**PROJECT STRUCTURE**

**src/main/java**

**com.nymgo**

**data** – test parameters, data providers, excel utils

**adapters** – adapter for fetching data to data providers;

**entity** – nymgo user (normal and reseller), admin user, 3ds user (for 3ds transactions) and credit card entities;

**enums** – nymgo user (normal and reseller), admin user, credit card, data provider, verifies file names variables;

**providers** – data providers for tests;

**testCases** – contains clearTransactionsExcelTest;

**utils** – contains Excel utils and some functions for TempMail site.

**tests** - all about admin site and nymgo site data

**AbstractCase.java**  - describes BeforeSuite, BeforeTest, BeforeMethod, AfterMethod, AfterTest and AfterSuite behavior for TestNG tests. Also initialize browser and test environment before every new test via initStarter method.

**starter** package – loading testing parameters, properties and starting browser

**listeners** – handles TestNG test statused and create screenshots if test fails

**generators** package – provides data, which depends on tests parameters (locale data, server data, deals and currencies data)

**enums** package – contains enumerators for tests

**navigation** package – contains classes for verifying navigation for pages, admin site widgets, admin site popups, alerts and fancyboxes on based on generic types for listed above

**utils** package – contains currencies and deals data, and some helpers for work with them

**fragments** – contains locators, all elements accessing data using browser driver and functions for using them

**BaseFragment.java** – contains common functions such as setting text, navigating by URL, interactions with common elements etc.

**admin** – contains locators, all elements accessing data using browser driver and functions for using them for admin site

**nymgo** – contains locators, all elements accessing data using browser driver and functions for using them for Nymgo site

**tempMail** – contains locators, all elements accessing data using browser driver and functions for using them for TempMail site

**pages** – contains corresponding to fragments page classes with functions for tests

**AbstractPage.java** – contains common functions for pages, navigating by URL.

**admin** – contains corresponding to fragments page classes with functions for tests for admin site

**nymgo** – contains corresponding to fragments page classes with functions for tests for Nymgo site

**tempMail** – contains corresponding to fragments page classes with functions for tests for TempMail site

**src/test/java**

**com.nymgo** – contains test groups

**pom.xml** – contains maven project dependencies

**LOCALE\_\*.properties** – contains locale variables for language (there should be no spaces in initializing) – loaded while initializing Starter. All locale variables should be listed in src/main/java/test/enums/LOCALE\_CONST.java

**AdminUsers.xlsx** – contains Username and Password for logging to admin site

**NymgoUsers.xlsx** – contains Users data for logging to Nymgo site

(some fields are now redundant, valuable fields are: Username, Password, FullName, Email, Mobile, Phone, CountryOfResidence, City, FullAddress, Street, PostelCode, VAT, BonusType, %, BusinessName). Fields on corresponding sheet updates automatically after TestAccountsInfo sheet

**CreditCards.xlsx** – contains data for credit cards which are used in tests

**Verifies.xlsx** – contains data for testing sign Up fields (may be updated in future)

**Activation.txt** – contains formatted Activation email text

**Registration.txt** – contains formatted Registration email text

**config.properties** – default config file. Contains the following:

VERSION –version of build (not used)

PLATFORM – WINDOWS (not used)

BROWSER – CHROME, FIREFOX or IE (listed in src/main/java/test/enums/BROWSER.java)

LOCALE – ENGLISH, FRENCH, ARABIC, TURKISH, INDONESIAN (listed in src/main/java/test/enums/LOCALES.java)

SERVER– DEV, STAGING, LIVE (listed in src/main/java/test/enums/SERVERS.java)

LOGGER\_LEVEL – ALL, DEBUG, ERROR, FATAL, INFO and others – log4j logging level

(listed in src/main/java/test/enums/PROPERTIES.java)

**params.properties** – default properties file. Contains the following:

ADMIN\_FILE\_NAME=AdminUsers.xlsx

USERS\_FILE\_NAME=NymgoUsers.xlsx

TRANSACTIONS\_FILE\_NAME=Transactions.xlsx

CREDIT\_CARDS\_FILE\_NAME=CreditCards.xlsx

VERIFIES\_FILE\_NAME=Verifies.xlsx

REGISTRATION\_FILE\_NAME=Registration.txt

ACTIVATION\_FILE\_NAME=Activation.txt

IMPLICITLY\_WAIT\_TIME=20

CORRECT\_PAGE\_WAIT\_TIME=5

ELEMENT\_WAIT\_TIME=3

INITIALIZED\_ELEMENT\_WAIT\_TIME=3

IFRAME\_WAIT\_TIME=90

ADMIN\_TAB\_WAIT\_TIME=60

In TestNG xml suite file you can set parameters

<parameter name="config.file.name" value="config.dev.properties" />

<parameter name="params.file.name" value="params.properties" />

If you need to set a custom config or parameters you have to create \*.properties file and list it within suite parameters values.

**conversionRates.DEV.properties** – contains dev server data for currencies from currency\_history table of phpadmin site, \_website database. Should be updated manually before tests, which uses currency conversion rates, start.

Conversion rates files, Locale files and server files are listed in src/main/java/test/enums/FILES\_NAMES.java

**TESTS**

According to Maven rules, tests are located in src/test/java com.nymgo and grouped by common use.

**AdminNormalMembersCase.java** – uses ***USER\_AND\_PAYMENT\_PARAMS\_PROVIDER*** data provider,contains test for changing normal user’s gateway (by gatewayName parameter) on admin

**AdminResellersCase.java** – uses ***USER\_AND\_PAYMENT\_PARAMS\_PROVIDER*** data provider,contains test for changing resells and master reseller’s gateway (by gatewayName parameter) on admin

**AdminSignInCase.java** – contains test for signing in to admin using data from AdminUsers.xlsx

**AdminTransactionsCase.java** – uses ***USER\_AND\_PAYMENT\_PARAMS\_PROVIDER*** data provider,contains tests for accepting, cancelling and declining deals and transactions for normal users and resellers on admin

**BuyCreditCase.java** – uses ***USER\_AND\_PAYMENT\_PARAMS\_PROVIDER*** data provider,contains tests for all combinations for:

* normal user, reseller or masterReseller;
* European or international user;
* GlobalCollect, Adyen or Worldpay gateway.

**BuyDealCase.java** – uses ***USER\_AND\_PAYMENT\_PARAMS\_PROVIDER*** data provider,contains tests for all combinations for:

* normal user or reseller;
* European or international user;
* GlobalCollect, Adyen or Worldpay gateway.

**DefaultCase.java** – contains test with setting Nymgo site to the default tests state (no user is logger, language is default for the tests)

**DefaultCreditCardCase.java** – contains tests for setting default test card for Adyen and Worlpay gateways using CreditCard.xlsx data. User has to have recurrent credit card set already.

**PayCreditCardAddNewCardCase.java** – contains tests for setting new recurrent card for Adyen and Worlpay gateways, such as Visa, AmericanExpress, MasterCard using CreditCard.xlsx data

**PayCreditCardCase.java** – contains tests for paying with different cards for different gateways, such as:

* Visa, AmericanExpress and MasterCard using CreditCard.xlsx cards sheets;
* 3DS Visa, 3DS AmericanExpress and 3DS MasterCard using CreditCard.xlsx cards sheets and “3DSUser” sheet ;
* GlobalCollect, Adyen or Worldpay gateway;
* pending transactions for all combinations above, successful and challenged for Visa+GlobalCollect

**PayCreditCardRecurrentCase.java** – contains tests for paying using recurrent MasterCard card for Worldpay and Adyen gateways.

**SignInCase.java** – uses ***LOGIN\_USER\_PROVIDER*** data provider,contains tests for signing in to Nymgo as normal user and reseller/master reseller (by loginUser parameter)

**SignUpCase.java** - contains tests for success signing up to Nymgo as normal user and reseller using TempMail utils (src/main/java/data/utils/NewEmailUtils.java) and verifying all mandatory fields (uses ***FULLNAME\_SIGN\_UP\_VERIFIES, USERNAME\_SIGN\_UP\_VERIFIES, PASSWORD\_SIGN\_UP\_VERIFIES, CONFIRM\_PASSWORD\_SIGN\_UP\_VERIFIES, EMAIL\_SIGN\_UP\_VERIFIES, MOBILE\_SIGN\_UP\_VERIFIES, BUSINESS\_NAME\_SIGN\_UP\_VERIFIES, PHONE\_SIGN\_UP\_VERIFIES, CITY\_SIGN\_UP\_VERIFIES, COUNTRY\_OF\_RESIDENCE\_SIGN\_UP\_VERIFIES, FULL\_ADDRESS\_SIGN\_UP\_VERIFIES, STREET\_SIGN\_UP\_VERIFIES, POSTAL\_CODE\_SIGN\_UP\_VERIFIES*** data providers from Verifies.xlsx corresponding sheets)

**TransferCreditsCase.java** – not fully completed. Uses ***TRANSFER\_PARAMS\_PROVIDER*** data provider,Contains tests for normal user to normal user transfer credit, masterReseller to masterReseller transfer credit, reseller to normal user transfer credit, masterReseller to reseller transfer credit and topUp request from reseller to masterReseller

**VerifyBuyCreditCase.java** – uses ***USER\_AND\_PAYMENT\_PARAMS\_PROVIDER*** data provider, contains tests for verifying accepted and cancelled buy credit transactions for normal users and reseller/masterReseller

**VerifyDealCase.java** – uses ***USER\_AND\_PAYMENT\_PARAMS\_PROVIDER*** data provider, contains tests for verifying accepted deal transactions for normal users and resellers

**VerifyTransferCreditsCase.java** – not fully completed. Uses ***TRANSFER\_PARAMS\_PROVIDER*** data provider,Contains tests for verifying normal user to normal user transfer credit, masterReseller to masterReseller transfer credit, reseller to normal user transfer credit, masterReseller to reseller transfer credit and topUp request from reseller to masterReseller

**ViewAccountCases.java** – uses ***SET\_NORMAL\_USER\_PARAMS\_PROVIDER, SET\_RESELLER\_PARAMS\_PROVIDER*** data providers,contains tests for editing normal user, reseller and masterReseller account details section. Should be updated in future with other sections

**DATA PROVIDERS**

***FULLNAME\_SIGN\_UP\_VERIFIES*** – provides test data from “FullName” sheet of Verifies.xlsx

***USERNAME\_SIGN\_UP\_VERIFIES*** – provides test data from “Username” sheet of Verifies.xlsx

***PASSWORD\_SIGN\_UP\_VERIFIES*** – provides test data from “Password” sheet of Verifies.xlsx

***CONFIRM\_PASSWORD\_SIGN\_UP\_VERIFIES*** – provides test data from “ConfirmPassword” sheet of Verifies.xlsx

***EMAIL\_SIGN\_UP\_VERIFIES*** – provides test data from “Email” sheet of Verifies.xlsx

***MOBILE\_SIGN\_UP\_VERIFIES*** – provides test data from “Mobile” sheet of Verifies.xlsx

***BUSINESS\_NAME\_SIGN\_UP\_VERIFIES*** – provides test data from “BusinessName” sheet of Verifies.xlsx

***PHONE\_SIGN\_UP\_VERIFIES*** – provides test data from “Phone” sheet of Verifies.xlsx

***CITY\_SIGN\_UP\_VERIFIES*** – provides test data from “City” sheet of Verifies.xlsx

***COUNTRY\_OF\_RESIDENCE\_SIGN\_UP\_VERIFIES*** – provides test data from “CountryOfResidence” sheet of Verifies.xlsx

***FULL\_ADDRESS\_SIGN\_UP\_VERIFIES*** – provides test data from “FullAddress” sheet of Verifies.xlsx

***STREET\_SIGN\_UP\_VERIFIES*** – provides test data from “Street” sheet of Verifies.xlsx

***POSTAL\_CODE\_SIGN\_UP\_VERIFIES*** – provides test data from “Postalcode” sheet of Verifies.xlsx

***USER\_AND\_PAYMENT\_PARAMS\_PROVIDER*** – provides test data from TestNG test suite xml parameters:

* paymentCurrency;
* dealCurrecncy;
* dealName;
* dealQuantity;
* countryOfCredit;
* cardType;
* gatewayName;
* currencyAmount;
* bonusType;
* bonusTypeValue;
* loginUser.

Almost all parameters are optional and are used in different tests. For example for BuyCredit suite loginUser, paymentCurrency, cardType and gatewayName are mandatory, others may be not listed at all, depends on tests flow.

***SET\_NORMAL\_USER\_PARAMS\_PROVIDER*** – provides test data from TestNG test suite xml parameters:

* fullName;
* mobile;
* phone;
* countryOgResidence;
* city;
* address;
* street;
* postalCodel
* displayCurrency;
* paymentCurrency;
* language.

This parameters are used while updating normal user account details if they are not null

***SET\_RESELLER\_PARAMS\_PROVIDER*** – provides test data from TestNG test suite xml parameters:

* fullName;
* mobile;
* phone;
* countryOgResidence;
* city;
* address;
* street;
* postalCodel
* displayCurrency;
* paymentCurrency;
* language.

This parameters are used while updating reseller account details if they are not null

***SET\_MASTER\_RESELLER\_PARAMS\_PROVIDER*** – provides test data from TestNG test suite xml parameters:

* fullName;
* mobile;
* phone;
* countryOgResidence;
* city;
* address;
* street;
* postalCodel
* displayCurrency;
* paymentCurrency;
* language.

This parameters are used while updating masterReseller account details if they are not null

Three providers above may be updated in future according to added parameters, specific for user.

***TRANSFER\_PARAMS\_PROVIDER*** – provides test data from TestNG test suite xml parameters:

* userFrom;
* userTo;
* transferAmount.

***LOGIN\_USER\_PROVIDER*** – provides test data from TestNG test suite xml parameters:

* loginUser.

User’s full entity is defined by name of NYMGO\_USER enumerator and is filled with data from corresponding sheets of NymgoUsers.xlsx by DataAdapter functions.

**TEST SUITE STRUCTURE**

Example of TestNG test suite:

<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd">

<suite thread-count="1" verbose="1" name="Transactions Smoke Suite" preserve-order="true">

<listeners>

<listener class-name="com.nymgo.tests.listeners.LoggerTestListener" />

</listeners>

<parameter name="config.file.name" value="config.dev.properties" />

<parameter name="params.file.name" value="params.properties" />

<test name="Test - Clear Transactions file" preserve-order="true">

<classes>

<class name="com.nymgo.data.testCases.ExcelCases">

<methods>

<include name="clearTransactionsExcelTest" />

</methods>

</class>

</classes>

</test>

<test name="Test - Change Inter NormalUser Gateway to Adyen" preserve-order="true">

<parameter name="loginUser" value="InterNormalWhitelist" />

<parameter name="gatewayName" value="Adyen" />

<classes>

<class name="com.nymgo.AdminSignInCase">

<methods>

<include name="signInAdminTest" />

</methods>

</class>

<class name="com.nymgo.AdminNormalMembersCase">

<methods>

<include name="editNormalUserGatewayAdminTest" />

</methods>

</class>

</classes>

</test>

<test name="Test - BuyDeal Inter NormalUser KWD Adyen Indonesia Deal 540 MasterCard" preserve-order="true">

<parameter name="loginUser" value="InterNormalWhitelist" />

<parameter name="paymentCurrency" value="KWD" />

<parameter name="cardType" value="MasterCard" />

<parameter name="gatewayName" value="Adyen" />

<parameter name="dealCurrency" value="IDR" />

<parameter name="dealName" value="Indonesia Deal 540" />

<classes>

<class name="com.nymgo.DefaultCase">

<methods>

<include name="setNymgoDefaultState" />

</methods>

</class>

<class name="com.nymgo.SignInCase">

<methods>

<include name="signInNormalUserTest" />

</methods>

</class>

<class name="com.nymgo.ViewAccountCases">

<methods>

<include name="editNormalUserAccountTest" />

</methods>

</class>

<class name="com.nymgo.BuyDealCase">

<methods>

<include name="buyDealLoggedInterNormalUserAdyenTest" />

</methods>

</class>

<class name="com.nymgo.PayCreditCardCase">

<methods>

<include name="payMasterCardAdyenPendingTest" />

</methods>

</class>

<class name="com.nymgo.AdminSignInCase">

<methods>

<include name="signInAdminTest" />

</methods>

</class>

<class name="com.nymgo.AdminTransactionsCase">

<methods>

<include name="acceptNormalUserTransactionAdminTest" />

</methods>

</class>

<class name="com.nymgo.VerifyDealCase">

<methods>

<include name="verifyDealAcceptedLoggedNormalUserTest" />

</methods>

</class>

</classes>

</test>

</suite>

**EXCEL UTILS FUNCTIONS**

This part is describing src/main/java/com/nymgo/data/utils/ExcelUtils some functions, which are used by tests and DataAdapter.

The following functions are used by tests:

**addUserAndCurrencyAndBalanceAndAmountAndCardTypeData(String username, String currency, String balance, String amount, String cardType)** – fills in Username, paymentCurrency, balance before transactions/number of deals before, currencyAmount/dealName, cardName+gatewayName for transactions/deals in Transactions.xlsx

**addTransactionData(String transactionID)** – fills in transactionID for transactions/deals in Transactions.xlsx

**getAccountBalanceBeforeTransaction(String transactionID)** – returns balanceBefore by transactionID from Transactions.xlsx

**addExpectedAndActualAddedAmountData(String expected, String actual)** – fills in expected currencyAmount/deals count, actual currencyAmount/deals count for transactions/deals in Transactions.xlsx

The following functions are used by DataAdapter:

* getAdminEntity(String filePath, String sheetName);
* getThreeDSUserEntity(String filePath, String sheetName);
* getFullUserEntity(String filePath, String sheetName);
* getFullCardEntity(String filePath, String sheetName);
* getFullNameVerifiesArray();
* getBusinessNameVerifiesArray();
* getUsernameVerifiesArray();
* getPasswordVerifiesArray();
* getConfirmPasswordVerifiesArray();
* getEmailVerifiesArray();
* getPhoneVerifiesArray();
* getMobileVerifiesArray();
* getCountryOfResidenceVerifiesArray();
* getCityVerifiesArray();
* getFullAddressVerifiesArray();
* getStreetVerifiesArray();
* getPostalCodeVerifiesArray().

**TEST RUN COMMENTS**

To run tests via Eclipse:

* intall Java;
* install TestNG for Eclipse (Eclipse -> Help -> Eclipse Marketplace -> Search);
* start xml file from Eclipse.

To run tests via Maven command line:

* install Java;
* install Maven;
* navigate to the project folder in the terminal and type:

mvn clean

mvn test

Test suite, which listed in the pom.xml parameter  <suiteXmlFile></suiteXmlFile> will start

In case of using Chrome as test browser you have to download chromedriver (<https://sites.google.com/a/chromium.org/chromedriver/downloads>) and store it by path "\\drivers\\ChromeDriver\\chromedriver.exe" in the project folder or change the system property for chromedriver in Starter getBrowser() function

In case of using IE as test browser you have to download Internet Explorer Driver Server (<http://www.seleniumhq.org/download/>) and store it by path

"\\drivers\\IEDriver\\IEDriverServer.exe" in the project folder or change the system property for IEDriverServer in Starter getBrowser() function

On Monday and Friday following siutes should be run:

* TransactionsSmokeSuite.xml;
* DealsSmokeSuite.xml;
* RecurrentPaymentsSmokeSuite.xml;
* DeclinedAndCancelledTransactionsSmokeSuite.xml

For transactions and deals tests you have to check transactions status on Worldpay and Adyen sites and fill in the Transactions report manually. Autotests Transactions file is stored in TransactionsReportExample/Transactions.xlsx, manually verified file example is stored in TransactionsReportExample/Transactions\_03\_28.xlsx