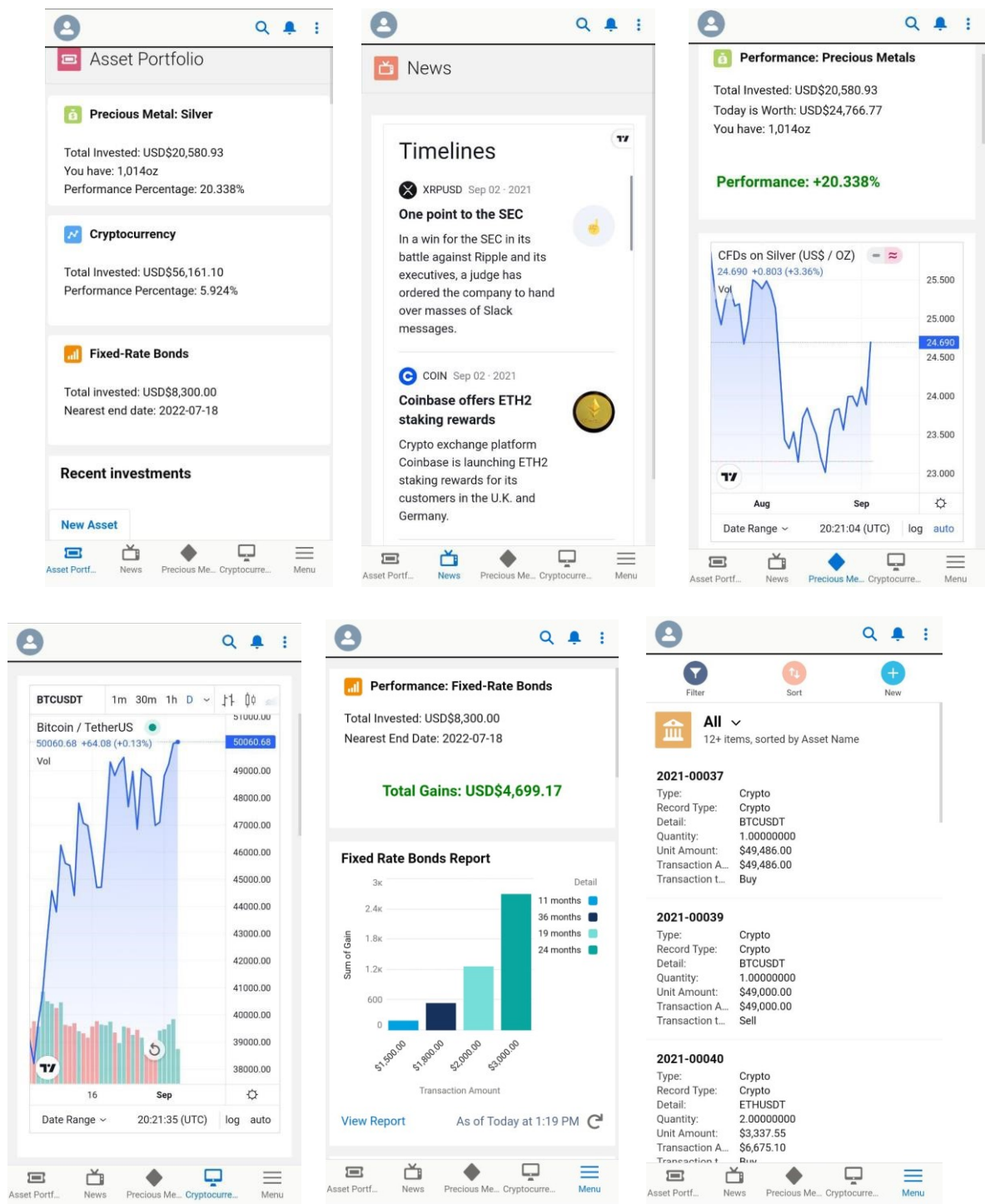
Assets custom tab:

This tab will show you all the details about each transaction made for each kind of asset and the ability to edit, delete, or add another one.

13 Items • Sorted by Record Type • Filtered by All assets custom • Updated a few seconds ago

Asset Name	Type	Record Type	Detail	Quantity	Unit Am...	Transaction Amount	Transaction...
1 2021-00037	Crypto	Crypto	BTCCUSD	1.00000000	\$49,486.00	\$49,486.00	Buy
2 2021-00038	Crypto	Crypto	BTCCUSD	2.00000000	\$49,486.00	\$98,972.00	Buy
3 2021-00039	Crypto	Crypto	BTCCUSD	1.00000000	\$49,000.00	\$49,000.00	Sell
4 2021-00040	Crypto	Crypto	ETHUSD	2.00000000	\$3,337.55	\$6,675.10	Buy
5 2021-00041	Crypto	Crypto	ETHUSD	0.50000000	\$3,437.55	\$1,718.78	Sell

Mobile tabs:



Goals Met

Goal	Achieved / Not Achieved
Data visibility with reports and graphs	Achieved
Real-time performance and profit calculations	Achieved
Intuitive and easy to use design	Achieved
Mobile friendly	Achieved
News tab	Achieved

Unmanaged Package

In the unmanaged package was included:

- Asset Portfolio App with code and objects.
- Flow: Calculate Transaction Amount.
- Custom Reports Folder.

Test classes:

- GoldAPITest
- AssetRecordsTest
- frb_TriggerControllerTest
- PreciousMetalsControllerTest
- BinanceRequestTest

Installation URL:


<https://login.salesforce.com/packaging/installPackage.apexp?p0=04t5e000000zQnw>

Password:

Portfolio1234

After installation, please add remote site URLs to Remote Site Settings:

- ApexDevNet: <http://www.apexdevnet.com>
- BinanceAPI: <https://api.binance.com>
- GoldAPI: <https://www.goldapi.io>

 **Remote Site Settings**

All Remote Sites

Below is the list of Web addresses that your organization can invoke from salesforce.com. To add another Web address, click New Remote Site.

View: All Remote Sites [Create New View](#)

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | **All**

Action	Remote Site Name	Namespace Prefix	Remote Site URL	Active	Created By	Created Date	Last Modified By	Last Modified Date
Edit Del	ApexDevNet	-	http://www.apexdevnet.com	✓	Maldonado, Kevin	7/7/2021, 12:23 PM	Maldonado, Kevin	7/7/2021, 12:23 PM
Edit Del	BinanceAPI	-	https://api.binance.com	✓	Maldonado, Kevin	8/23/2021, 12:47 PM	Maldonado, Kevin	8/23/2021, 12:47 PM
Edit Del	GoldAPI	-	https://www.goldapi.io	✓	Maldonado, Kevin	8/25/2021, 11:46 AM	Maldonado, Kevin	8/25/2021, 11:46 AM

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | **All**