

FAYA JAVA APP - PHASE 1 UPDATES CODE CHALLENGE

Revision History

Author	Revision Number	Date
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1. Organization of Submission

docs

Contains deployment guides and Postman collection files.

faya-commons

The common code module.

faya-api

The FAYA REST API module.

fundyield-api

The Fund Yield public REST API module.

sql

Contains sql scripts that used to create db schema (db user, table, procedure...).

test_data

Contains sql scripts that populate the db with test data.

README.md

The project documentation in Markdown format.

2. Prerequisites

Java 8 <http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

Tomcat 8 <https://tomcat.apache.org/download-80.cgi>

Maven <https://maven.apache.org/download.cgi>

Oracle 11g <http://www.oracle.com/technetwork/database/database-technologies/express-edition/downloads/index.html>

3. Configuration

faya-api module

These are the most important variables that can be configured for **faya-api** module:

Name	Location	Description	Example value
operationScale	faya-api src/main/resources/constants.properties	The operation scale used by calculator engines	7
roundingMode	faya-api src/main/resources/constants.properties	The rounding mode used by calculator engines	4
oracle.url	faya-api src/main/resources/db.properties	The Oracle url	jdbc:oracle:thin:@localhost:49161:xe
oracle.username	faya-api	The Oracle username	secyield

e	src/main/resources/db.properties		
oracle.password	faya-api src/main/resources/db.properties	The Oracle password	passwd

For tests, make sure you provide the correct db credentials in faya-api/src/test/resources/test-db.properties:

```
oracle.driverClassName=oracle.jdbc.driver.OracleDriver
oracle.url=jdbc:oracle:thin:@localhost:49161:xe
oracle.username=test_secyield
oracle.password=password
```

fundyield-api module

These are the most important variables that can be configured for **fundyield-api** module:

Name	Location	Description	Example value
secyieldcontroller.maxNumberOfSecurityData	fundyield-api src/main/resources/constants.properties	The maximum number of security data to be returned by the API	100
getConfigApiPath	fundyield-api src/main/resources/application.properties	The path to get SEC configuration from faya-api	http://localhost:8081/faya-api/securitySECDataConfiguration
getSecuritySECDataApiPath	fundyield-api src/main/resources/application.properties	The path to get SEC data from faya-api	http://localhost:8081/faya-api/fayaFundAccountingSECYieldData
saveCalculatedSecuritySECDataApiPath	fundyield-api src/main/resources/application.properties	The path to save calculated SEC data from faya-api	http://localhost:8081/faya-api/calculatedFundAccountingSECYieldData
getCalculatedSecuritySECDataApiPath	fundyield-api src/main/resources/application.properties	The path to get calculated SEC data from faya-api	http://localhost:8081/faya-api/calculatedFundAccountingSECYieldData

4. Database Setup

Follow these steps to get the APIs running:

Use Oracle SQL Developer to connect to Oracle.

Run ***sql/create_user.sql***. This will create the two users ***secyield*** and ***test_secyield***.

Connect as ***secyield*** user, run ***sql/schema.sql*** and ***sql/procedures.sql***. This will create the table structure and store procedures for user ***secyield***.

Connect as ***test_secyield*** user, run ***sql/schema.sql*** and ***sql/procedures.sql***. This will create the table structure and store procedures for user ***test_secyield***.

In case you want to load some test data, run ***test_data/clear.sql*** and ***test_data/test_data.sql***

5. Application Setup

In ***faya-commons*** folder, run the following command:

```
$ mvn clean install
```

In ***faya-api*** folder, run the following commands:

```
$ mvn install:install-file -Dfile=lib/ojdbc6.jar -DgroupId=com.oracle  
-DartifactId=ojdbc6 -Dversion=11.2.0 -Dpackaging=jar  
$ mvn clean install  
$ mvn spring-boot:run
```

In ***fundyield-api*** folder, run the following commands:

```
$ mvn clean install  
$ mvn spring-boot:run
```

Unit tests are run by default, use ***-DskipTests*** parameter to skip unit tests:

```
$ mvn clean install -DskipTests
```

6. Unit Tests

In ***faya-commons***, ***faya-api*** and ***fundyield-api*** folder, run the following command:

```
$ mvn test
```

7. Verification

All input dates for the 2 REST APIs must follow this format: yyyy-MM-dd

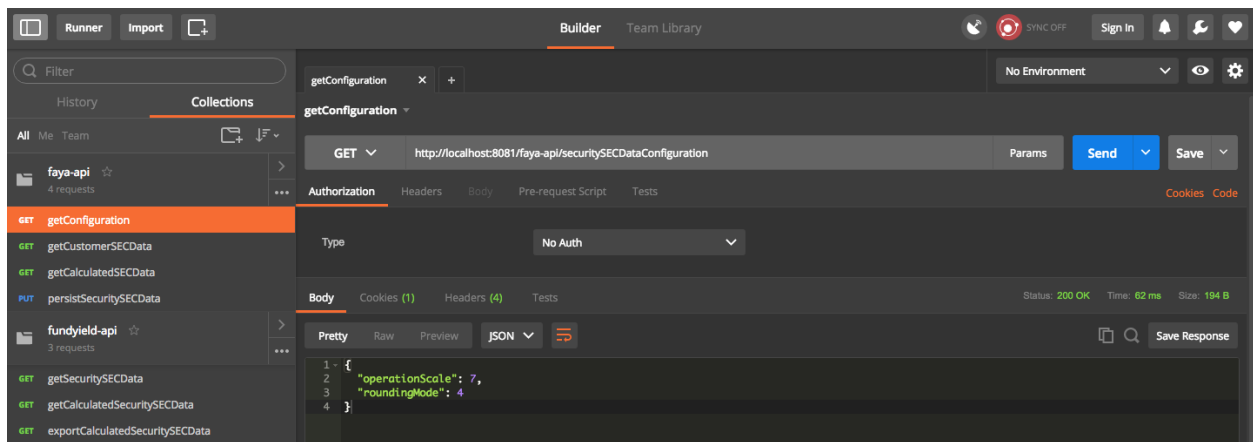
The ***test_data/test_data.sql*** will insert sample data for date: **2014-12-01**

Open docs/faya-api.postman_collection.json and docs/fundyield-api.postman_collection.json in Postman application

faya-api

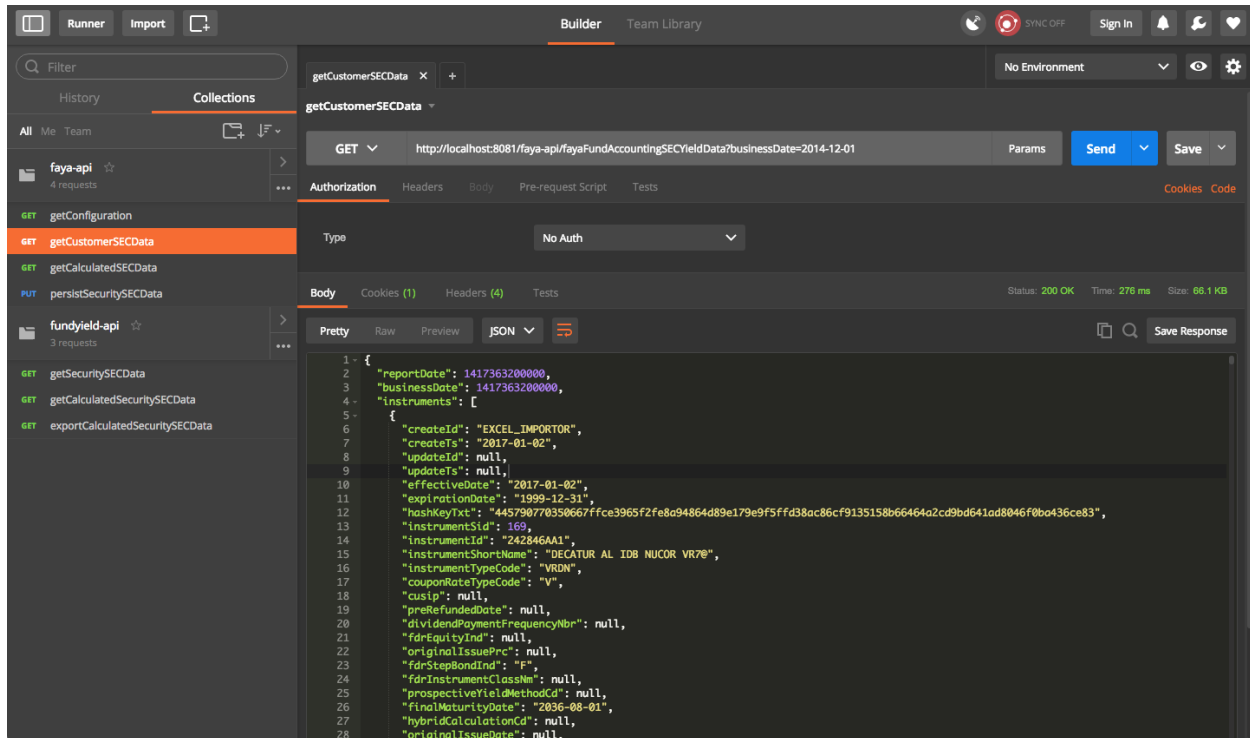
GET <http://localhost:8081/faya-api/securitySECDataConfiguration>

Gets SEC security config for the calculations in engines:



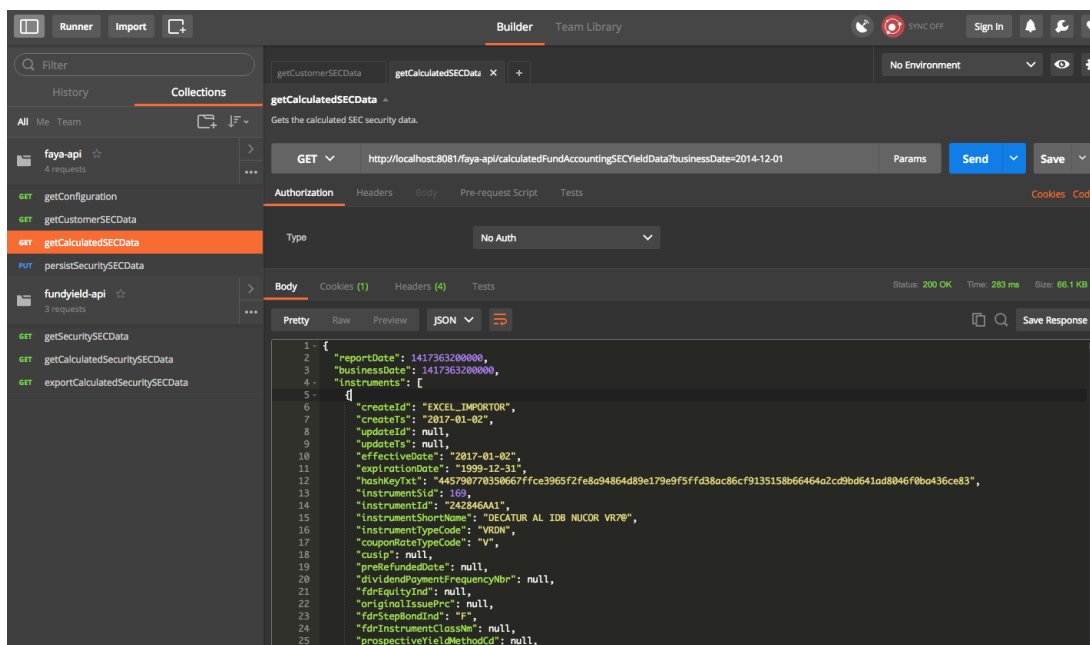
GET <http://localhost:8081/faya-api/fayaFundAccountingSECYieldData?businessDate=2014-12-01>

Gets the customer SEC security data:



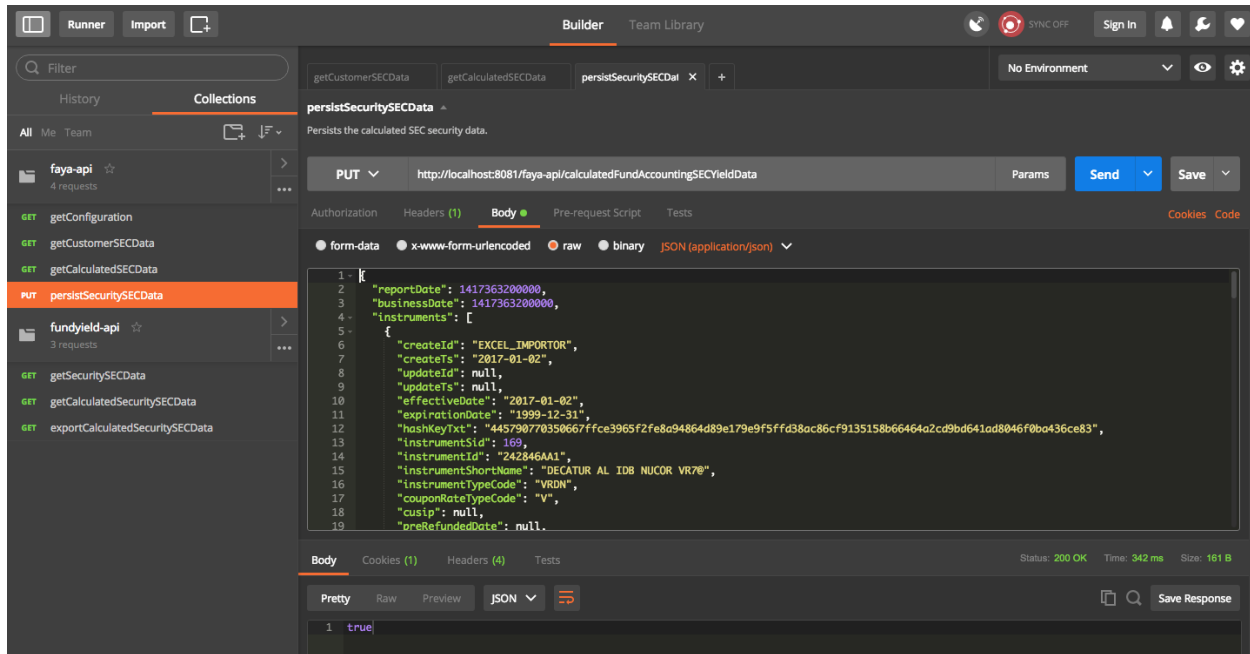
GET <http://localhost:8081/faya-api/calculatedFundAccountingSECYieldData?businessDate=2014-12-01>

Gets the calculated SEC security data:



PUT <http://localhost:8081/faya-api/calculatedFundAccountingSECYieldData>

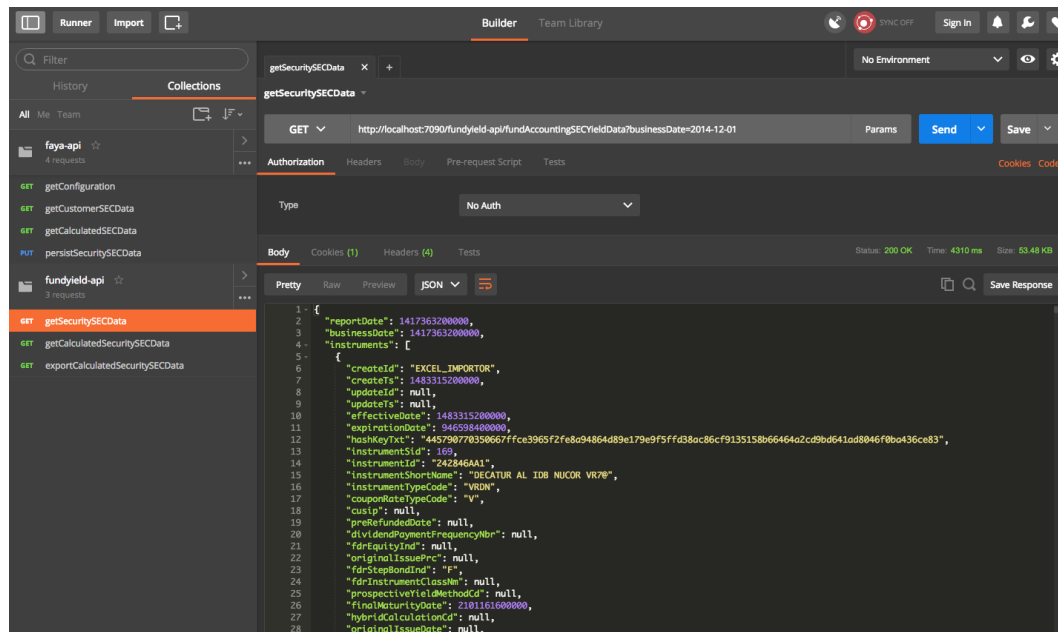
Persists the calculated SEC security data:



fundyield-api

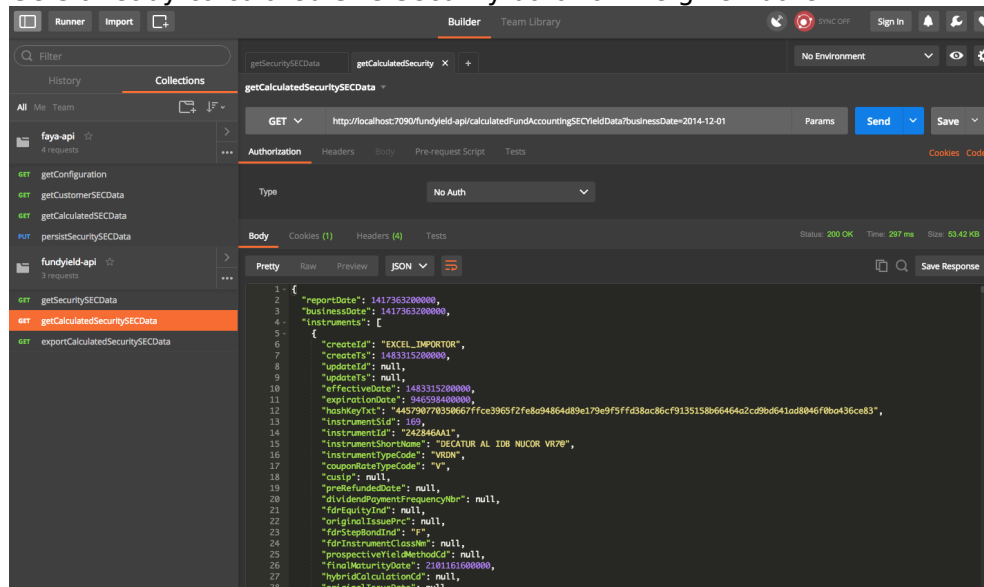
GET <http://localhost:7090/fundyield-api/fundAccountingSECYieldData?businessDate=2014-12-01>

Gets SEC Security data with the calculated data for the business date. The securities are also persisted using customer REST API:



GET http://localhost:7090/fundyield-api/calculatedFundAccountingSECYieldData?
businessDate=2014-12-01

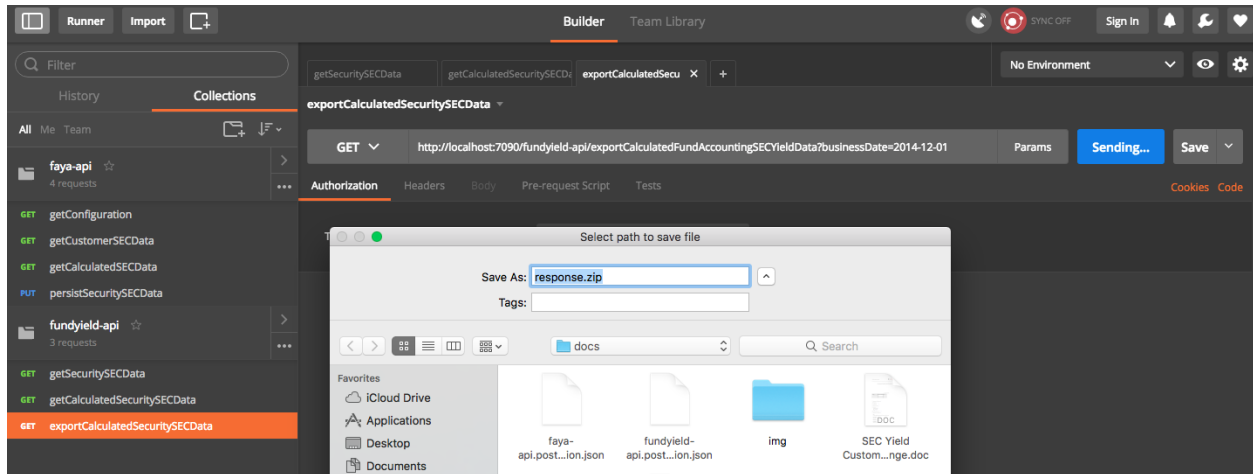
Gets already calculated SEC Security data for the given date:



GET http://localhost:7090/fundyield-api/exportCalculatedFundAccountingSECYieldData?
businessDate=2014-12-01

Exports calculated SEC Security data for the given date:

For downloading, click the arrow near the Send button and then click "Send and Download".



In order to get the correct file name of the export, please test this url in a browser.

Sample Export file:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	securityId	reportDate	derCleanPr	derYieldCalc	derIncomeC	derOneDaySi	derRedempt	derRedempt	derSecurityT	derTIPSinflat	securityPrice	fxRate	lvType	securityNam	finalMaturity	securityYield	interestRt	defIndicator	derStepIndic	derHybridInc	ioHybridFie	as400Rate
2	242846AA1	01/12/2014	100	COUP_RATE	COUPON	0.23	01/08/2036	null	null	1	100	1	VRDN	DECATUR AL	01/08/2036	100	0.2300011	N	F	N	null	V
3	246579AF3	01/12/2014	100	COUP_RATE	COUPON	0.26	01/12/2020	null	null	1	100	1	VRDN	DE VLY PA 85	01/12/2020	100	0.2600005	N	F	N	null	V
4	25154CA20	01/12/2014	100	COUP_RATE	COUPON	0.57	01/08/1954	null	null	1	100	1	DVRN	PR SALE T 03	01/08/1954	100	0.5699986	N	F	N	null	V
5	25155DL33	01/12/2014	100	COUP_RATE	COUPON	0.3	01/12/2033	null	null	1	100	1	DVRN	DEUTSCHE SI	01/12/2033	100	0.3000008	N	F	N	null	V
6	64579FYG2	01/12/2014	100	COUP_RATE	COUPON	0.43	01/07/2038	null	null	1	100	1	DVRN	VIRTUA HTH	01/07/2038	100	0.4299992	N	F	N	null	V
7	646065SM5	01/12/2014	100	COUP_RATE	COUPON	0.25	01/07/2036	null	null	1	100	1	VRDN	NI EFA 08 L	01/07/2036	100	0.2499995	N	F	N	null	V
8	735220AR6	01/12/2014	100	COUP_RATE	COUPON	0.15	01/12/2039	null	null	1	100	1	VRDN	PORT ARTH I	01/12/2039	100	0.1500004	N	F	N	null	V
9	87638QBK6	01/12/2014	100	COUP_RATE	COUPON	0.24	15/11/2029	null	null	1	100	1	DVRN	TARRANT ERI	15/11/2029	100	0.2399985	N	F	N	null	V
10	912828SQ4	01/12/2014	101.226527	YTM	TIPS	0.02	15/04/2017	100	null	1.048	106.07629	1	VPS	USTN TII 121	15/04/2017	100	0.125	N	F	N	null	F
11	912828SQ4	01/12/2014	101.226527	YTM	TIPS	0.02	15/04/2017	100	null	1.048	106.07629	1	VPS	USTN TII 121	15/04/2017	100	0.125	N	F	N	null	F
12	912828SQ4	01/12/2014	101.226527	YTM	TIPS	0.02	15/04/2017	100	null	1.048	106.07629	1	VPS	USTN TII 121	15/04/2017	100	0.125	N	F	N	null	F
13	93978HHQ1	01/12/2014	100	COUP_RATE	COUPON	0.21	01/10/2036	null	null	1	100	1	DVRN	WA HLT CHI	01/10/2036	100	0.2099991	N	F	N	null	V
14	93978HHQ1	01/12/2014	100	COUP_RATE	COUPON	0.21	01/10/2036	null	null	1	100	1	DVRN	WA HLT CHI	01/10/2036	100	0.2099991	N	F	N	null	V
15	885SFQ5	01/12/2014	116.304854	YTM	TIPS	0.02	22/03/2024	100	null	1	116.304854	0.6353442	VPS	UK GILT I/L 3	22/03/2024	100	0.125	N	F	N	null	F
16	885SFQ5	01/12/2014	116.304854	YTM	TIPS	0.02	22/03/2024	100	null	1	116.304854	0.6353442	VPS	UK GILT I/L 3	22/03/2024	100	0.125	N	F	N	null	F
17	885SFQ5	01/12/2014	116.304854	YTM	TIPS	0.02	22/03/2024	100	null	1	116.304854	0.6353442	VPS	UK GILT I/L 3	22/03/2024	100	0.125	N	F	N	null	F
18	885SFQ5	01/12/2014	116.304854	YTM	TIPS	0.02	22/03/2024	100	null	1	116.304854	0.6353442	VPS	UK GILT I/L 3	22/03/2024	100	0.125	N	F	N	null	F
19	885SFQ5	01/12/2014	116.304854	YTM	TIPS	0.02	22/03/2024	100	null	1	116.304854	0.6353442	VPS	UK GILT I/L 3	22/03/2024	100	0.125	N	F	N	null	F
20	88FKMW7	01/12/2014	103.347785	YTM	TIPS	0.02	22/04/2017	100	null	1	103.347785	0.8018282	VPS	ITALY GOVT I	22/04/2017	100	2.25	N	F	N	null	F
21	88FKMW7	01/12/2014	103.347785	YTM	TIPS	0.02	22/04/2017	100	null	1	103.347785	0.8018282	VPS	ITALY GOVT I	22/04/2017	100	2.25	N	F	N	null	F

8. Resource Contact List

Name	Resource Email
TCSASSEMBLER	