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Version: 1.0 / 2019-10-30

Introduction

EPlug is a plugin to extend the Eclipse Java Integrated Development Environment with support and additional features for development with the JVx Application Framework and the VisionX Rapid Application Development Tool.

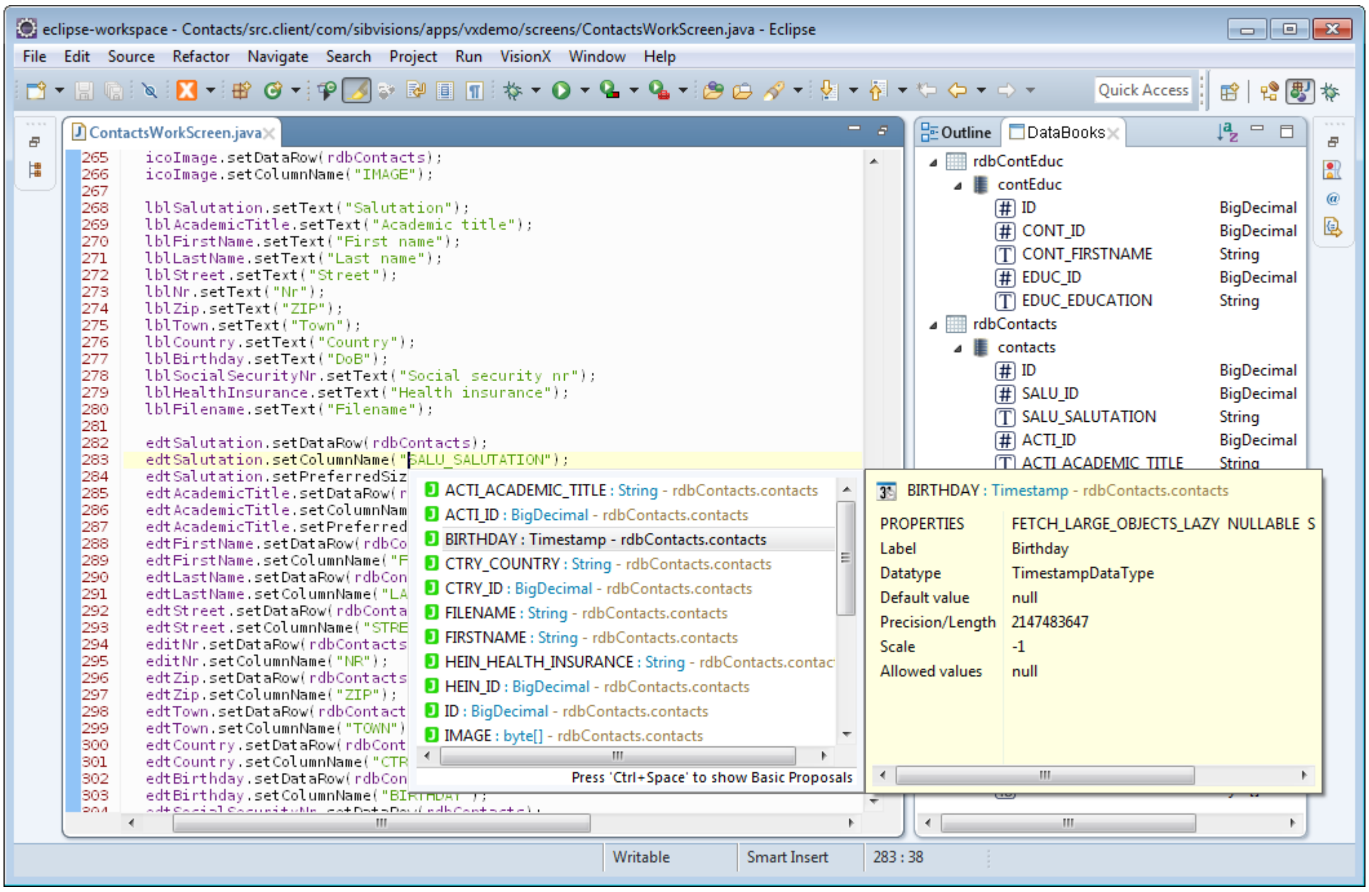
Because JVx is utilizing various different techniques to achieve its goals and the necessity to work around technical limitations, we provide support to IDEs like Eclipse to achieve a very good user experience when building complex applications.

Features

EPlug extends the Java IDE with additional features and functionality, for example:

- Extended auto-completion
- Extended compile-time checks
- Extended hover information
- Various commands

Additionally, it adds the ability to interact with VisionX directly from the Java IDE for certain actions, both triggered by the user and automatically.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
ContactsWorkScreen.java
Outline DataBooks
Writable
Smart Insert
283 : 38

```
    icoImage.setDataRow(rdbContacts);
    icoImage.setColumnName("IMAGE");

    lblSalutation.setText("Salutation");
    lblAcademicTitle.setText("Academic title");
    lblFirstName.setText("First name");
    lblLastName.setText("Last name");
    lblStreet.setText("Street");
    lblNr.setText("Nr");
    lblZip.setText("ZIP");
    lblTown.setText("Town");
    lblCountry.setText("Country");
    lblBirthday.setText("DoB");
    lblSocialSecurityNr.setText("Social security nr");
    lblHealthInsurance.setText("Health insurance");
    lblFilename.setText("Filename");

    edtSalutation.setDataRow(rdbContacts);
    edtSalutation.setColumnName("SALU_SALUTATION");
    edtSalutation.setPreferredSiz
    edtAcademicTitle.setDataRow(r
    edtAcademicTitle.setColumnNam
    edtAcademicTitle.setPreferred
    edtFirstName.setDataRow(rdbCo
    edtFirstName.setColumnName("F
    edtLastName.setDataRow(rdbCon
    edtLastName.setColumnName("LA
    edtStreet.setDataRow(rdbConta
    edtStreet.setColumnName("STRE
    editNr.setDataRow(rdbContacts
    editNr.setColumnName("NR");
    edtZip.setDataRow(rdbContacts
    edtZip.setColumnName("ZIP");
    edtTown.setDataRow(rdbContact
    edtTown.setColumnName("TOWN")
    edtCountry.setDataRow(rdbCont
    edtCountry.setColumnName("CTR
    edtBirthday.setDataRow(rdbCon
    edtBirthday.setColumnName("BIRTHDAY");
```

```
ACTI_ACADEMIC_TITLE : String - rdbContacts.contacts
ACTI_ID : BigDecimal - rdbContacts.contacts
BIRTHDAY : Timestamp - rdbContacts.contacts
CTRY_COUNTRY : String - rdbContacts.contacts
CTRY_ID : BigDecimal - rdbContacts.contacts
FILENAME : String - rdbContacts.contacts
FIRSTNAME : String - rdbContacts.contacts
HEIN_HEALTH_INSURANCE : String - rdbContacts.contac
HEIN_ID : BigDecimal - rdbContacts.contacts
ID : BigDecimal - rdbContacts.contacts
IMAGE : byte[] - rdbContacts.contacts
                  Press 'Ctrl+Space' to show Basic Proposals
```

BIRTHDAY : Timestamp - rdbContacts.contacts

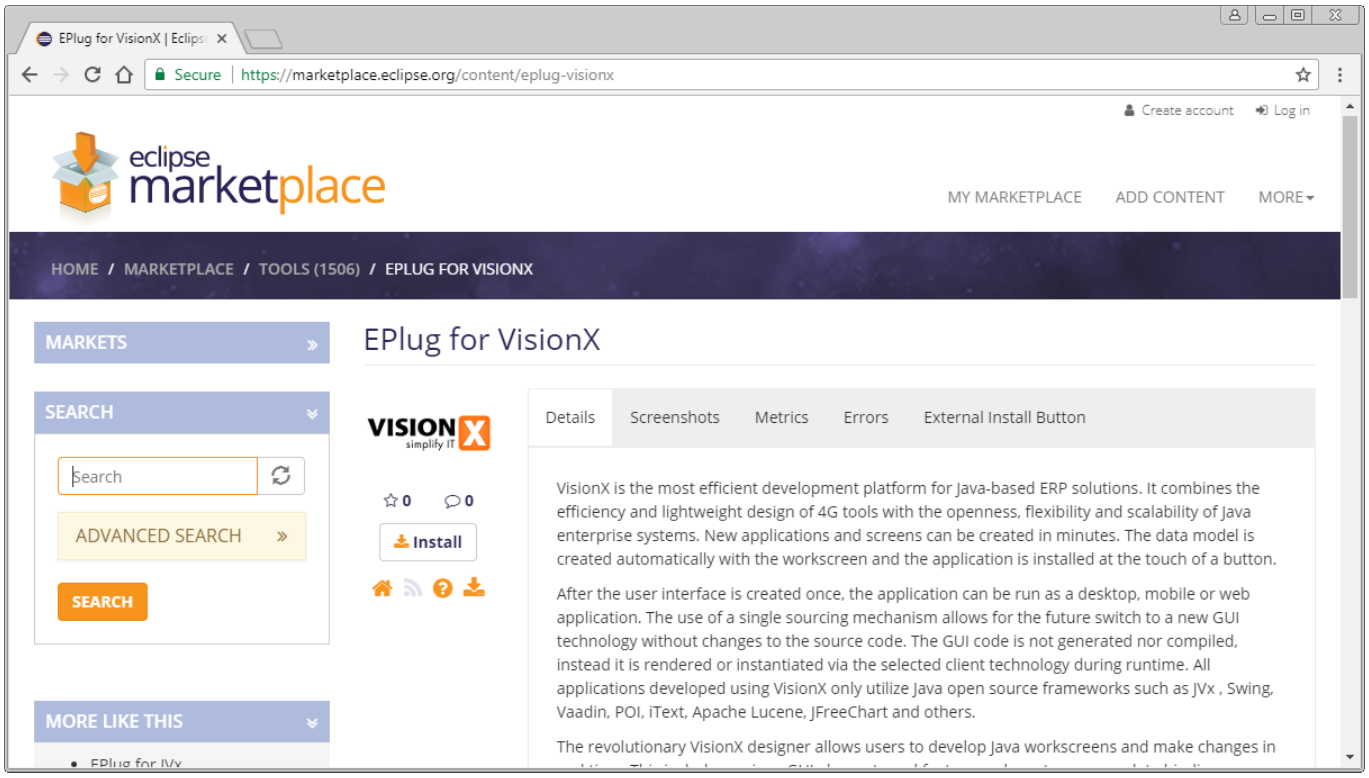
PROPERTIES	FETCH_LARGE_OBJECTS_LAZY NULLABLE S
Label	Birthday
Datatype	TimestampDataType
Default value	null
Precision/Length	2147483647
Scale	-1
Allowed values	null

```
rdbContEduc
  contEduc
    ID                 BigDecimal
    CONT_ID            BigDecimal
    CONT_FIRSTNAME     String
    EDUC_ID            BigDecimal
    EDUC_EDUCATION     String
rdbContacts
  contacts
    ID                 BigDecimal
    SALU_ID            BigDecimal
    SALU_SALUTATION    String
    ACTI_ID            BigDecimal
    ACTI_ACADEMIC_TITLE String
```

For a complete and detailed list of features, see Interaction with VisionX.

Installation

EPlug can be installed from the Eclipse Marketplace by using the EPlug marketplace entry.



EPlug for VisionX

VisionX is the most efficient development platform for Java-based ERP solutions. It combines the efficiency and lightweight design of 4G tools with the openness, flexibility and scalability of Java enterprise systems. New applications and screens can be created in minutes. The data model is created automatically with the workscreen and the application is installed at the touch of a button.

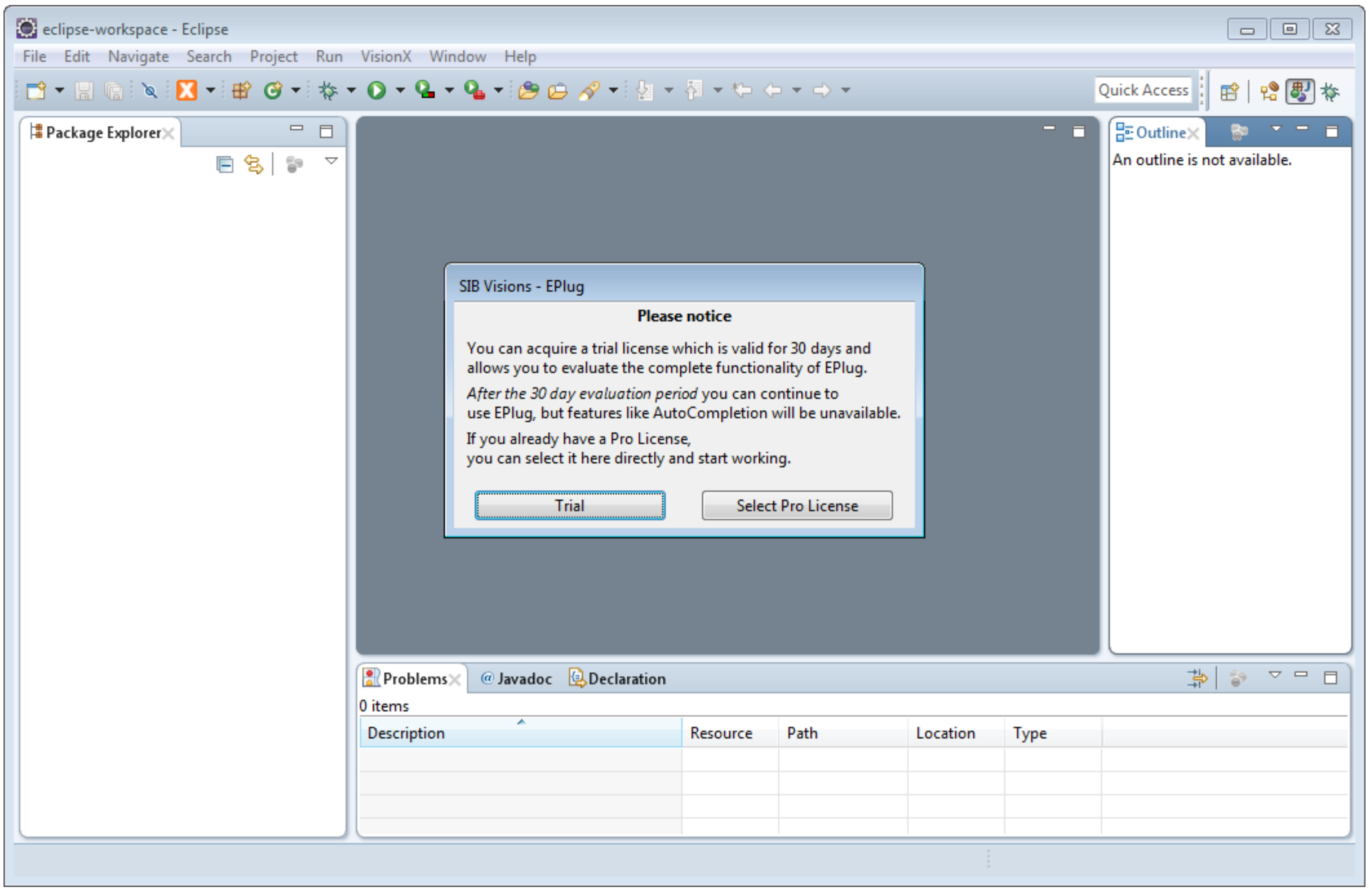
After the user interface is created once, the application can be run as a desktop, mobile or web application. The use of a single sourcing mechanism allows for the future switch to a new GUI technology without changes to the source code. The GUI code is not generated nor compiled, instead it is rendered or instantiated via the selected client technology during runtime. All applications developed using VisionX only utilize Java open source frameworks such as JVx , Swing, Vaadin, POI, iText, Apache Lucene, JFreeChart and others.

The revolutionary VisionX designer allows users to develop Java workscreens and make changes in

Drag the “Install” into the running Eclipse instance to install the plugin.

License and Trial

When Eclipse started the first time after EPlug has been installed, a prompt is opened to either select a commercial license file from the local disk or to request a new trial license from the license server.


eclipse-workspace - Eclipse
File Edit Navigate Search Project Run VisionX Window Help
Quick Access
Package Explorer
Outline
An outline is not available.
Problems
Javadoc
Declaration
0 items
Description
Resource
Path
Location
Type

SIB Visions - EPlug

Please notice

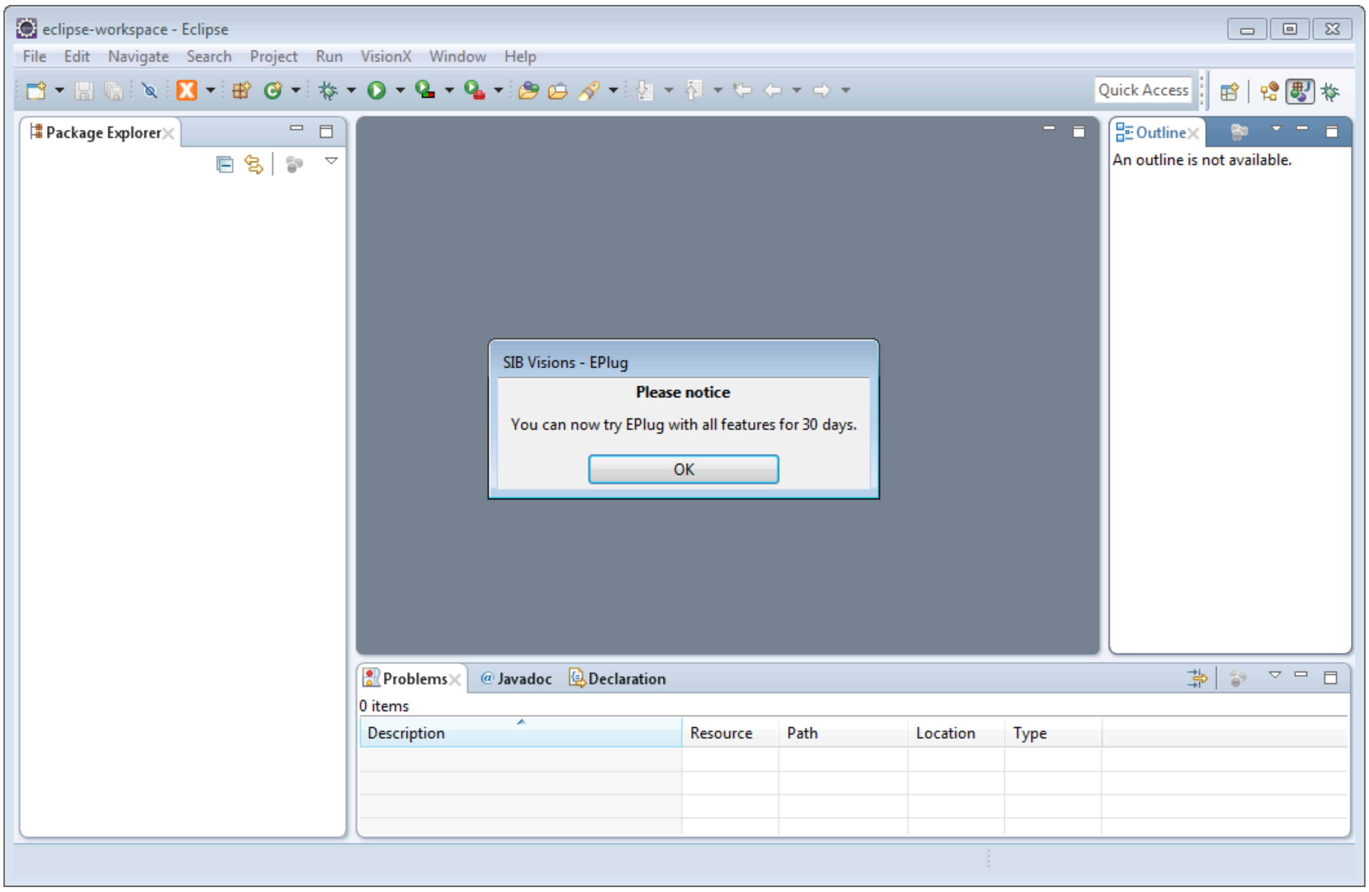
You can acquire a trial license which is valid for 30 days and allows you to evaluate the complete functionality of EPlug.

After the 30 day evaluation period you can continue to use EPlug, but features like AutoCompletion will be unavailable.

If you already have a Pro License, you can select it here directly and start working.

Trial | Select Pro License

When a new trial license is requested, the license server will be contacted and a new, unique trial license will be issued.


eclipse-workspace - Eclipse
File Edit Navigate Search Project Run VisionX Window Help
Quick Access
Package Explorer
Outline
An outline is not available.
Problems
Javadoc
Declaration
0 items
Description
Resource
Path
Location
Type

SIB Visions - EPlug

Please notice

You can now try EPlug with all features for 30 days.

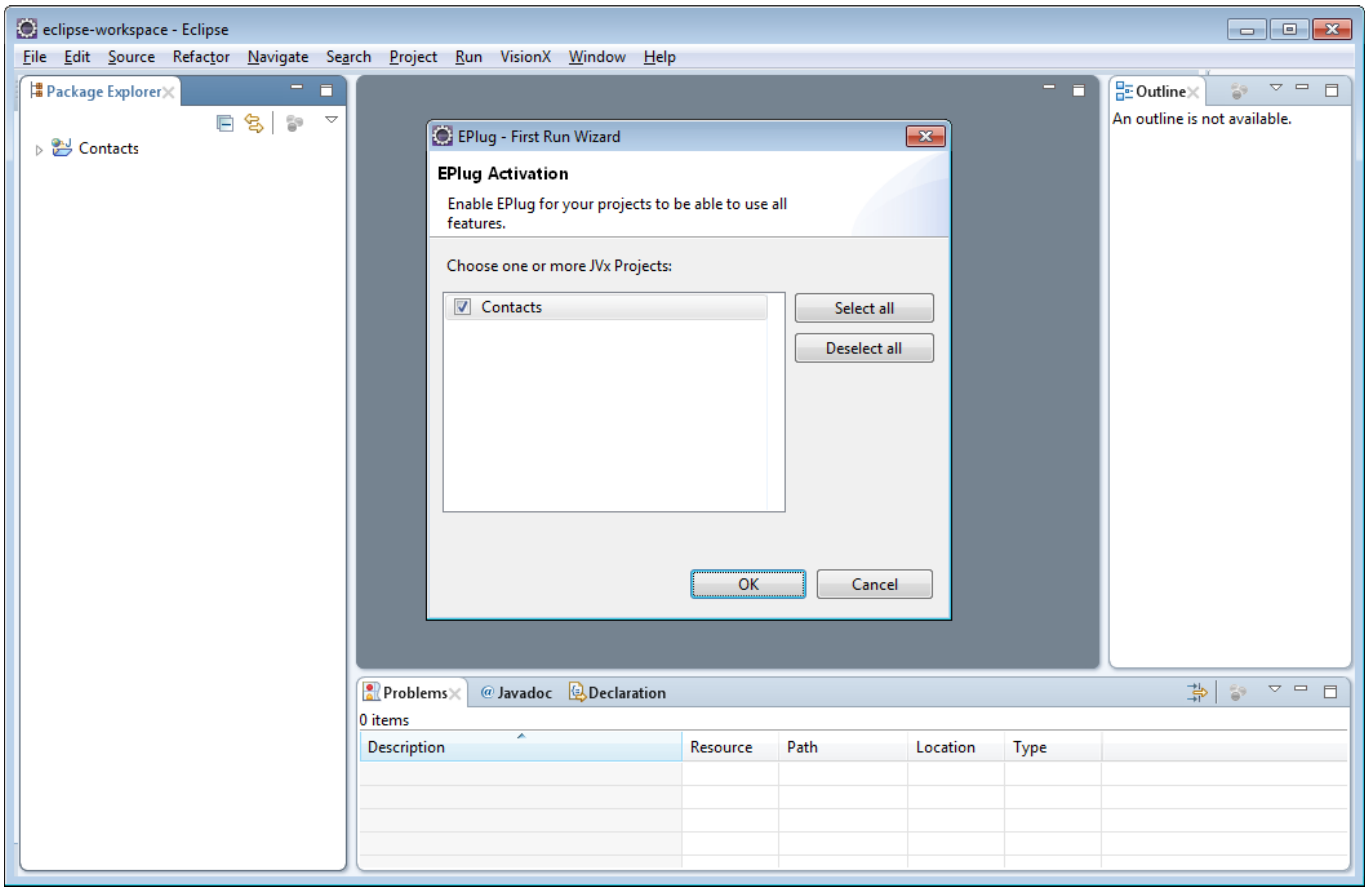
OK

A commercial license can also be selected anytime in the preferences under `EPlug -> License`.

In the preferences, you can also view various information about the license, including the time remaining until it is expiring if it is a trial license.

Using EPlug

For all features to be available, EPlug must be activated on the current project. This can be done through the First Run Wizard which is displayed when Eclipse is started the first time after the EPlug installation.



An outline is not available.

EPlug Activation

Enable EPlug for your projects to be able to use all features.

Choose one or more JVx Projects:

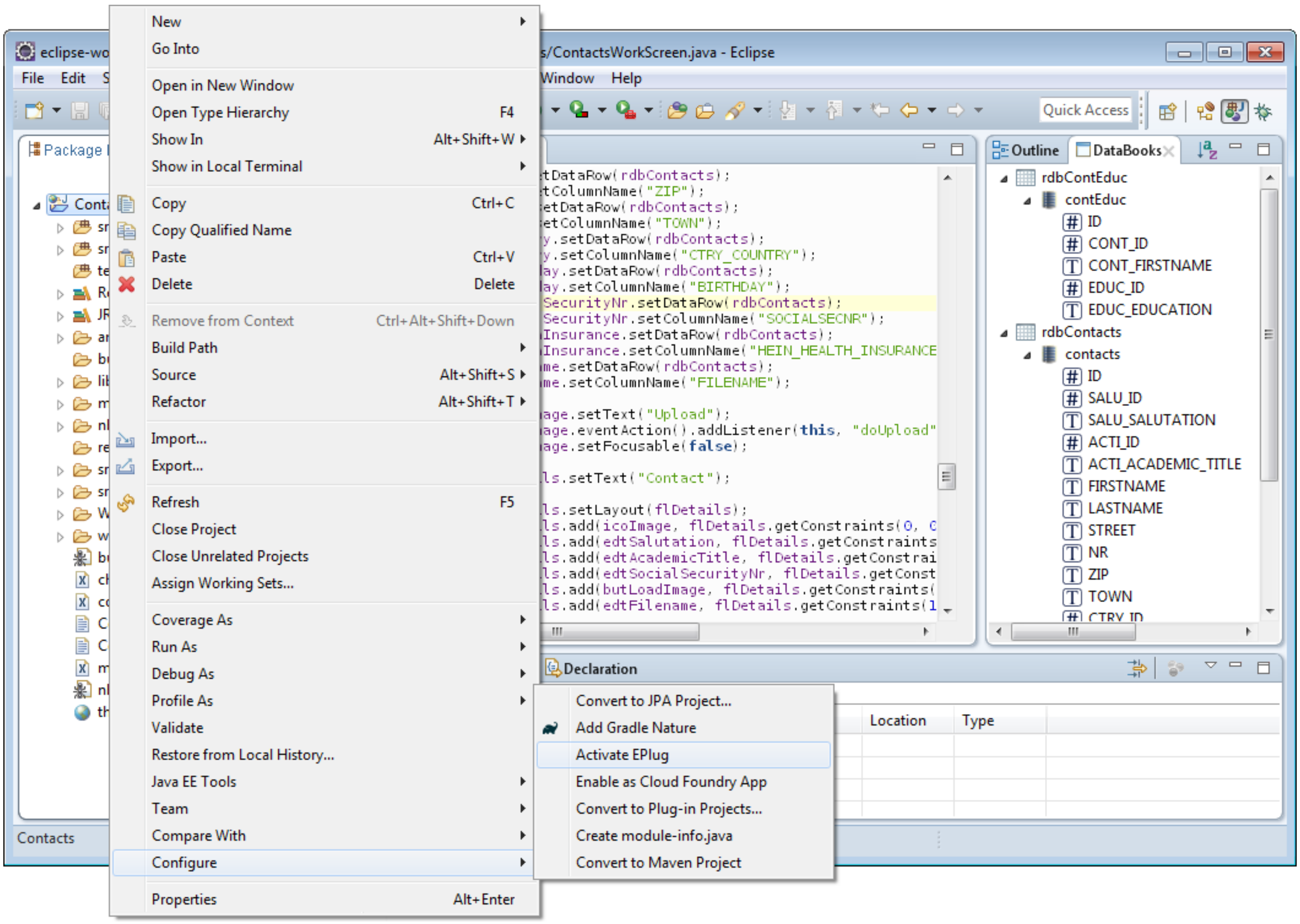
☑ Contacts

0 items

Description	Resource	Path	Location	Type

Select all projects on which you want to enable EPlug and press “OK”.

Afterwards, EPlug can be activated on single projects through the project context menu.

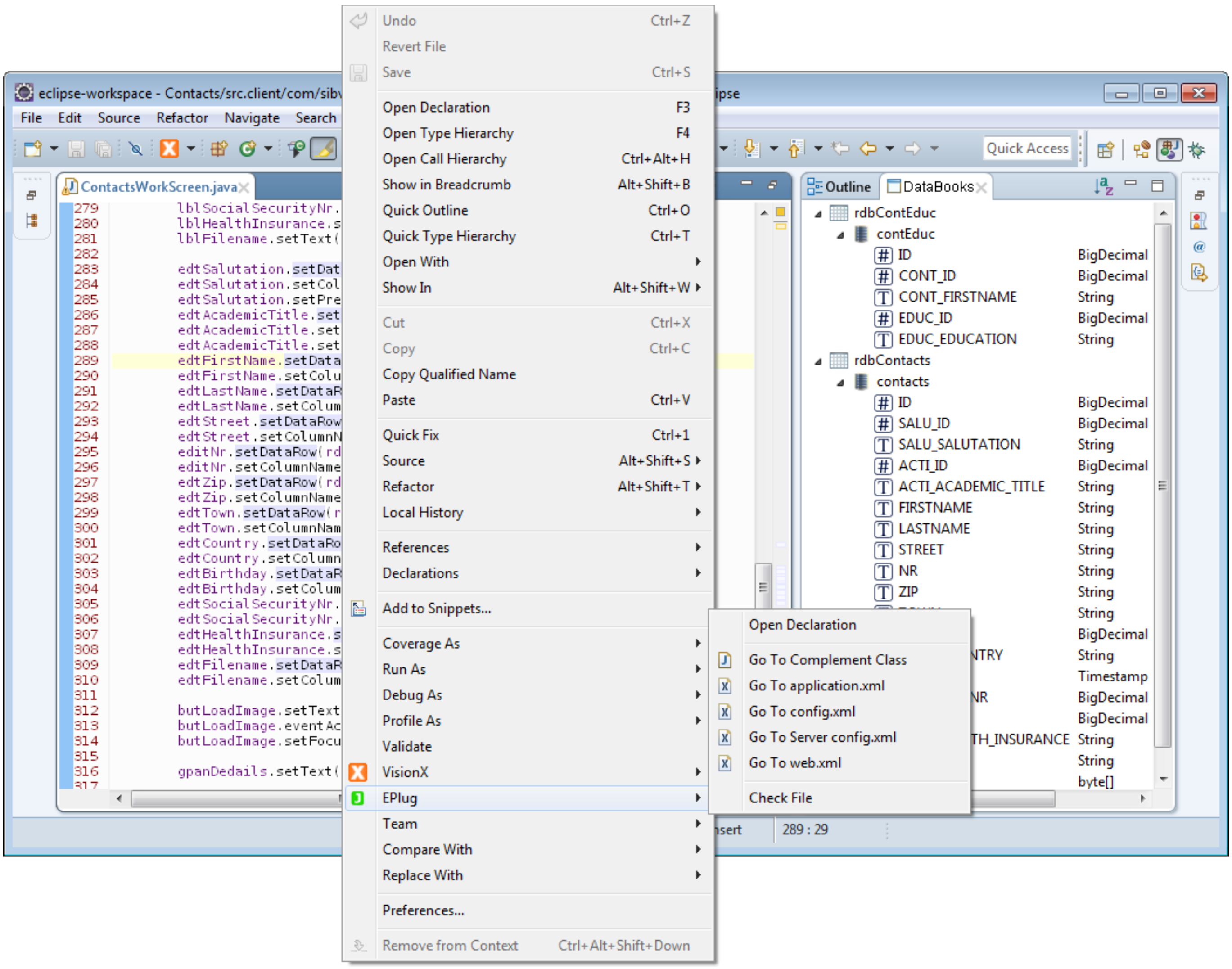


```
tDataRow(rdbContacts);
tColumnName("ZIP");
etDataRow(rdbContacts);
etColumnName("TOWN");
y.setDataRow(rdbContacts);
y.setColumnName("CTRY_COUNTRY");
ay.setDataRow(rdbContacts);
ay.setColumnName("BIRTHDAY");
SecurityNr.setDataRow(rdbContacts);
SecurityNr.setColumnName("SOCIALSECNR");
Insurance.setDataRow(rdbContacts);
Insurance.setColumnName("HEIN_HEALTH_INSURANCE
me.setDataRow(rdbContacts);
me.setColumnName("FILENAME");

age.setText("Upload");
age.eventAction().addListener(this, "doUpload"
age.setFocusable(false);

ls.setText("Contact");

ls.setLayout(flDetails);
ls.add(icoImage, flDetails.getConstraints(0, 0
ls.add(edtSalutation, flDetails.getConstraints
ls.add(edtAcademicTitle, flDetails.getConstrai
ls.add(edtSocialSecurityNr, flDetails.getConst
ls.add(butLoadImage, flDetails.getConstraints(
ls.add(edtFilename, flDetails.getConstraints(1
```

Or through the project preferences.

Commands

EPlug provides various commands which can be used to navigate the project. These are either available from the context menu on a source file or can be assigned custom keybindings through the Eclipse preferences.



```
        lblSocialSecurityNr.
        lblHealthInsurance.s
        lblFilename.setText(

        edtSalutation.setDat
        edtSalutation.setCol
        edtSalutation.setPre
        edtAcademicTitle.set
        edtAcademicTitle.set
        edtAcademicTitle.set
        edtFirstName.setData
        edtFirstName.setColu
        edtLastName.setDataR
        edtLastName.setColum
        edtStreet.setDataRow
        edtStreet.setColumnN
        editNr.setDataRow(rd
        editNr.setColumnName
        edtZip.setDataRow(rd
        edtZip.setColumnName
        edtTown.setDataRow(r
        edtTown.setColumnNam
        edtCountry.setDataRo
        edtCountry.setColumn
        edtBirthday.setDataR
        edtBirthday.setColum
        edtSocialSecurityNr.
        edtSocialSecurityNr.
        edtHealthInsurance.s
        edtHealthInsurance.s
        edtFilename.setDataR
        edtFilename.setColum

        butLoadImage.setText
        butLoadImage.eventAc
        butLoadImage.setFocu

        gpanDedails.setText(
```

Open Declaration

Extends the Eclipse "Open Declaration" command to be able to also jump to the declarations of actions and server calls. Because it extends the built-in functionality, this can be used as a replacement for the built-in command.

Go to Complement Class

Opens the complement class of the currently open file.

The complement class is the "counterpart" of every class on the client or server. So, when invoked on a workscreen (client-side), it will open the server-side LCO class and vice versa.

Go to application.xml

Opens the `application.xml` file of the project.

Go to config.xml

Opens the client-side `config.xml` file of the project.

Go to Server config.xml

Opens the server-side `config.xml` file of the project.

Go to web.xml

Opens the `web.xml` file of the project.

Check File

Runs all EPlug checks on the file without building it anew.

DataBooks

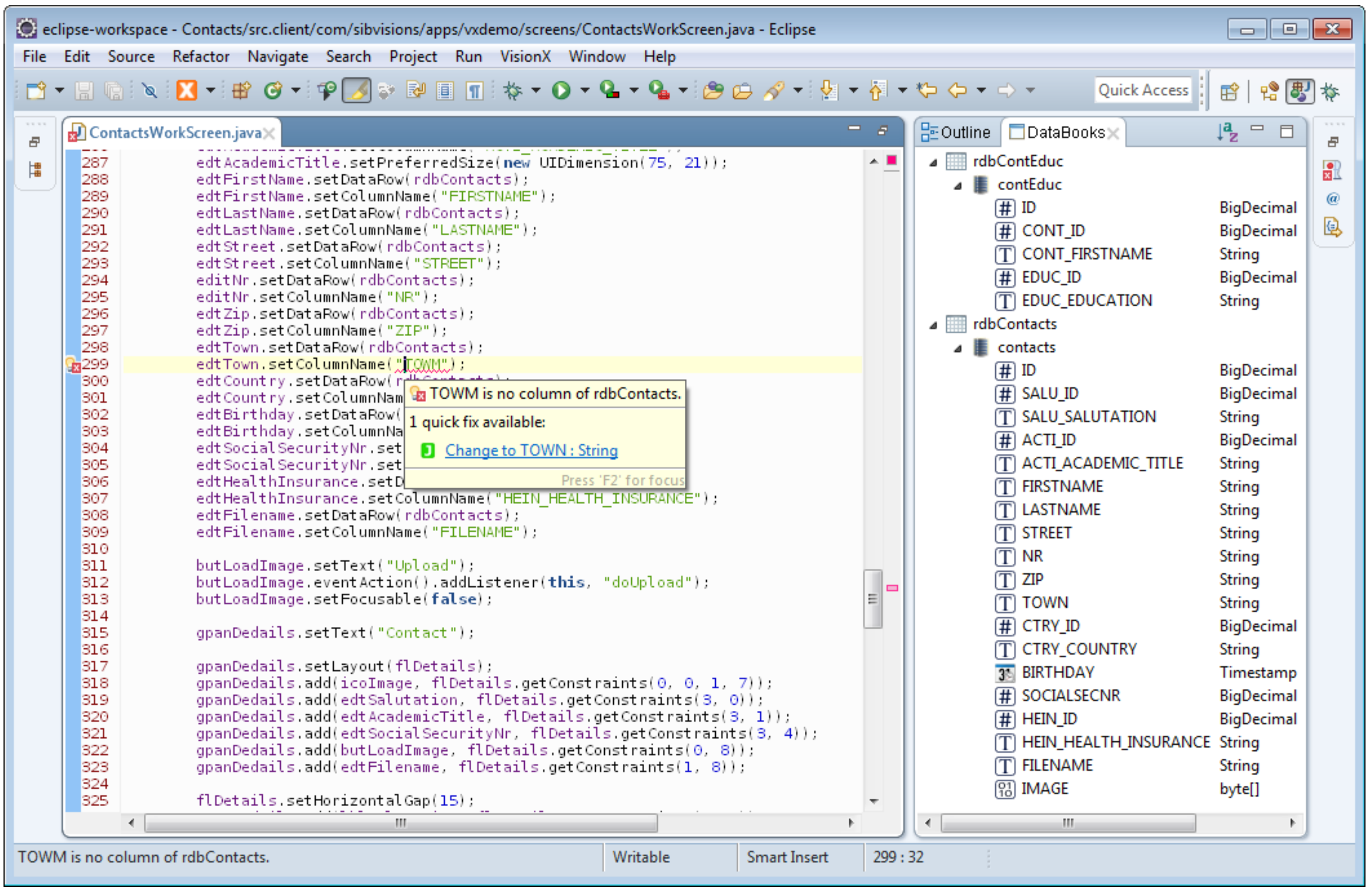
The biggest and most important feature of EPlug is the support for DataBooks, both `RemoteDataBooks` and `MemDataBooks` to be exact.

Because DataBooks use `Strings` to identify columns (instead of properties or Enums), it cannot be covered by the default functionality of Eclipse and the Java compiler. EPlug extends Eclipse with additional functionality to be able to provide various features on and around DataBooks and column names.

Both the `RemoteDataBook` and the `MemDataBook` are supported out of the box. In the case of a `MemDataBook`, the metadata is not requested from the data source (because there is none), but the metadata is directly extracted from the code itself.

Compile Time Checks

Column names are checked during compilation if they are correct or not. This is done by actually requesting the metadata from the data source and comparing the names against it. In the case of the `MemDataBook`, the metadata is built directly from the code.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
ContactsWorkScreen.java
Outline
DataBooks

```
        edtAcademicTitle.setPreferredSize(new UIDimension(75, 21));
        edtFirstName.setDataRow(rdbContacts);
        edtFirstName.setColumnName("FIRSTNAME");
        edtLastName.setDataRow(rdbContacts);
        edtLastName.setColumnName("LASTNAME");
        edtStreet.setDataRow(rdbContacts);
        edtStreet.setColumnName("STREET");
        editNr.setDataRow(rdbContacts);
        editNr.setColumnName("NR");
        edtZip.setDataRow(rdbContacts);
        edtZip.setColumnName("ZIP");
        edtTown.setDataRow(rdbContacts);
        edtTown.setColumnName("TOWM");
        edtCountry.setDataRow(r
        edtCountry.setColumnNam
        edtBirthday.setDataRow(
        edtBirthday.setColumnNa
        edtSocialSecurityNr.set
        edtSocialSecurityNr.set
        edtHealthInsurance.setD
        edtHealthInsurance.setColumnName("HEIN_HEALTH_INSURANCE");
        edtFilename.setDataRow(rdbContacts);
        edtFilename.setColumnName("FILENAME");

        butLoadImage.setText("Upload");
        butLoadImage.eventAction().addListener(this, "doUpload");
        butLoadImage.setFocusable(false);

        gpanDedails.setText("Contact");

        gpanDedails.setLayout(flDetails);
        gpanDedails.add(icoImage, flDetails.getConstraints(0, 0, 1, 7));
        gpanDedails.add(edtSalutation, flDetails.getConstraints(3, 0));
        gpanDedails.add(edtAcademicTitle, flDetails.getConstraints(3, 1));
        gpanDedails.add(edtSocialSecurityNr, flDetails.getConstraints(3, 4));
        gpanDedails.add(butLoadImage, flDetails.getConstraints(0, 8));
        gpanDedails.add(edtFilename, flDetails.getConstraints(1, 8));

        flDetails.setHorizontalGap(15);
```

TOWM is no column of rdbContacts.

1 quick fix available:

Change to TOWN : String

Press 'F2' for focus

rdbContEduc	
contEduc	
ID	BigDecimal
CONT_ID	BigDecimal
CONT_FIRSTNAME	String
EDUC_ID	BigDecimal
EDUC_EDUCATION	String
rdbContacts	
contacts	
ID	BigDecimal
SALU_ID	BigDecimal
SALU_SALUTATION	String
ACTI_ID	BigDecimal
ACTI_ACADEMIC_TITLE	String
FIRSTNAME	String
LASTNAME	String
STREET	String
NR	String
ZIP	String
TOWN	String
CTRY_ID	BigDecimal
CTRY_COUNTRY	String
BIRTHDAY	Timestamp
SOCIALSECNR	BigDecimal
HEIN_ID	BigDecimal
HEIN_HEALTH_INSURANCE	String
FILENAME	String
IMAGE	byte[]

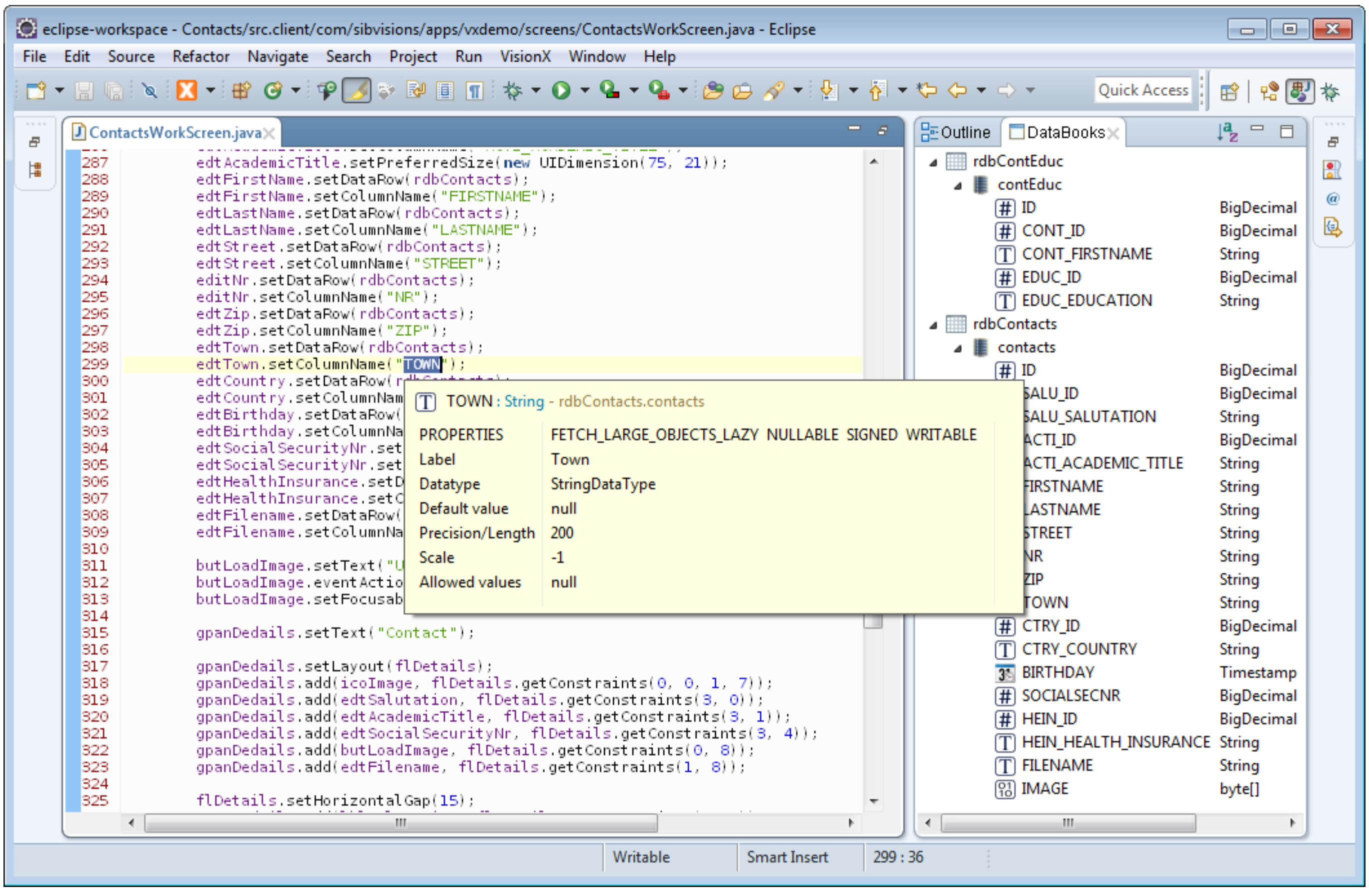
TOWM is no column of rdbContacts. | Writable | Smart Insert | 299 : 32

Quick fixes are provided in the case that a column name has been misspelled to make it easier to fix simple errors.

Hover Tips

When hovering over a column name, a hover tip is displayed that shows all the information about the column that is available. The information includes:

- Name
- Datatype
- Label
- Default value
- And various other properties


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
ContactsWorkScreen.java
Outline
DataBooks
Writable
Smart Insert
299 : 36

```
        edtAcademicTitle.setPreferredSize(new UIDimension(75, 21));
        edtFirstName.setDataRow(rdbContacts);
        edtFirstName.setColumnName("FIRSTNAME");
        edtLastName.setDataRow(rdbContacts);
        edtLastName.setColumnName("LASTNAME");
        edtStreet.setDataRow(rdbContacts);
        edtStreet.setColumnName("STREET");
        editNr.setDataRow(rdbContacts);
        editNr.setColumnName("NR");
        edtZip.setDataRow(rdbContacts);
        edtZip.setColumnName("ZIP");
        edtTown.setDataRow(rdbContacts);
        edtTown.setColumnName("TOWN");
        edtCountry.setDataRow(r
        edtCountry.setColumnNam
        edtBirthday.setDataRow(
        edtBirthday.setColumnNa
        edtSocialSecurityNr.set
        edtSocialSecurityNr.set
        edtHealthInsurance.setD
        edtHealthInsurance.setC
        edtFilename.setDataRow(
        edtFilename.setColumnNa

        butLoadImage.setText("U
        butLoadImage.eventActio
        butLoadImage.setFocusab

        gpanDedails.setText("Contact");

        gpanDedails.setLayout(flDetails);
        gpanDedails.add(icoImage, flDetails.getConstraints(0, 0, 1, 7));
        gpanDedails.add(edtSalutation, flDetails.getConstraints(3, 0));
        gpanDedails.add(edtAcademicTitle, flDetails.getConstraints(3, 1));
        gpanDedails.add(edtSocialSecurityNr, flDetails.getConstraints(3, 4));
        gpanDedails.add(butLoadImage, flDetails.getConstraints(0, 8));
        gpanDedails.add(edtFilename, flDetails.getConstraints(1, 8));

        flDetails.setHorizontalGap(15);
```

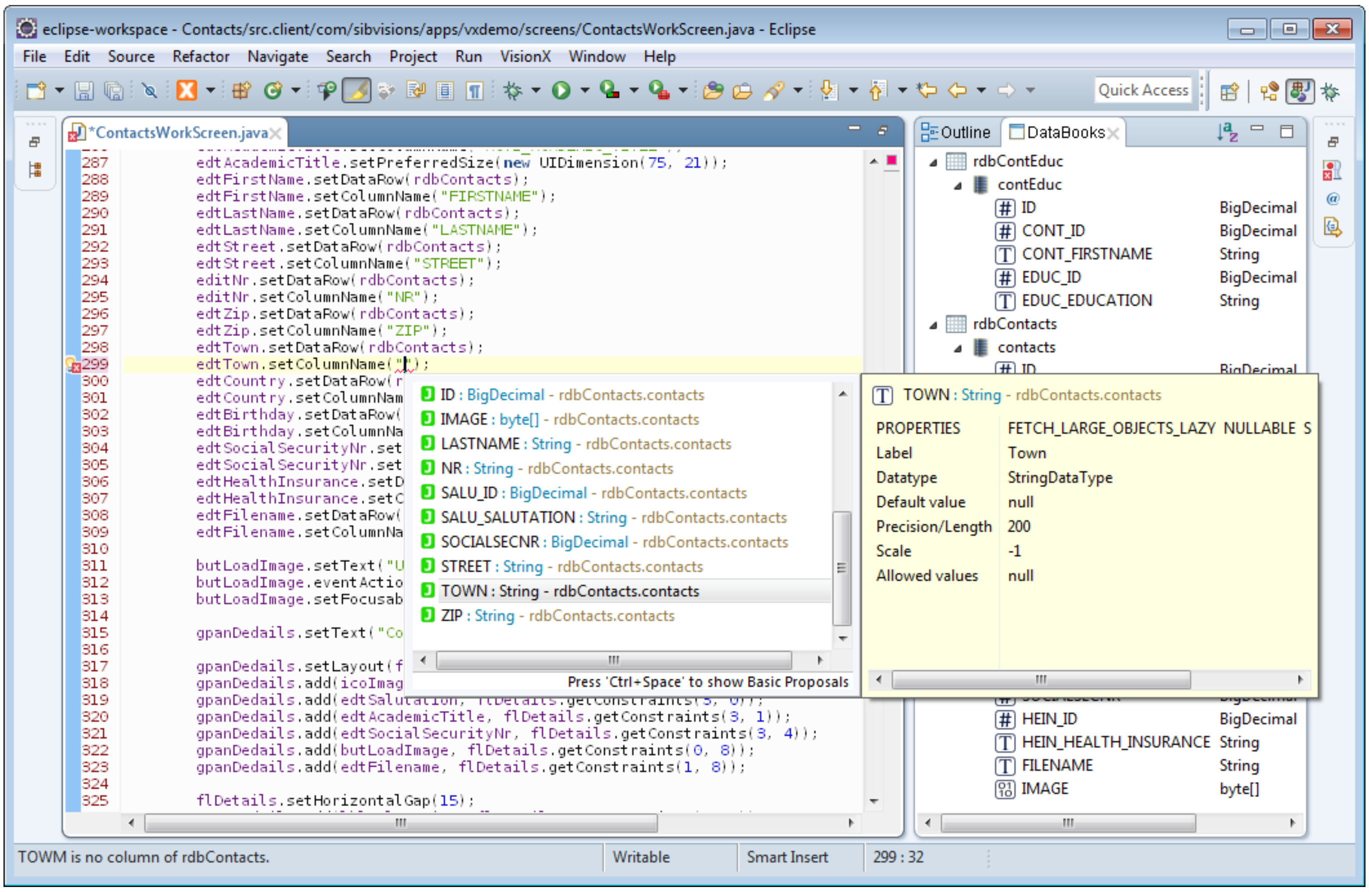
TOWN : String - rdbContacts.contacts

PROPERTIES	FETCH_LARGE_OBJECTS_LAZY NULLABLE SIGNED WRITABLE
Label	Town
Datatype	StringDataType
Default value	null
Precision/Length	200
Scale	-1
Allowed values	null

```
rdbContEduc
  contEduc
    ID                    BigDecimal
    CONT_ID               BigDecimal
    CONT_FIRSTNAME        String
    EDUC_ID               BigDecimal
    EDUC_EDUCATION        String
rdbContacts
  contacts
    ID                    BigDecimal
    SALU_ID               BigDecimal
    SALU_SALUTATION       String
    ACTI_ID               BigDecimal
    ACTI_ACADEMIC_TITLE   String
    FIRSTNAME             String
    LASTNAME              String
    STREET                String
    NR                    String
    ZIP                   String
    TOWN                  String
    CTRY_ID               BigDecimal
    CTRY_COUNTRY          String
    BIRTHDAY              Timestamp
    SOCIALSECNR           BigDecimal
    HEIN_ID               BigDecimal
    HEIN_HEALTH_INSURANCE String
    FILENAME              String
    IMAGE                 byte[]
```

Code Completion

Column names are also offered in the code completion dialog as well as all available information about them.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse

*ContactsWorkScreen.java

```
        edtAcademicTitle.setPreferredSize(new UIDimension(75, 21));
        edtFirstName.setDataRow(rdbContacts);
        edtFirstName.setColumnName("FIRSTNAME");
        edtLastName.setDataRow(rdbContacts);
        edtLastName.setColumnName("LASTNAME");
        edtStreet.setDataRow(rdbContacts);
        edtStreet.setColumnName("STREET");
        editNr.setDataRow(rdbContacts);
        editNr.setColumnName("NR");
        edtZip.setDataRow(rdbContacts);
        edtZip.setColumnName("ZIP");
        edtTown.setDataRow(rdbContacts);
        edtTown.setColumnName("");
        edtCountry.setDataRow(r
        edtCountry.setColumnNam
        edtBirthday.setDataRow(
        edtBirthday.setColumnNa
        edtSocialSecurityNr.set
        edtSocialSecurityNr.set
        edtHealthInsurance.setD
        edtHealthInsurance.setC
        edtFilename.setDataRow(
        edtFilename.setColumnNa

        butLoadImage.setText("U
        butLoadImage.eventActio
        butLoadImage.setFocusab

        gpanDedails.setText("Co

        gpanDedails.setLayout(f
        gpanDedails.add(icoImag
        gpanDedails.add(edtSalutation, flDetails.getConstraints(3, 0));
        gpanDedails.add(edtAcademicTitle, flDetails.getConstraints(3, 1));
        gpanDedails.add(edtSocialSecurityNr, flDetails.getConstraints(3, 4));
        gpanDedails.add(butLoadImage, flDetails.getConstraints(0, 8));
        gpanDedails.add(edtFilename, flDetails.getConstraints(1, 8));

        flDetails.setHorizontalGap(15);
```

```
ID : BigDecimal - rdbContacts.contacts
IMAGE : byte[] - rdbContacts.contacts
LASTNAME : String - rdbContacts.contacts
NR : String - rdbContacts.contacts
SALU_ID : BigDecimal - rdbContacts.contacts
SALU_SALUTATION : String - rdbContacts.contacts
SOCIALSECNR : BigDecimal - rdbContacts.contacts
STREET : String - rdbContacts.contacts
TOWN : String - rdbContacts.contacts
ZIP : String - rdbContacts.contacts
Press 'Ctrl+Space' to show Basic Proposals
```

TOWN : String - rdbContacts.contacts

PROPERTIES	FETCH_LARGE_OBJECTS_LAZY NULLABLE S
Label	Town
Datatype	StringDataType
Default value	null
Precision/Length	200
Scale	-1
Allowed values	null

Outline | DataBooks

```
rdbContEduc
  contEduc
    ID                  BigDecimal
    CONT_ID             BigDecimal
    CONT_FIRSTNAME      String
    EDUC_ID             BigDecimal
    EDUC_EDUCATION      String
rdbContacts
  contacts
    ID                  BigDecimal
    ...
    HEIN_ID             BigDecimal
    HEIN_HEALTH_INSURANCE String
    FILENAME            String
    IMAGE               byte[]
```

```
TOWM is no column of rdbContacts.    Writable    Smart Insert    299 : 32
```

The same information as in the hover tips is being displayed alongside all columns that can be selected in the code completion dialog.

DataBooks View

Additionally, there is the DataBooks view which lists all DataBooks and all columns in the currently edited file together with their datatype and label.

The view can be added to the Eclipse perspective in the menu under `Window -> Show View -> Other...`.

Preferences

The behavior of the DataBooks plugin can be changed by changing the project preferences.

Check the DataBooks on Refresh

When enabled, DataBooks are checked when a refresh of the file is performed and not only when the file is build.

Check DataBooks While You Type

When enabled, DataBooks are checked as you type without the need to save and/or build the file.

This is especially useful when working with `MemDataBooks`, as their metadata might have been typed just seconds before being used.

Build Options

The build behavior can also be changed in the project preferences.

Action When No Metadata Was Provided

This option allows you to control how the plugin behaves when no metadata could be acquired for the DataBook that is being checked. Please note that “no metadata could be acquired” is not the same as “acquiring failed”. For example, it could be that a DataBook is the parameter of a function. In that case, is not possible to determine from where the DataBook originated, and so no metadata can be determined.

With this option, the behavior for such a situation can be controlled, whether the plugin should issue a notice/warning/error or do nothing.

Check DataSource of RemoteDataBooks

This option allows you to control whether the datasource on `RemoteDataBooks` should be checked if it is correctly set or not. This is basically a check if the name of the `RemoteDataBook` can be mapped to a server-side storage object.

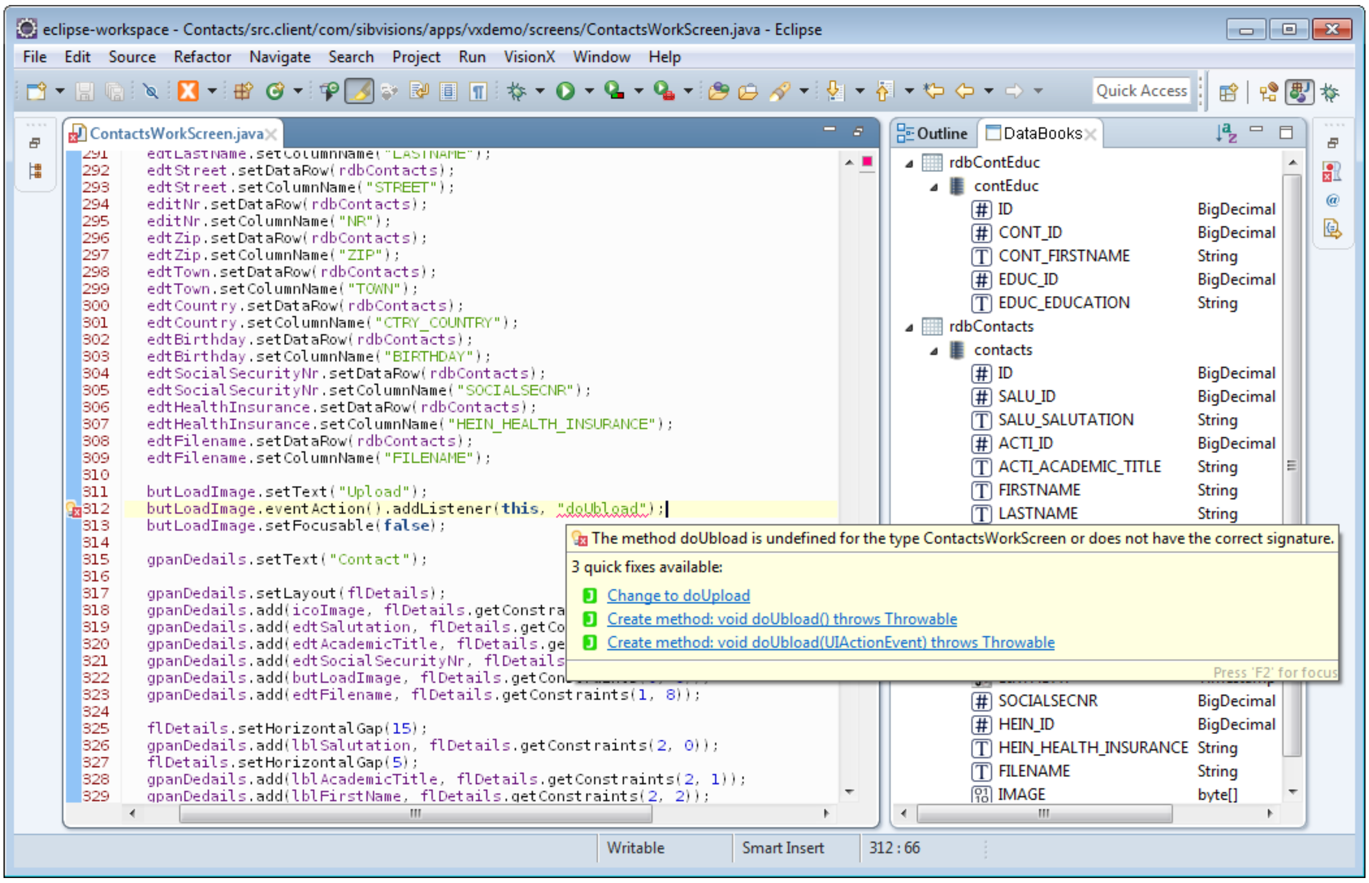
Actions

Another pillar of EPlug is the support for actions. Actions are a simple mechanism which provide the ability to use method references by specifying an object and the name of the method. The ability to use “real” method references has only lately become an integrated functionality of the JRE and of course JVx does also support this.

Out of the box the EPlug support for actions does support all `EventHandler` extensions and various other methods.

Compile Time Checks

The action names and references are checked during compilation for their existence and correct signature.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse

```
edtLastName.setColumnName("LASTNAME");
edtStreet.setDataRow(rdbContacts);
edtStreet.setColumnName("STREET");
editNr.setDataRow(rdbContacts);
editNr.setColumnName("NR");
edtZip.setDataRow(rdbContacts);
edtZip.setColumnName("ZIP");
edtTown.setDataRow(rdbContacts);
edtTown.setColumnName("TOWN");
edtCountry.setDataRow(rdbContacts);
edtCountry.setColumnName("CTRY_COUNTRY");
edtBirthday.setDataRow(rdbContacts);
edtBirthday.setColumnName("BIRTHDAY");
edtSocialSecurityNr.setDataRow(rdbContacts);
edtSocialSecurityNr.setColumnName("SOCIALSECNR");
edtHealthInsurance.setDataRow(rdbContacts);
edtHealthInsurance.setColumnName("HEIN_HEALTH_INSURANCE");
edtFilename.setDataRow(rdbContacts);
edtFilename.setColumnName("FILENAME");

butLoadImage.setText("Upload");
butLoadImage.eventAction().addListener(this, "doUbload");
butLoadImage.setFocusable(false);

gpanDedails.setText("Contact");

gpanDedails.setLayout(flDetails);
gpanDedails.add(icoImage, flDetails.getConstra
gpanDedails.add(edtSalutation, flDetails.getCo
gpanDedails.add(edtAcademicTitle, flDetails.ge
gpanDedails.add(edtSocialSecurityNr, flDetails
gpanDedails.add(butLoadImage, flDetails.getCon
gpanDedails.add(edtFilename, flDetails.getConstraints(1, 8));

flDetails.setHorizontalGap(15);
gpanDedails.add(lblSalutation, flDetails.getConstraints(2, 0));
flDetails.setHorizontalGap(5);
gpanDedails.add(lblAcademicTitle, flDetails.getConstraints(2, 1));
gpanDedails.add(lblFirstName, flDetails.getConstraints(2, 2));
```

rdbContEduc	
contEduc	
ID	BigDecimal
CONT_ID	BigDecimal
CONT_FIRSTNAME	String
EDUC_ID	BigDecimal
EDUC_EDUCATION	String
rdbContacts	
contacts	
ID	BigDecimal
SALU_ID	BigDecimal
SALU_SALUTATION	String
ACTI_ID	BigDecimal
ACTI_ACADEMIC_TITLE	String
FIRSTNAME	String
LASTNAME	String
SOCIALSECNR	BigDecimal
HEIN_ID	BigDecimal
HEIN_HEALTH_INSURANCE	String
FILENAME	String
IMAGE	byte[]

The method doUbload is undefined for the type ContactsWorkScreen or does not have the correct signature.

3 quick fixes available:

- Change to doUpload
- Create method: void doUbload() throws Throwable
- Create method: void doUbload(UIActionEvent) throws Throwable

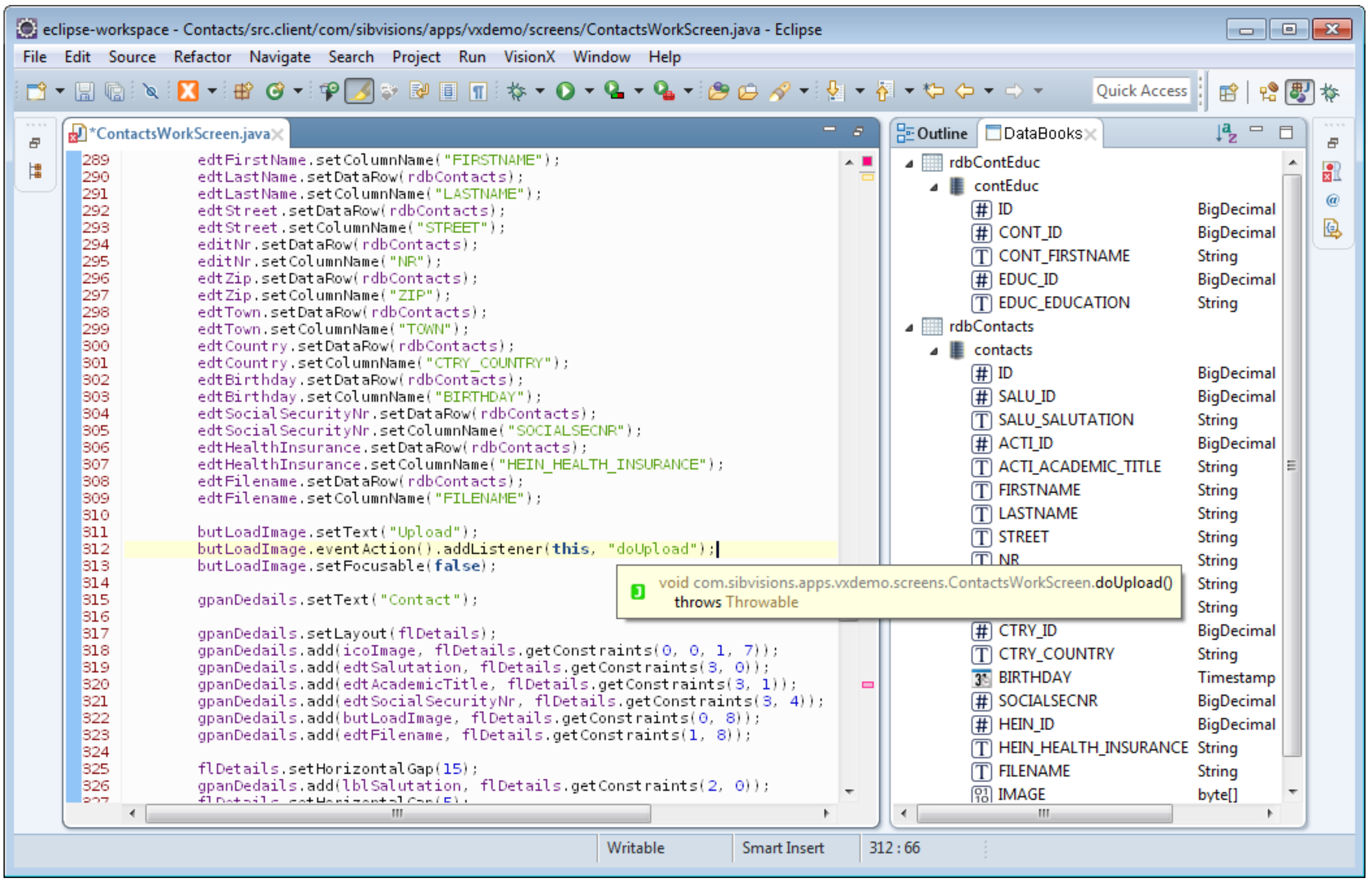
Press 'F2' for focus

Writable | Smart Insert | 312 : 66

Quick fixes are provided in the case that a method name has been misspelled or is non-existent.

Hover Tips

When hovering over the action name, a basic hover tip is provided which displays the most important information about the function.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
*ContactsWorkScreen.java
Outline DataBooks
Writable Smart Insert 312 : 66

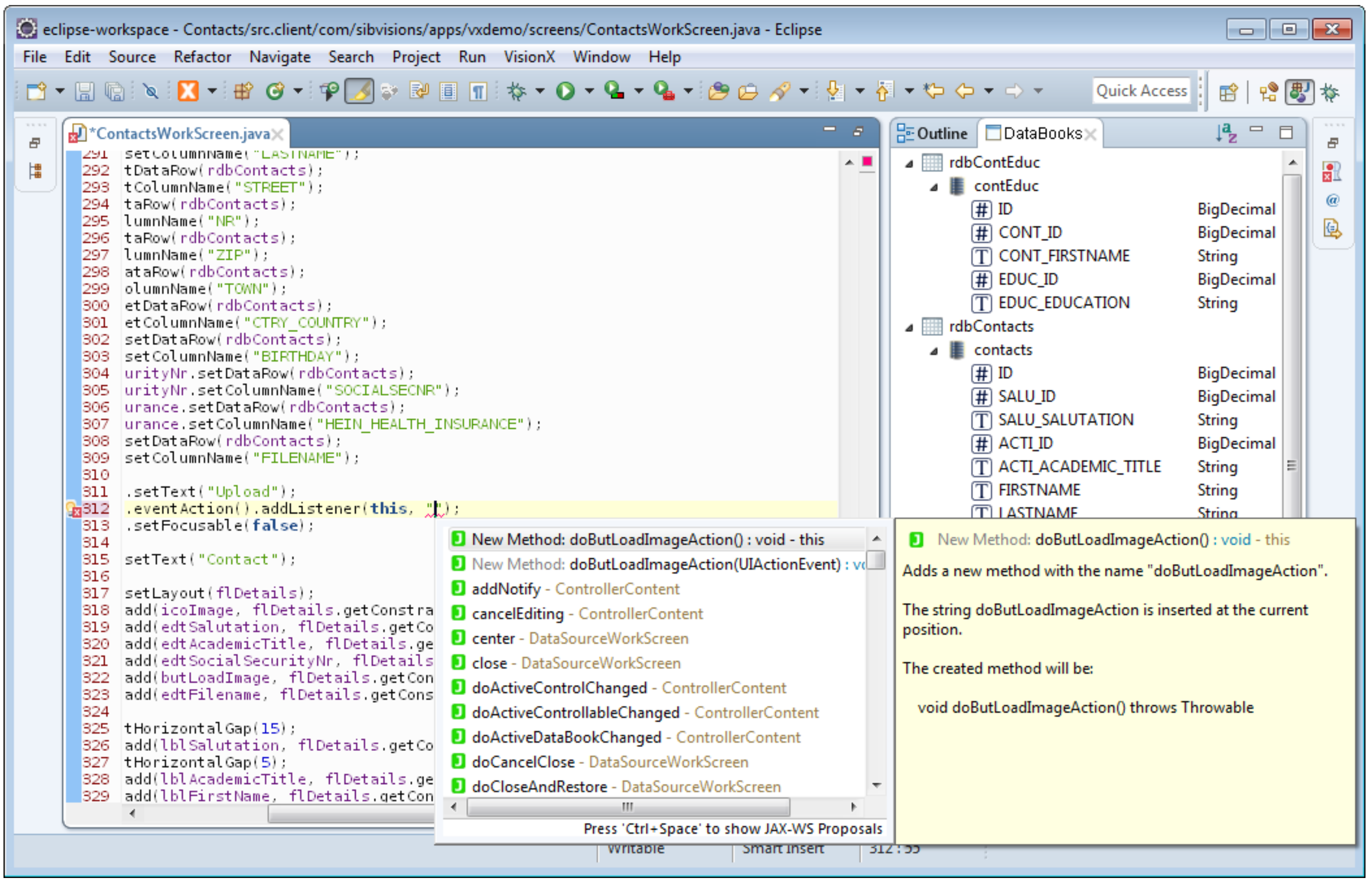
```
        edtFirstName.setColumnName("FIRSTNAME");
        edtLastName.setDataRow(rdbContacts);
        edtLastName.setColumnName("LASTNAME");
        edtStreet.setDataRow(rdbContacts);
        edtStreet.setColumnName("STREET");
        editNr.setDataRow(rdbContacts);
        editNr.setColumnName("NR");
        edtZip.setDataRow(rdbContacts);
        edtZip.setColumnName("ZIP");
        edtTown.setDataRow(rdbContacts);
        edtTown.setColumnName("TOWN");
        edtCountry.setDataRow(rdbContacts);
        edtCountry.setColumnName("CTRY_COUNTRY");
        edtBirthday.setDataRow(rdbContacts);
        edtBirthday.setColumnName("BIRTHDAY");
        edtSocialSecurityNr.setDataRow(rdbContacts);
        edtSocialSecurityNr.setColumnName("SOCIALSECNR");
        edtHealthInsurance.setDataRow(rdbContacts);
        edtHealthInsurance.setColumnName("HEIN_HEALTH_INSURANCE");
        edtFilename.setDataRow(rdbContacts);
        edtFilename.setColumnName("FILENAME");

        butLoadImage.setText("Upload");
        butLoadImage.eventAction().addListener(this, "doUpload");
        butLoadImage.setFocusable(false);

        gpanDedails.setText("Contact");

        gpanDedails.setLayout(flDetails);
        gpanDedails.add(icoImage, flDetails.getConstraints(0, 0, 1, 7));
        gpanDedails.add(edtSalutation, flDetails.getConstraints(3, 0));
        gpanDedails.add(edtAcademicTitle, flDetails.getConstraints(3, 1));
        gpanDedails.add(edtSocialSecurityNr, flDetails.getConstraints(3, 4));
        gpanDedails.add(butLoadImage, flDetails.getConstraints(0, 8));
        gpanDedails.add(edtFilename, flDetails.getConstraints(1, 8));

        flDetails.setHorizontalGap(15);
        gpanDedails.add(lblSalutation, flDetails.getConstraints(2, 0));
```

void com.sibvisions.apps.vxdemo.screens.ContactsWorkScreen.doUpload()
throws Throwable

```
rdbContEduc
  contEduc
    ID                      BigDecimal
    CONT_ID                 BigDecimal
    CONT_FIRSTNAME          String
    EDUC_ID                 BigDecimal
    EDUC_EDUCATION          String
rdbContacts
  contacts
    ID                      BigDecimal
    SALU_ID                 BigDecimal
    SALU_SALUTATION         String
    ACTI_ID                 BigDecimal
    ACTI_ACADEMIC_TITLE     String
    FIRSTNAME               String
    LASTNAME                String
    STREET                  String
    NR                      String
                            String
                            String
    CTRY_ID                 BigDecimal
    CTRY_COUNTRY            String
    BIRTHDAY                Timestamp
    SOCIALSECNR             BigDecimal
    HEIN_ID                 BigDecimal
    HEIN_HEALTH_INSURANCE   String
    FILENAME                String
    IMAGE                   byte[]
```

Code Completion

Action listener names are also offered in the code completion dialog.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
*ContactsWorkScreen.java
Outline DataBooks
Writable Smart Insert 312 : 55

```
setColumnName("LASTNAME");
tDataRow(rdbContacts);
tColumnName("STREET");
taRow(rdbContacts);
lumnName("NR");
taRow(rdbContacts);
lumnName("ZIP");
ataRow(rdbContacts);
olumnName("TOWN");
etDataRow(rdbContacts);
etColumnName("CTRY_COUNTRY");
setDataRow(rdbContacts);
setColumnName("BIRTHDAY");
urityNr.setDataRow(rdbContacts);
urityNr.setColumnName("SOCIALSECNR");
urance.setDataRow(rdbContacts);
urance.setColumnName("HEIN_HEALTH_INSURANCE");
setDataRow(rdbContacts);
setColumnName("FILENAME");

.setText("Upload");
.eventAction().addListener(this, "");
.setFocusable(false);

setText("Contact");

setLayout(flDetails);
add(icoImage, flDetails.getConstra
add(edtSalutation, flDetails.getCo
add(edtAcademicTitle, flDetails.ge
add(edtSocialSecurityNr, flDetails
add(butLoadImage, flDetails.getCon
add(edtFilename, flDetails.getCons

tHorizontalGap(15);
add(lblSalutation, flDetails.getCo
tHorizontalGap(5);
add(lblAcademicTitle, flDetails.ge
add(lblFirstName, flDetails.getCon
```

New Method: doButLoadImageAction() : void - this
New Method: doButLoadImageAction(UIActionEvent) : v
addNotify - ControllerContent
cancelEditing - ControllerContent
center - DataSourceWorkScreen
close - DataSourceWorkScreen
doActiveControlChanged - ControllerContent
doActiveControllableChanged - ControllerContent
doActiveDataBookChanged - ControllerContent
doCancelClose - DataSourceWorkScreen
doCloseAndRestore - DataSourceWorkScreen
Press 'Ctrl+Space' to show JAX-WS Proposals

New Method: doButLoadImageAction() : void - this

Adds a new method with the name "doButLoadImageAction".

The string doButLoadImageAction is inserted at the current position.

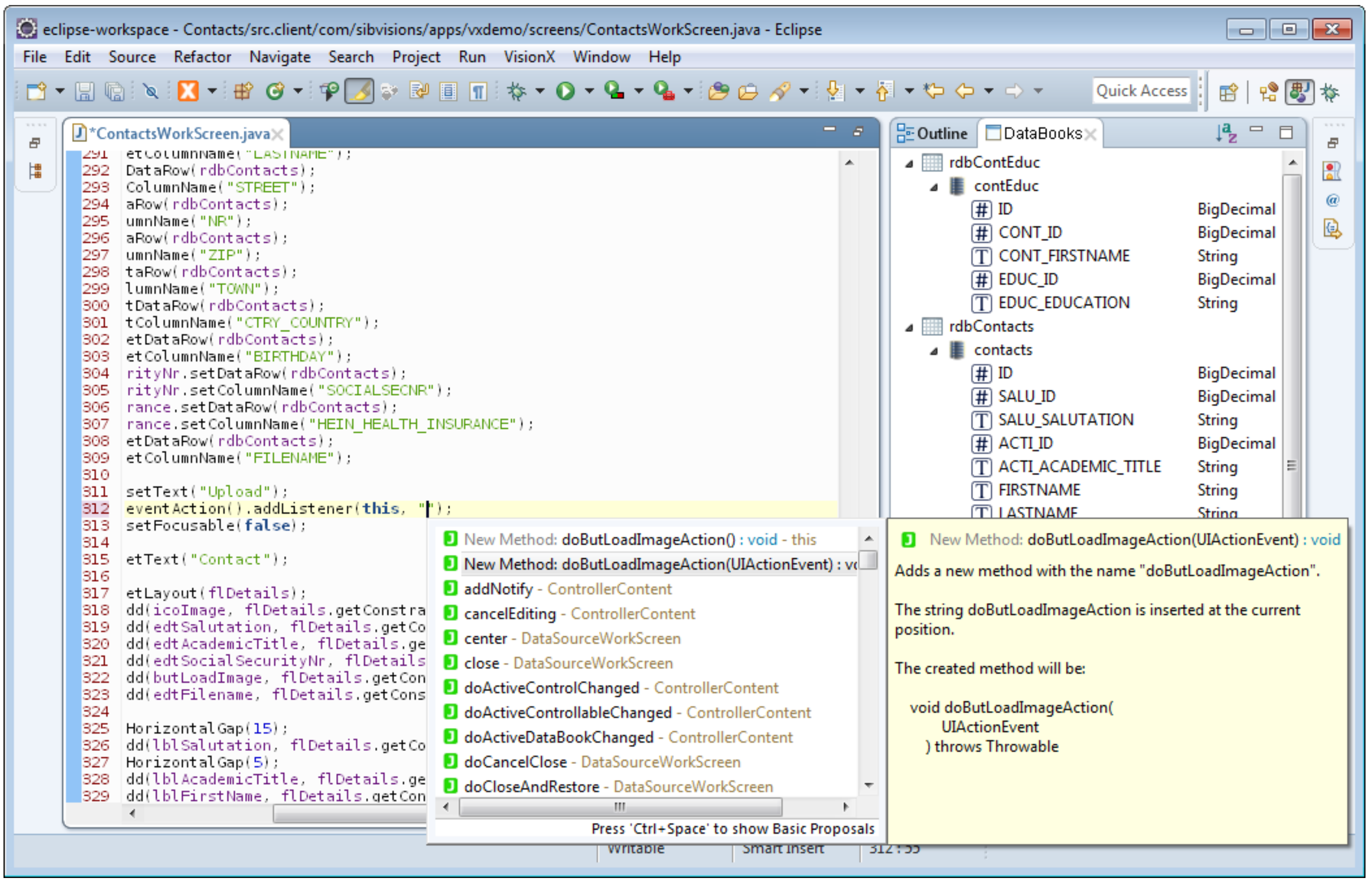
The created method will be:

void doButLoadImageAction() throws Throwable

```
rdbContEduc
  contEduc
    ID                      BigDecimal
    CONT_ID                 BigDecimal
    CONT_FIRSTNAME          String
    EDUC_ID                 BigDecimal
    EDUC_EDUCATION          String
rdbContacts
  contacts
    ID                      BigDecimal
    SALU_ID                 BigDecimal
    SALU_SALUTATION         String
    ACTI_ID                 BigDecimal
    ACTI_ACADEMIC_TITLE     String
    FIRSTNAME               String
    LASTNAME                String
```

Templates

To make it easier to create and add listeners, two templates are available from the code completion list that automatically create listener methods when chosen.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
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```
etColumnName("LASTNAME");
DataRow(rdbContacts);
ColumnName("STREET");
aRow(rdbContacts);
umnName("NR");
aRow(rdbContacts);
umnName("ZIP");
taRow(rdbContacts);
lumnName("TOWN");
tDataRow(rdbContacts);
tColumnName("CTRY_COUNTRY");
etDataRow(rdbContacts);
etColumnName("BIRTHDAY");
rityNr.setDataRow(rdbContacts);
rityNr.setColumnName("SOCIALSECNR");
rance.setDataRow(rdbContacts);
rance.setColumnName("HEIN_HEALTH_INSURANCE");
etDataRow(rdbContacts);
etColumnName("FILENAME");

setText("Upload");
eventAction().addListener(this, "");
setFocusable(false);

etText("Contact");

etLayout(flDetails);
dd(icoImage, flDetails.getConstra
dd(edtSalutation, flDetails.getCo
dd(edtAcademicTitle, flDetails.ge
dd(edtSocialSecurityNr, flDetails
dd(butLoadImage, flDetails.getCon
dd(edtFilename, flDetails.getCons

HorizontalGap(15);
dd(lblSalutation, flDetails.getCo
HorizontalGap(5);
dd(lblAcademicTitle, flDetails.ge
dd(lblFirstName, flDetails.getCon
```

rdbContEduc	
contEduc	
ID	BigDecimal
CONT_ID	BigDecimal
CONT_FIRSTNAME	String
EDUC_ID	BigDecimal
EDUC_EDUCATION	String
rdbContacts	
contacts	
ID	BigDecimal
SALU_ID	BigDecimal
SALU_SALUTATION	String
ACTI_ID	BigDecimal
ACTI_ACADEMIC_TITLE	String
FIRSTNAME	String
LASTNAME	String

```
New Method: doButLoadImageAction() : void - this
New Method: doButLoadImageAction(UIActionEvent) : vo
addNotify - ControllerContent
cancelEditing - ControllerContent
center - DataSourceWorkScreen
close - DataSourceWorkScreen
doActiveControlChanged - ControllerContent
doActiveControllableChanged - ControllerContent
doActiveDataBookChanged - ControllerContent
doCancelClose - DataSourceWorkScreen
doCloseAndRestore - DataSourceWorkScreen
Press 'Ctrl+Space' to show Basic Proposals
```

New Method: doButLoadImageAction(UIActionEvent) : void

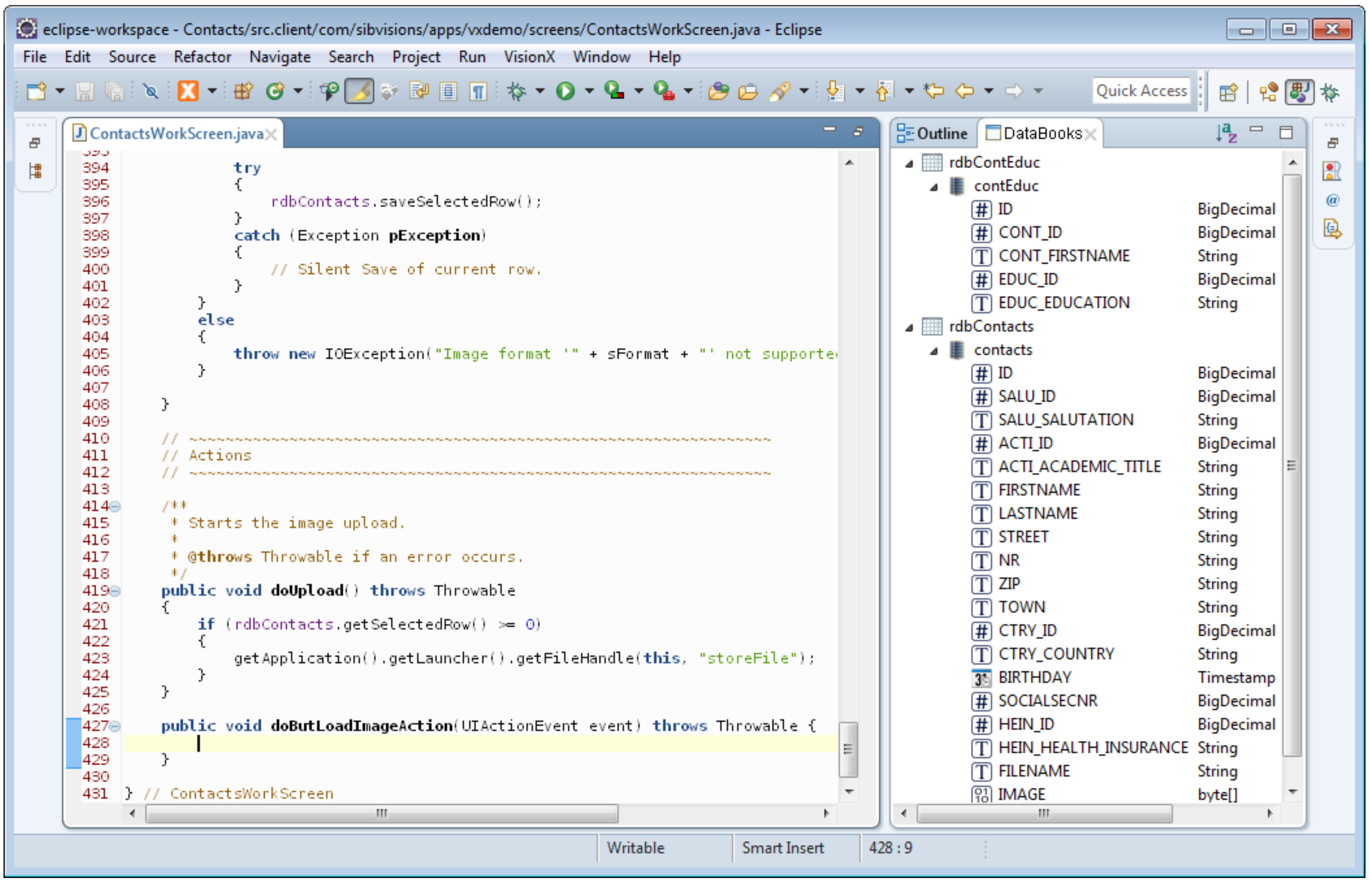
Adds a new method with the name "doButLoadImageAction".

The string doButLoadImageAction is inserted at the current position.

The created method will be:

```
  void doButLoadImageAction(
        UIActionEvent
     ) throws Throwable
```

The first option creates a new listener method without any parameters, the second creates a listener method with the action specific parameters. The new method is inserted at the end of the class and can be edited directly.



eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse

```
            try
            {
                rdbContacts.saveSelectedRow();
            }
            catch (Exception pException)
            {
                // Silent Save of current row.
            }
        }
        else
        {
            throw new IOException("Image format '" + sFormat + "' not supporte
        }
    }

    // ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    // Actions
    // ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

    /**
     * Starts the image upload.
     *
     * @throws Throwable if an error occurs.
     */
    public void doUpload() throws Throwable
    {
        if (rdbContacts.getSelectedRow() >= 0)
        {
            getApplication().getLauncher().getFileHandle(this, "storeFile");
        }
    }

    public void doButLoadImageAction(UIActionEvent event) throws Throwable {

    }

} // ContactsWorkScreen
```

rdbContEduc	
contEduc	
ID	BigDecimal
CONT_ID	BigDecimal
CONT_FIRSTNAME	String
EDUC_ID	BigDecimal
EDUC_EDUCATION	String
rdbContacts	
contacts	
ID	BigDecimal
SALU_ID	BigDecimal
SALU_SALUTATION	String
ACTI_ID	BigDecimal
ACTI_ACADEMIC_TITLE	String
FIRSTNAME	String
LASTNAME	String
STREET	String
NR	String
ZIP	String
TOWN	String
CTRY_ID	BigDecimal
CTRY_COUNTRY	String
BIRTHDAY	Timestamp
SOCIALSECNR	BigDecimal
HEIN_ID	BigDecimal
HEIN_HEALTH_INSURANCE	String
FILENAME	String
IMAGE	byte[]

Writable | Smart Insert | 428 : 9

Refactoring Support

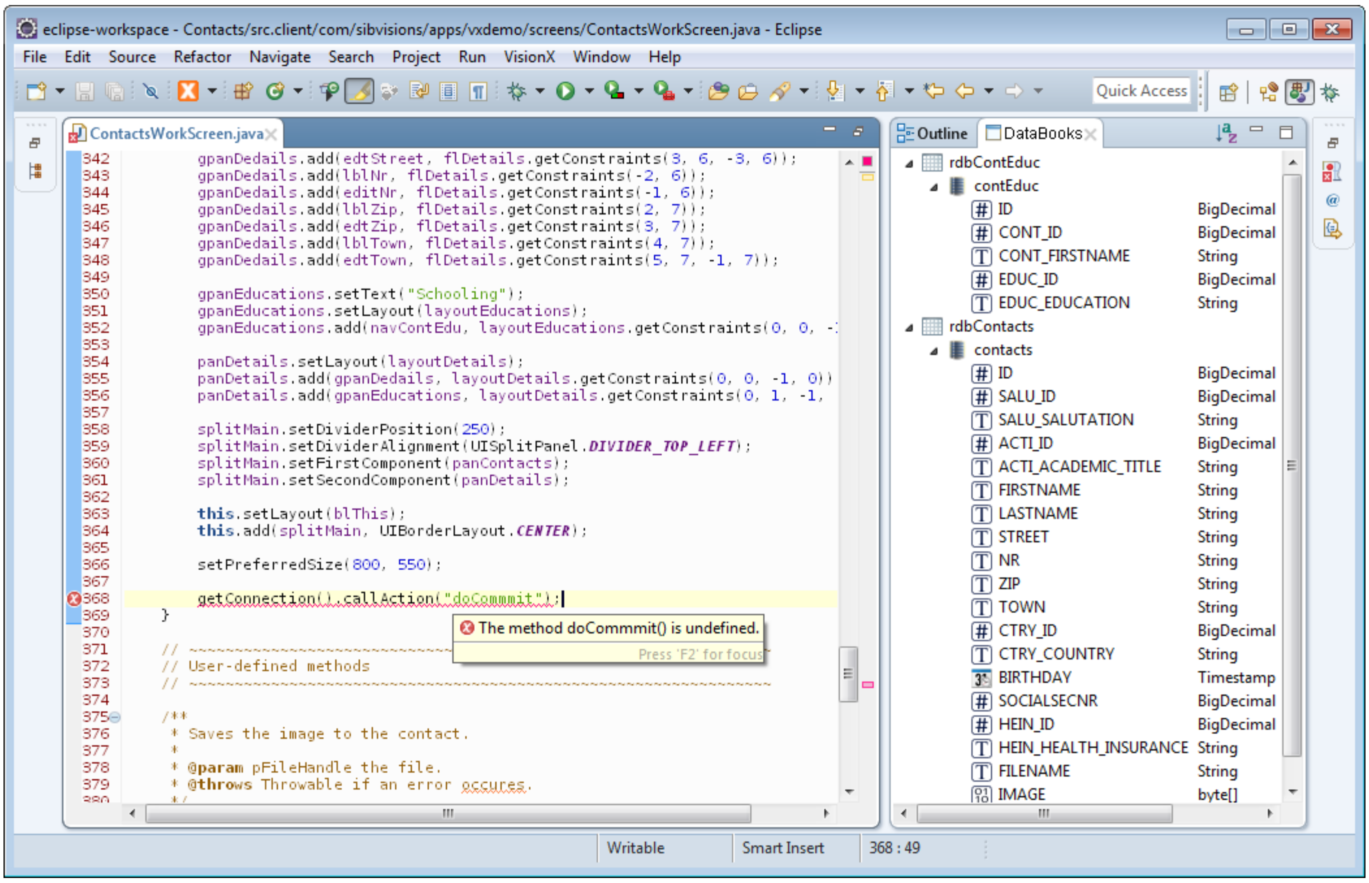
When an action listener is refactored through the provided mechanisms of Eclipse, the references to it are automatically refactored too.

Server Calls/Actions

Through the connection of the application, it is possible to directly execute functions and actions on the server. JVx allows you to do this by specifying the function name to call on the server and appending the parameters for the to be called function.

Compile Time Checks

The server calls/actions are checked during compilation for their existence and whether the correct parameters have been provided.



eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse

```java
        gpanDedails.add(edtStreet, flDetails.getConstraints(3, 6, -3, 6));
        gpanDedails.add(lblNr, flDetails.getConstraints(-2, 6));
        gpanDedails.add(editNr, flDetails.getConstraints(-1, 6));
        gpanDedails.add(lblZip, flDetails.getConstraints(2, 7));
        gpanDedails.add(edtZip, flDetails.getConstraints(3, 7));
        gpanDedails.add(lblTown, flDetails.getConstraints(4, 7));
        gpanDedails.add(edtTown, flDetails.getConstraints(5, 7, -1, 7));

        gpanEducations.setText("Schooling");
        gpanEducations.setLayout(layoutEducations);
        gpanEducations.add(navContEdu, layoutEducations.getConstraints(0, 0, -

        panDetails.setLayout(layoutDetails);
        panDetails.add(gpanDedails, layoutDetails.getConstraints(0, 0, -1, 0))
        panDetails.add(gpanEducations, layoutDetails.getConstraints(0, 1, -1,

        splitMain.setDividerPosition(250);
        splitMain.setDividerAlignment(UISplitPanel.DIVIDER_TOP_LEFT);
        splitMain.setFirstComponent(panContacts);
        splitMain.setSecondComponent(panDetails);

        this.setLayout(blThis);
        this.add(splitMain, UIBorderLayout.CENTER);

        setPreferredSize(800, 550);

        getConnection().callAction("doCommmit");
    }

    // ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    // User-defined methods
    // ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

    /**
     * Saves the image to the contact.
     *
     * @param pFileHandle the file.
     * @throws Throwable if an error occures.
     */
```

The method doCommmit() is undefined.

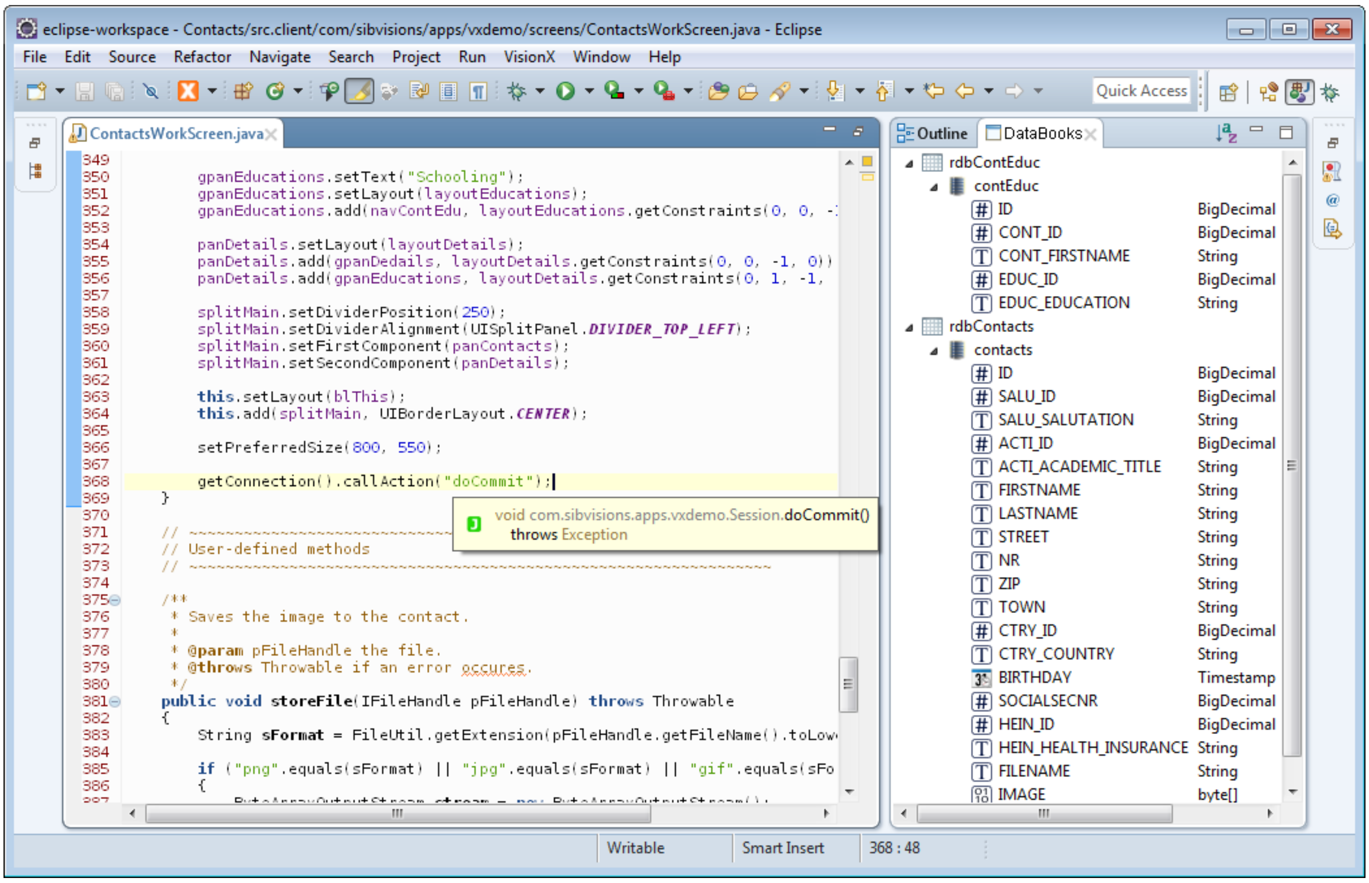
Press 'F2' for focus

rdbContEduc	
contEduc	
ID	BigDecimal
CONT_ID	BigDecimal
CONT_FIRSTNAME	String
EDUC_ID	BigDecimal
EDUC_EDUCATION	String
rdbContacts	
contacts	
ID	BigDecimal
SALU_ID	BigDecimal
SALU_SALUTATION	String
ACTI_ID	BigDecimal
ACTI_ACADEMIC_TITLE	String
FIRSTNAME	String
LASTNAME	String
STREET	String
NR	String
ZIP	String
TOWN	String
CTRY_ID	BigDecimal
CTRY_COUNTRY	String
BIRTHDAY	Timestamp
SOCIALSECNR	BigDecimal
HEIN_ID	BigDecimal
HEIN_HEALTH_INSURANCE	String
FILENAME	String
IMAGE	byte[]

Writable Smart Insert 368 : 49

Hover Tips

When hovering over the name of a server call/action, a basic hover tip is provided which displays the most important information about the function.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
ContactsWorkScreen.java
Outline
DataBooks

```java

        gpanEducations.setText("Schooling");
        gpanEducations.setLayout(layoutEducations);
        gpanEducations.add(navContEdu, layoutEducations.getConstraints(0, 0, -

        panDetails.setLayout(layoutDetails);
        panDetails.add(gpanDedails, layoutDetails.getConstraints(0, 0, -1, 0))
        panDetails.add(gpanEducations, layoutDetails.getConstraints(0, 1, -1,

        splitMain.setDividerPosition(250);
        splitMain.setDividerAlignment(UISplitPanel.DIVIDER_TOP_LEFT);
        splitMain.setFirstComponent(panContacts);
        splitMain.setSecondComponent(panDetails);

        this.setLayout(blThis);
        this.add(splitMain, UIBorderLayout.CENTER);

        setPreferredSize(800, 550);

        getConnection().callAction("doCommit");
    }

    // ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    // User-defined methods
    // ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

    /**
     * Saves the image to the contact.
     *
     * @param pFileHandle the file.
     * @throws Throwable if an error occures.
     */
    public void storeFile(IFileHandle pFileHandle) throws Throwable
    {
        String sFormat = FileUtil.getExtension(pFileHandle.getFileName().toLow

        if ("png".equals(sFormat) || "jpg".equals(sFormat) || "gif".equals(sFo
        {
```

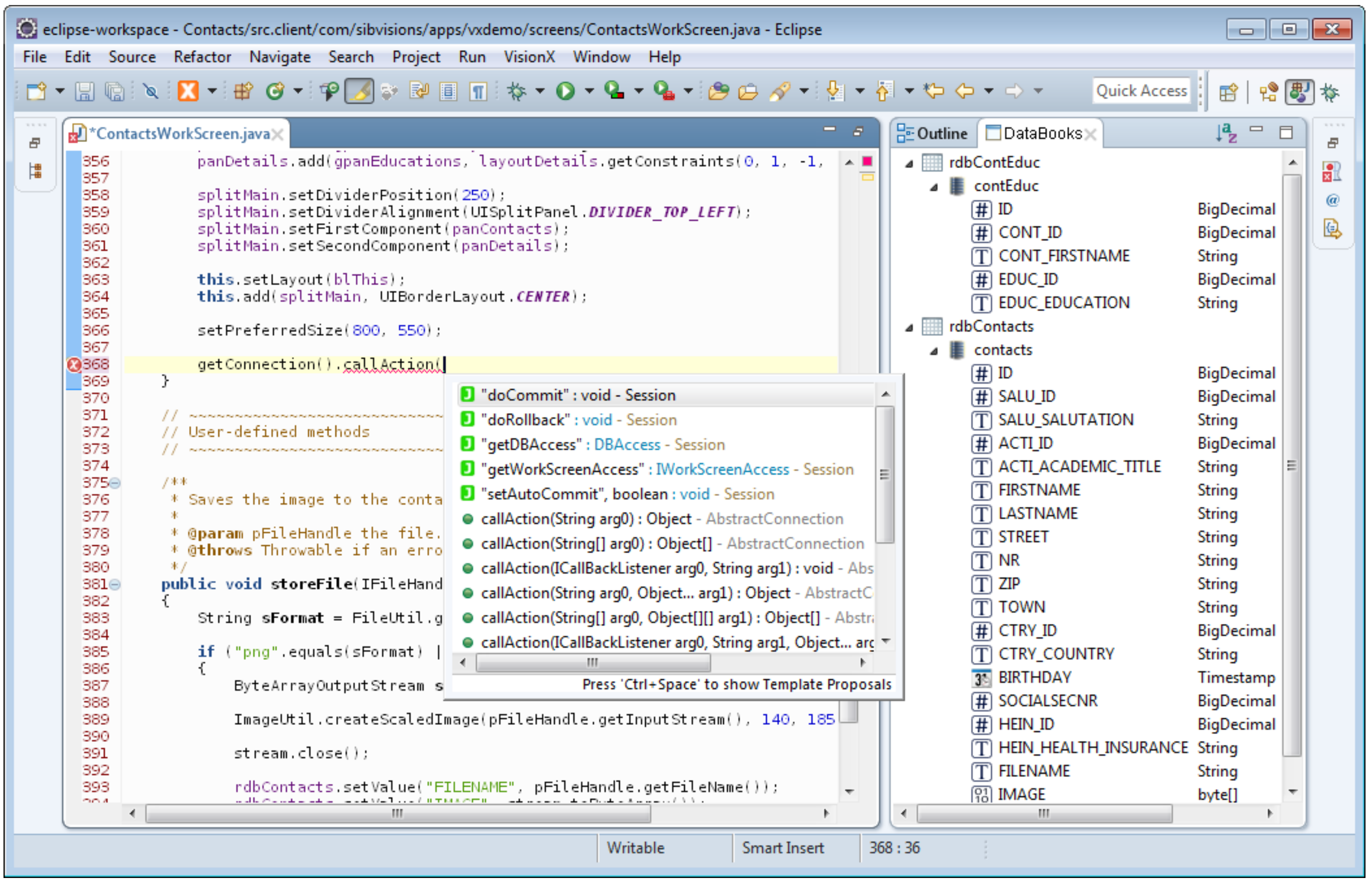
```
void com.sibvisions.apps.vxdemo.Session.doCommit()
  throws Exception
```

```
rdbContEduc
  contEduc
    ID                      BigDecimal
    CONT_ID                 BigDecimal
    CONT_FIRSTNAME          String
    EDUC_ID                 BigDecimal
    EDUC_EDUCATION          String
rdbContacts
  contacts
    ID                      BigDecimal
    SALU_ID                 BigDecimal
    SALU_SALUTATION         String
    ACTI_ID                 BigDecimal
    ACTI_ACADEMIC_TITLE     String
    FIRSTNAME               String
    LASTNAME                String
    STREET                  String
    NR                      String
    ZIP                     String
    TOWN                    String
    CTRY_ID                 BigDecimal
    CTRY_COUNTRY            String
    BIRTHDAY                Timestamp
    SOCIALSECNR             BigDecimal
    HEIN_ID                 BigDecimal
    HEIN_HEALTH_INSURANCE   String
    FILENAME                String
    IMAGE                   byte[]
```

Writable | Smart Insert | 368 : 48

Code Completion

Server calls/actions are also offered in the code completion dialog.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
*ContactsWorkScreen.java
Outline
DataBooks

```java
        panDetails.add(gpanEducations, layoutDetails.getConstraints(0, 1, -1,

        splitMain.setDividerPosition(250);
        splitMain.setDividerAlignment(UISplitPanel.DIVIDER_TOP_LEFT);
        splitMain.setFirstComponent(panContacts);
        splitMain.setSecondComponent(panDetails);

        this.setLayout(blThis);
        this.add(splitMain, UIBorderLayout.CENTER);

        setPreferredSize(800, 550);

        getConnection().callAction(
    }

    // ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    // User-defined methods
    // ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

    /**
     * Saves the image to the conta
     *
     * @param pFileHandle the file.
     * @throws Throwable if an erro
     */
    public void storeFile(IFileHand
    {
        String sFormat = FileUtil.g

        if ("png".equals(sFormat) |
        {
            ByteArrayOutputStream s

            ImageUtil.createScaledImage(pFileHandle.getInputStream(), 140, 185

            stream.close();

            rdbContacts.setValue("FILENAME", pFileHandle.getFileName());
```

```
"doCommit" : void - Session
"doRollback" : void - Session
"getDBAccess" : DBAccess - Session
"getWorkScreenAccess" : IWorkScreenAccess - Session
"setAutoCommit", boolean : void - Session
callAction(String arg0) : Object - AbstractConnection
callAction(String[] arg0) : Object[] - AbstractConnection
callAction(ICallBackListener arg0, String arg1) : void - Abs
callAction(String arg0, Object... arg1) : Object - AbstractC
callAction(String[] arg0, Object[][] arg1) : Object[] - Abstr
callAction(ICallBackListener arg0, String arg1, Object... arg
                           Press 'Ctrl+Space' to show Template Proposals
```

```
rdbContEduc
  contEduc
    ID                      BigDecimal
    CONT_ID                 BigDecimal
    CONT_FIRSTNAME          String
    EDUC_ID                 BigDecimal
    EDUC_EDUCATION          String
rdbContacts
  contacts
    ID                      BigDecimal
    SALU_ID                 BigDecimal
    SALU_SALUTATION         String
    ACTI_ID                 BigDecimal
    ACTI_ACADEMIC_TITLE     String
    FIRSTNAME               String
    LASTNAME                String
    STREET                  String
    NR                      String
    ZIP                     String
    TOWN                    String
    CTRY_ID                 BigDecimal
    CTRY_COUNTRY            String
    BIRTHDAY                Timestamp
    SOCIALSECNR             BigDecimal
    HEIN_ID                 BigDecimal
    HEIN_HEALTH_INSURANCE   String
    FILENAME                String
    IMAGE                   byte[]
```

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Build Options

The build behavior can also be changed in the project preferences.

Object Parameters Passed to Server Calls

This option defines how the plugin should treat server calls/actions which are passed with `Objects` as parameters and whether it should issue a notice/warning/error or do nothing.

This is an especially useful function when one calls a lot of server functions with parameters from DataBooks. Let us assume the following server side function:

```java
public String concatName(String title, String firstname, String lastname)
{
    if (StringUtil.isEmpty(title))
    {
        return firstname + " " + lastname;
    }
    else
    {
        return title + " " + firstname + " " + lastname;
    }
}
```

This can be called from the client side:

```java
String fullname = getConnection().callAction(
        "concatName",
        rdbContacts.getValue("TITLE"),
        rdbContacts.getValue("FIRSTNAME"),
        rdbContacts.getValue("LASTNAME"));
```

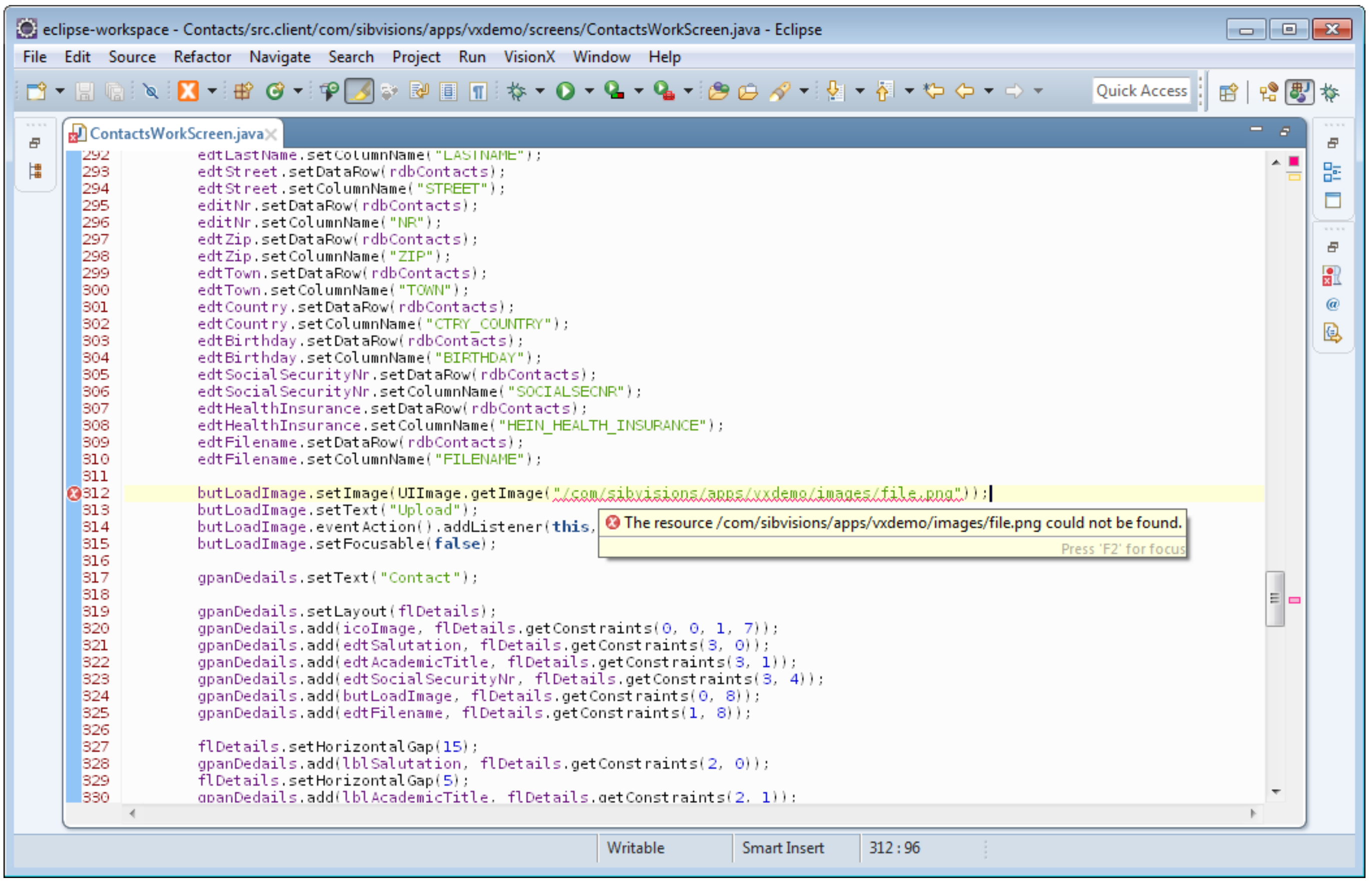
The DataBooks `getValue` function does return by default `Objects`, but the server side function does expect three parameters of the type `String`. With this option, one can control what the plugin should if it encounters such a call, whether they should be flagged or not.

Resources

Resources, like embedded images or text files, are important to most applications. In the case of JVx, they mostly consist of images which are used to enhance the UI and are loaded through the `UIImage` facility.

Compile Time Checks

The paths of resources are checked during compilation for their existence.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
ContactsWorkScreen.java

```
        edtLastName.setColumnName("LASTNAME");
        edtStreet.setDataRow(rdbContacts);
        edtStreet.setColumnName("STREET");
        editNr.setDataRow(rdbContacts);
        editNr.setColumnName("NR");
        edtZip.setDataRow(rdbContacts);
        edtZip.setColumnName("ZIP");
        edtTown.setDataRow(rdbContacts);
        edtTown.setColumnName("TOWN");
        edtCountry.setDataRow(rdbContacts);
        edtCountry.setColumnName("CTRY_COUNTRY");
        edtBirthday.setDataRow(rdbContacts);
        edtBirthday.setColumnName("BIRTHDAY");
        edtSocialSecurityNr.setDataRow(rdbContacts);
        edtSocialSecurityNr.setColumnName("SOCIALSECNR");
        edtHealthInsurance.setDataRow(rdbContacts);
        edtHealthInsurance.setColumnName("HEIN_HEALTH_INSURANCE");
        edtFilename.setDataRow(rdbContacts);
        edtFilename.setColumnName("FILENAME");

        butLoadImage.setImage(UIImage.getImage("/com/sibvisions/apps/vxdemo/images/file.png"));
        butLoadImage.setText("Upload");
        butLoadImage.eventAction().addListener(this,
        butLoadImage.setFocusable(false);

        gpanDedails.setText("Contact");

        gpanDedails.setLayout(flDetails);
        gpanDedails.add(icoImage, flDetails.getConstraints(0, 0, 1, 7));
        gpanDedails.add(edtSalutation, flDetails.getConstraints(3, 0));
        gpanDedails.add(edtAcademicTitle, flDetails.getConstraints(3, 1));
        gpanDedails.add(edtSocialSecurityNr, flDetails.getConstraints(3, 4));
        gpanDedails.add(butLoadImage, flDetails.getConstraints(0, 8));
        gpanDedails.add(edtFilename, flDetails.getConstraints(1, 8));

        flDetails.setHorizontalGap(15);
        gpanDedails.add(lblSalutation, flDetails.getConstraints(2, 0));
        flDetails.setHorizontalGap(5);
        gpanDedails.add(lblAcademicTitle, flDetails.getConstraints(2, 1));
```

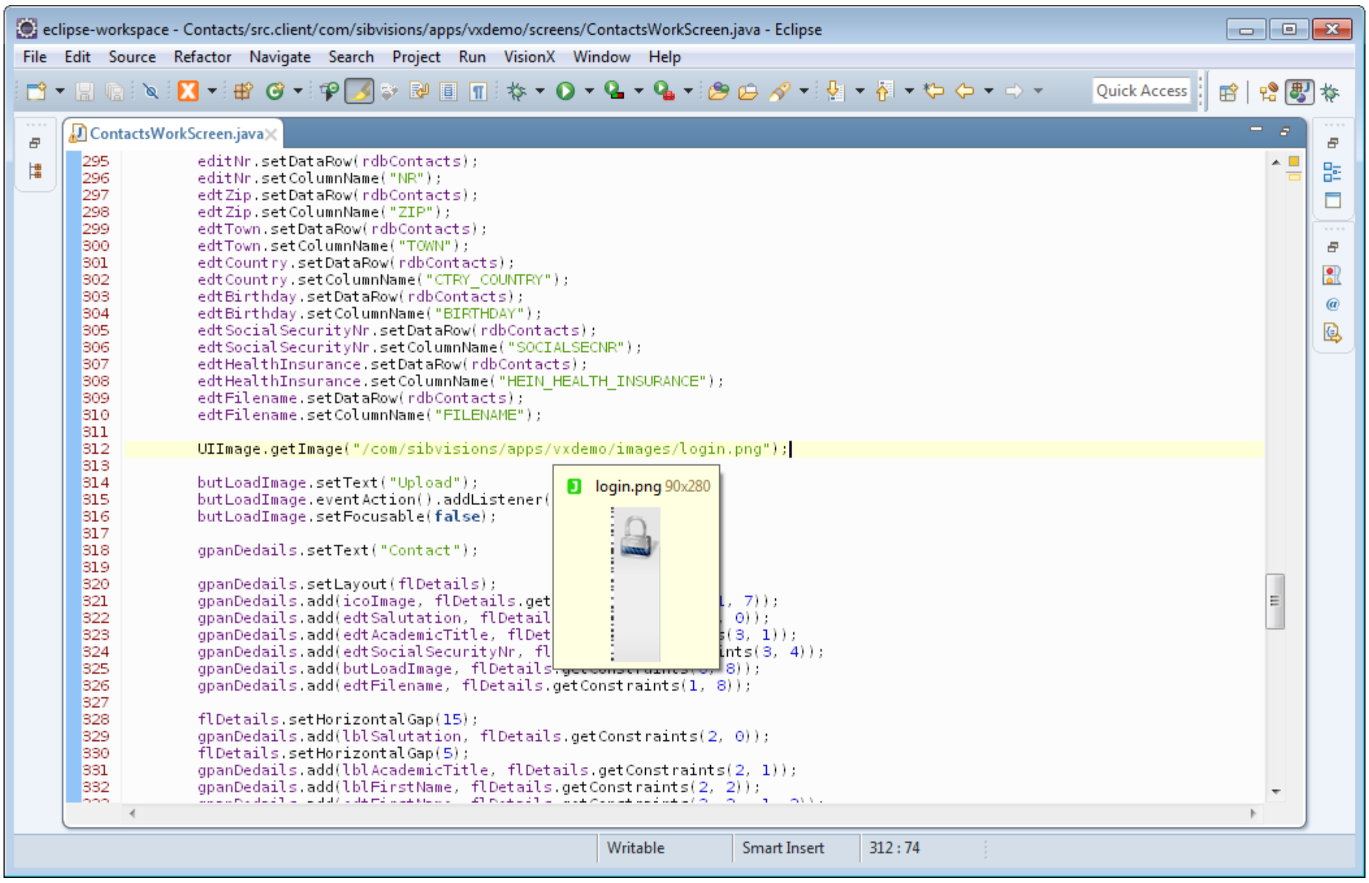
The resource /com/sibvisions/apps/vxdemo/images/file.png could not be found.

Press 'F2' for focus

Writable | Smart Insert | 312 : 96

Hover Tips

When hovering over the path of a resource, a hover tip is provided which shows a preview of the image that is being referenced.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
ContactsWorkScreen.java
login.png 90x280
Writable
Smart Insert
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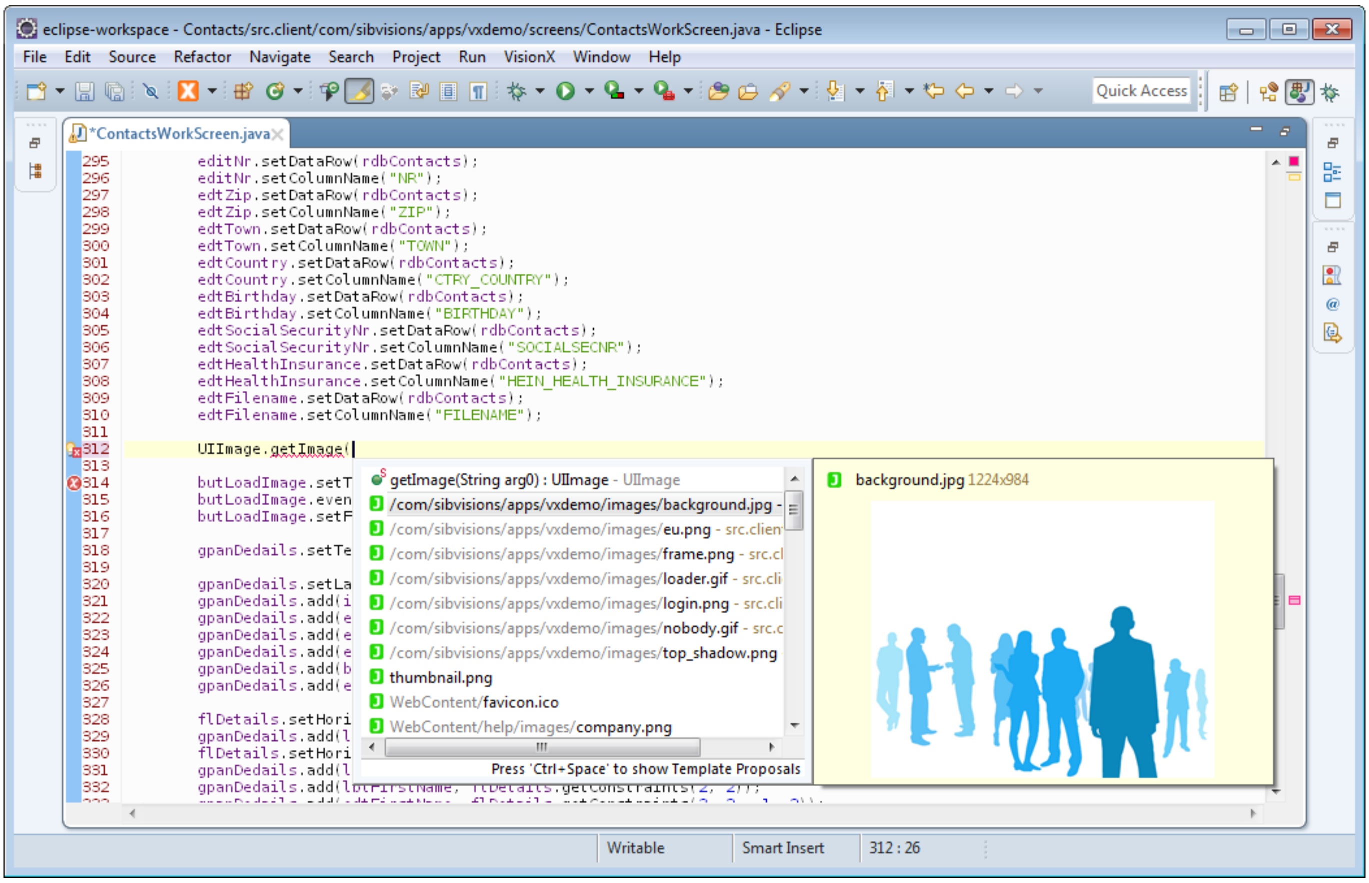
```java
        editNr.setDataRow(rdbContacts);
        editNr.setColumnName("NR");
        edtZip.setDataRow(rdbContacts);
        edtZip.setColumnName("ZIP");
        edtTown.setDataRow(rdbContacts);
        edtTown.setColumnName("TOWN");
        edtCountry.setDataRow(rdbContacts);
        edtCountry.setColumnName("CTRY_COUNTRY");
        edtBirthday.setDataRow(rdbContacts);
        edtBirthday.setColumnName("BIRTHDAY");
        edtSocialSecurityNr.setDataRow(rdbContacts);
        edtSocialSecurityNr.setColumnName("SOCIALSECNR");
        edtHealthInsurance.setDataRow(rdbContacts);
        edtHealthInsurance.setColumnName("HEIN_HEALTH_INSURANCE");
        edtFilename.setDataRow(rdbContacts);
        edtFilename.setColumnName("FILENAME");

        UIImage.getImage("/com/sibvisions/apps/vxdemo/images/login.png");

        butLoadImage.setText("Upload");
        butLoadImage.eventAction().addListener(
        butLoadImage.setFocusable(false);

        gpanDedails.setText("Contact");

        gpanDedails.setLayout(flDetails);
        gpanDedails.add(icoImage, flDetails.get                  1, 7));
        gpanDedails.add(edtSalutation, flDetail                  , 0));
        gpanDedails.add(edtAcademicTitle, flDet                  s(3, 1));
        gpanDedails.add(edtSocialSecurityNr, fl                  ints(3, 4));
        gpanDedails.add(butLoadImage, flDetails.                 8));
        gpanDedails.add(edtFilename, flDetails.getConstraints(1, 8));

        flDetails.setHorizontalGap(15);
        gpanDedails.add(lblSalutation, flDetails.getConstraints(2, 0));
        flDetails.setHorizontalGap(5);
        gpanDedails.add(lblAcademicTitle, flDetails.getConstraints(2, 1));
        gpanDedails.add(lblFirstName, flDetails.getConstraints(2, 2));
```

Code Completion

The paths of resources are also offered in the code completion dialog, complete with a preview of the image.



```
        editNr.setDataRow(rdbContacts);
        editNr.setColumnName("NR");
        edtZip.setDataRow(rdbContacts);
        edtZip.setColumnName("ZIP");
        edtTown.setDataRow(rdbContacts);
        edtTown.setColumnName("TOWN");
        edtCountry.setDataRow(rdbContacts);
        edtCountry.setColumnName("CTRY_COUNTRY");
        edtBirthday.setDataRow(rdbContacts);
        edtBirthday.setColumnName("BIRTHDAY");
        edtSocialSecurityNr.setDataRow(rdbContacts);
        edtSocialSecurityNr.setColumnName("SOCIALSECNR");
        edtHealthInsurance.setDataRow(rdbContacts);
        edtHealthInsurance.setColumnName("HEIN_HEALTH_INSURANCE");
        edtFilename.setDataRow(rdbContacts);
        edtFilename.setColumnName("FILENAME");

        UIImage.getImage(

        butLoadImage.setT
        butLoadImage.even
        butLoadImage.setF

        gpanDedails.setTe

        gpanDedails.setLa
        gpanDedails.add(i
        gpanDedails.add(e
        gpanDedails.add(e
        gpanDedails.add(e
        gpanDedails.add(b
        gpanDedails.add(e

        flDetails.setHori
        gpanDedails.add(l
        flDetails.setHori
        gpanDedails.add(l
        gpanDedails.add(lblFirstName, flDetails.getConstraints(2, 2));
```

```
getImage(String arg0) : UIImage - UIImage
/com/sibvisions/apps/vxdemo/images/background.jpg -
/com/sibvisions/apps/vxdemo/images/eu.png - src.clien
/com/sibvisions/apps/vxdemo/images/frame.png - src.cl
/com/sibvisions/apps/vxdemo/images/loader.gif - src.cli
/com/sibvisions/apps/vxdemo/images/login.png - src.cli
/com/sibvisions/apps/vxdemo/images/nobody.gif - src.c
/com/sibvisions/apps/vxdemo/images/top_shadow.png
thumbnail.png
WebContent/favicon.ico
WebContent/help/images/company.png
Press 'Ctrl+Space' to show Template Proposals
```

eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
*ContactsWorkScreen.java
background.jpg 1224x984
Writable
Smart Insert
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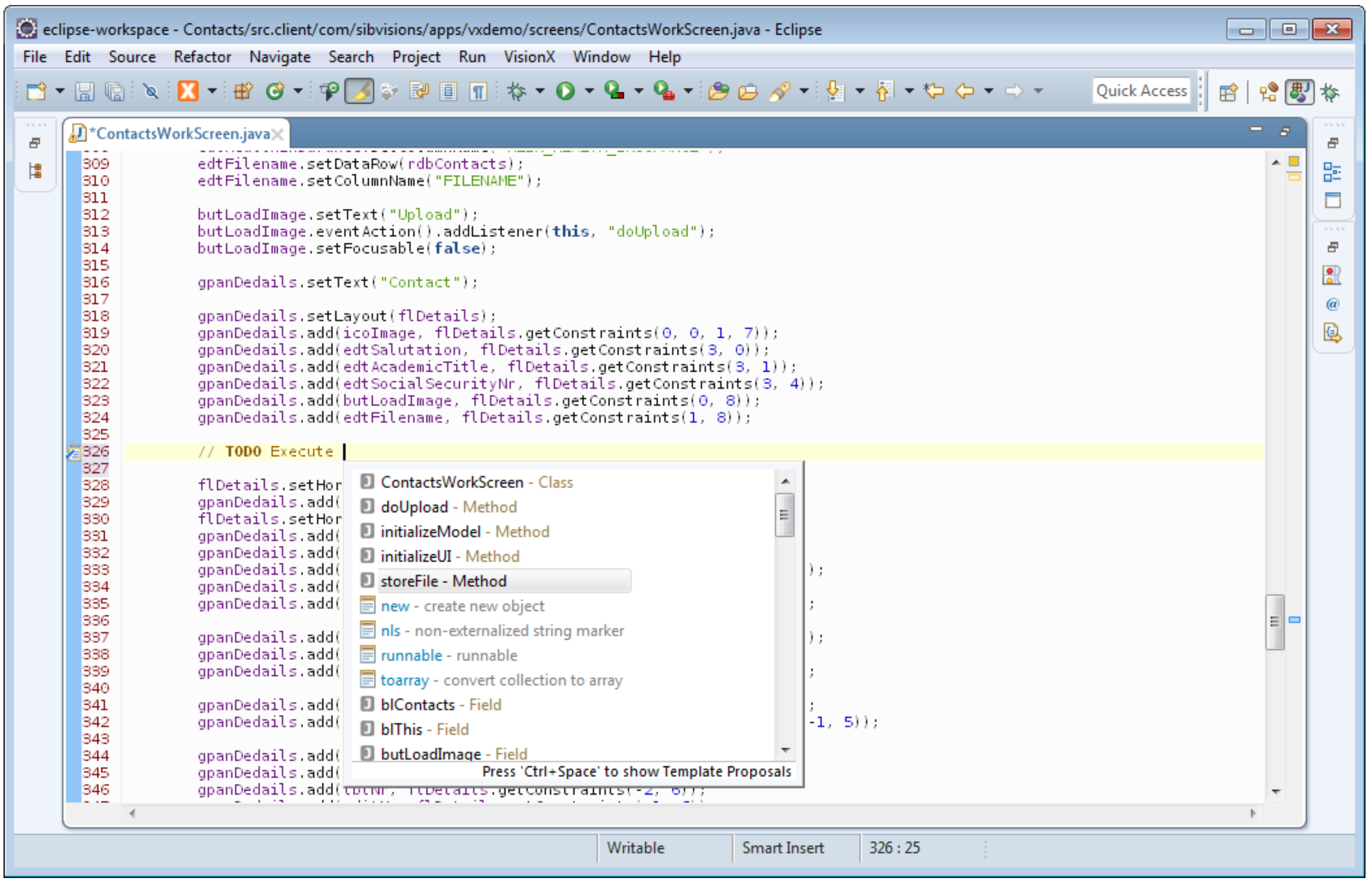
Comments

EPlug offers an additional plugin which provides various utility methods regarding comments.

Code Completion

Code completion for the current class is offered while writing a comment. This includes the class name and all function names.

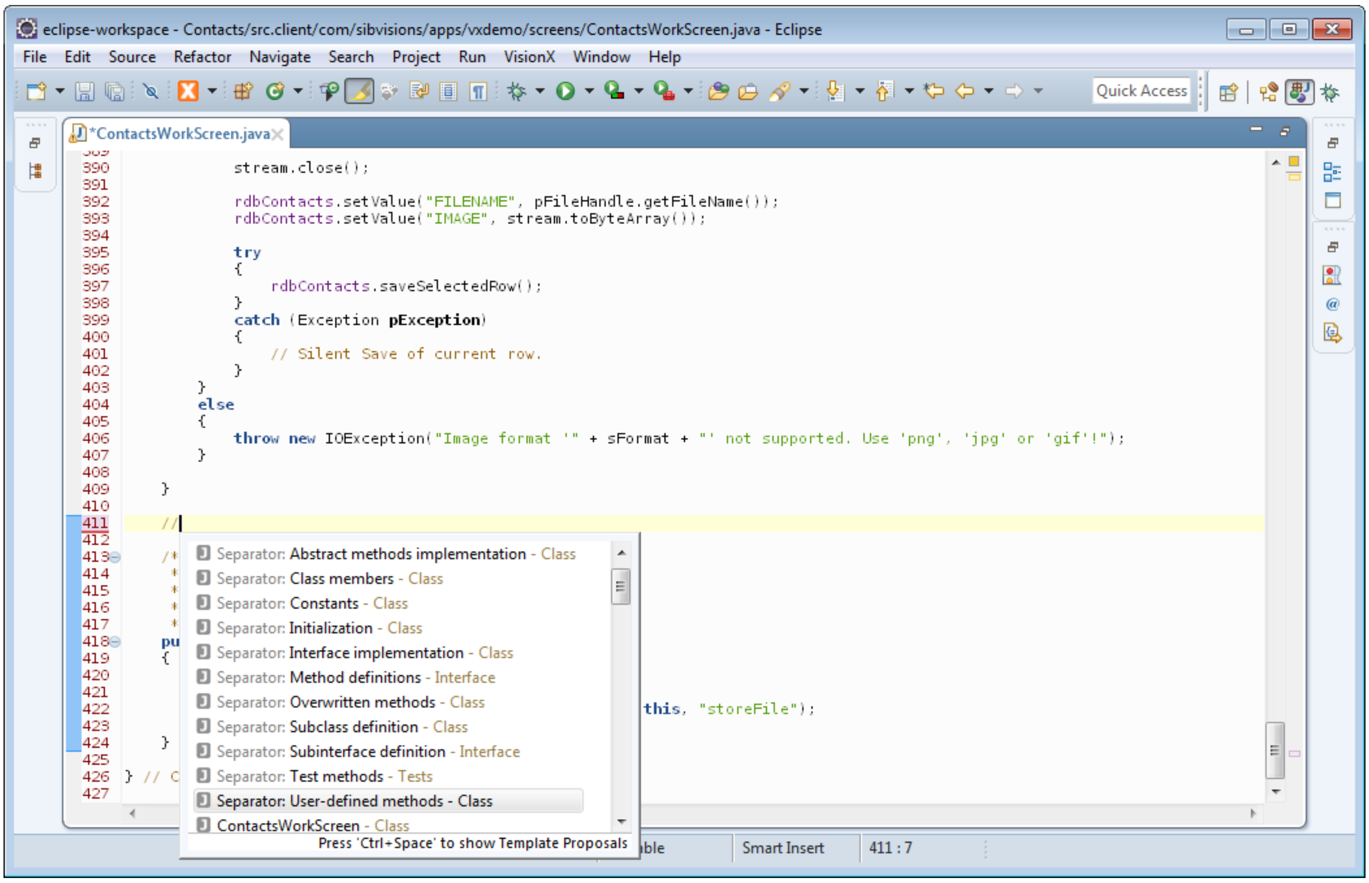

eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
*ContactsWorkScreen.java

```
        edtFilename.setDataRow(rdbContacts);
        edtFilename.setColumnName("FILENAME");

        butLoadImage.setText("Upload");
        butLoadImage.eventAction().addListener(this, "doUpload");
        butLoadImage.setFocusable(false);

        gpanDedails.setText("Contact");

        gpanDedails.setLayout(flDetails);
        gpanDedails.add(icoImage, flDetails.getConstraints(0, 0, 1, 7));
        gpanDedails.add(edtSalutation, flDetails.getConstraints(3, 0));
        gpanDedails.add(edtAcademicTitle, flDetails.getConstraints(3, 1));
        gpanDedails.add(edtSocialSecurityNr, flDetails.getConstraints(3, 4));
        gpanDedails.add(butLoadImage, flDetails.getConstraints(0, 8));
        gpanDedails.add(edtFilename, flDetails.getConstraints(1, 8));

        // TODO Execute

        flDetails.setHor
        gpanDedails.add(
        flDetails.setHor
        gpanDedails.add(
        gpanDedails.add(
        gpanDedails.add(                                                   );
        gpanDedails.add(
        gpanDedails.add(                                                   ;

        gpanDedails.add(                                                   );
        gpanDedails.add(
        gpanDedails.add(                                                   ;

        gpanDedails.add(                                                   ;
        gpanDedails.add(                                                   -1, 5));

        gpanDedails.add(
        gpanDedails.add(
        gpanDedails.add(
```

```
ContactsWorkScreen - Class
doUpload - Method
initializeModel - Method
initializeUI - Method
storeFile - Method
new - create new object
nls - non-externalized string marker
runnable - runnable
toarray - convert collection to array
blContacts - Field
blThis - Field
butLoadImage - Field
Press 'Ctrl+Space' to show Template Proposals
```

Separators

It is also possible to automatically insert the separators which are used to structure classes.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
*ContactsWorkScreen.java

```
            stream.close();

            rdbContacts.setValue("FILENAME", pFileHandle.getFileName());
            rdbContacts.setValue("IMAGE", stream.toByteArray());

            try
            {
                rdbContacts.saveSelectedRow();
            }
            catch (Exception pException)
            {
                // Silent Save of current row.
            }
        }
        else
        {
            throw new IOException("Image format '" + sFormat + "' not supported. Use 'png', 'jpg' or 'gif'!");
        }
    }

    //

    /*
     *
     *
     *
     *
    pu
    {
                                                        this, "storeFile");

    }
} // C
```

```
Separator: Abstract methods implementation - Class
Separator: Class members - Class
Separator: Constants - Class
Separator: Initialization - Class
Separator: Interface implementation - Class
Separator: Method definitions - Interface
Separator: Overwritten methods - Class
Separator: Subclass definition - Class
Separator: Subinterface definition - Interface
Separator: Test methods - Tests
Separator: User-defined methods - Class
ContactsWorkScreen - Class
Press 'Ctrl+Space' to show Template Proposals
```

Additional Build Options

There are additional build options available in the project preferences.

Mixed Use of Client/Server Classes

Allows you to check whether client classes are used on the server or the other way round.

In most deployment environments, the client would have no access to the server classes, and vice versa: the server would not have access to the client classes. As both sources are included in the development classpath, a mixup of the two can easily happen. This option provides a means to make sure that this does not happen, or at least so it can be spotted before deployment.

Check Complement Files During Build

Allows you to enable that complement files are also checked during the build.

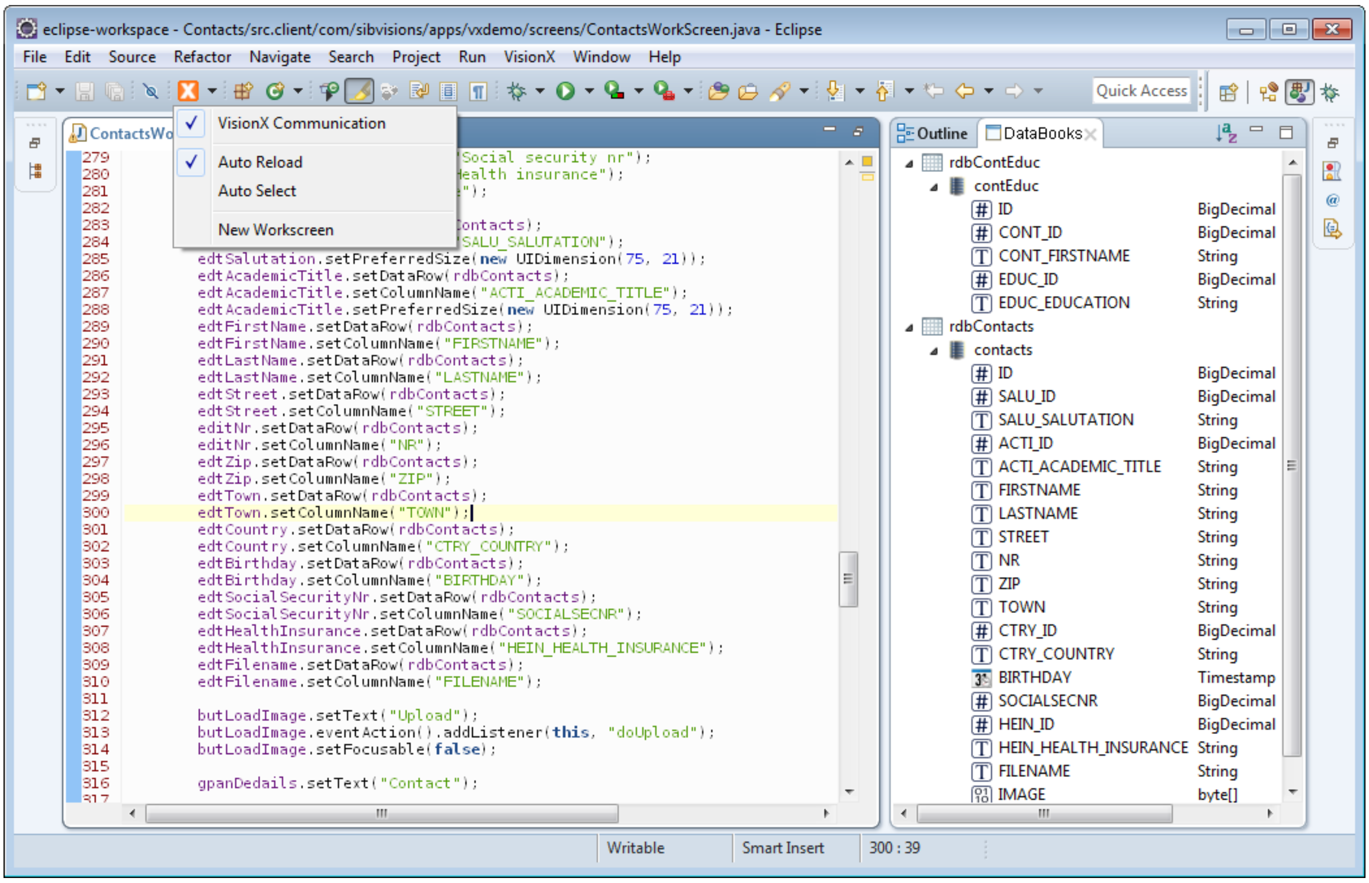
See Go To Complement Class for more information.

Interaction With VisionX

VisionX is a rapid application development tool which let's you quickly create, edit, and publish applications. It has the ability to interact with EPlug, and EPlug can interact with VisionX in a variety of ways.

Connecting With VisionX

The connection to VisionX can be toggled by clicking the menu item and selecting the option “VisionX Communication”.


eclipse-workspace - Contacts/src.client/com/sibvisions/apps/vxdemo/screens/ContactsWorkScreen.java - Eclipse
File Edit Source Refactor Navigate Search Project Run VisionX Window Help
Quick Access
✓ VisionX Communication
✓ Auto Reload
Auto Select
New Workscreen
ContactsWo
Outline
DataBooks
Writable
Smart Insert
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```
                                         "Social security nr");
                                         Health insurance");
                                         ");

                                         Contacts);
                                         "SALU_SALUTATION");
        edtSalutation.setPreferredSize(new UIDimension(75, 21));
        edtAcademicTitle.setDataRow(rdbContacts);
        edtAcademicTitle.setColumnName("ACTI_ACADEMIC_TITLE");
        edtAcademicTitle.setPreferredSize(new UIDimension(75, 21));
        edtFirstName.setDataRow(rdbContacts);
        edtFirstName.setColumnName("FIRSTNAME");
        edtLastName.setDataRow(rdbContacts);
        edtLastName.setColumnName("LASTNAME");
        edtStreet.setDataRow(rdbContacts);
        edtStreet.setColumnName("STREET");
        editNr.setDataRow(rdbContacts);
        editNr.setColumnName("NR");
        edtZip.setDataRow(rdbContacts);
        edtZip.setColumnName("ZIP");
        edtTown.setDataRow(rdbContacts);
        edtTown.setColumnName("TOWN");
        edtCountry.setDataRow(rdbContacts);
        edtCountry.setColumnName("CTRY_COUNTRY");
        edtBirthday.setDataRow(rdbContacts);
        edtBirthday.setColumnName("BIRTHDAY");
        edtSocialSecurityNr.setDataRow(rdbContacts);
        edtSocialSecurityNr.setColumnName("SOCIALSECNR");
        edtHealthInsurance.setDataRow(rdbContacts);
        edtHealthInsurance.setColumnName("HEIN_HEALTH_INSURANCE");
        edtFilename.setDataRow(rdbContacts);
        edtFilename.setColumnName("FILENAME");

        butLoadImage.setText("Upload");
        butLoadImage.eventAction().addListener(this, "doUpload");
        butLoadImage.setFocusable(false);

        gpanDedails.setText("Contact");
```

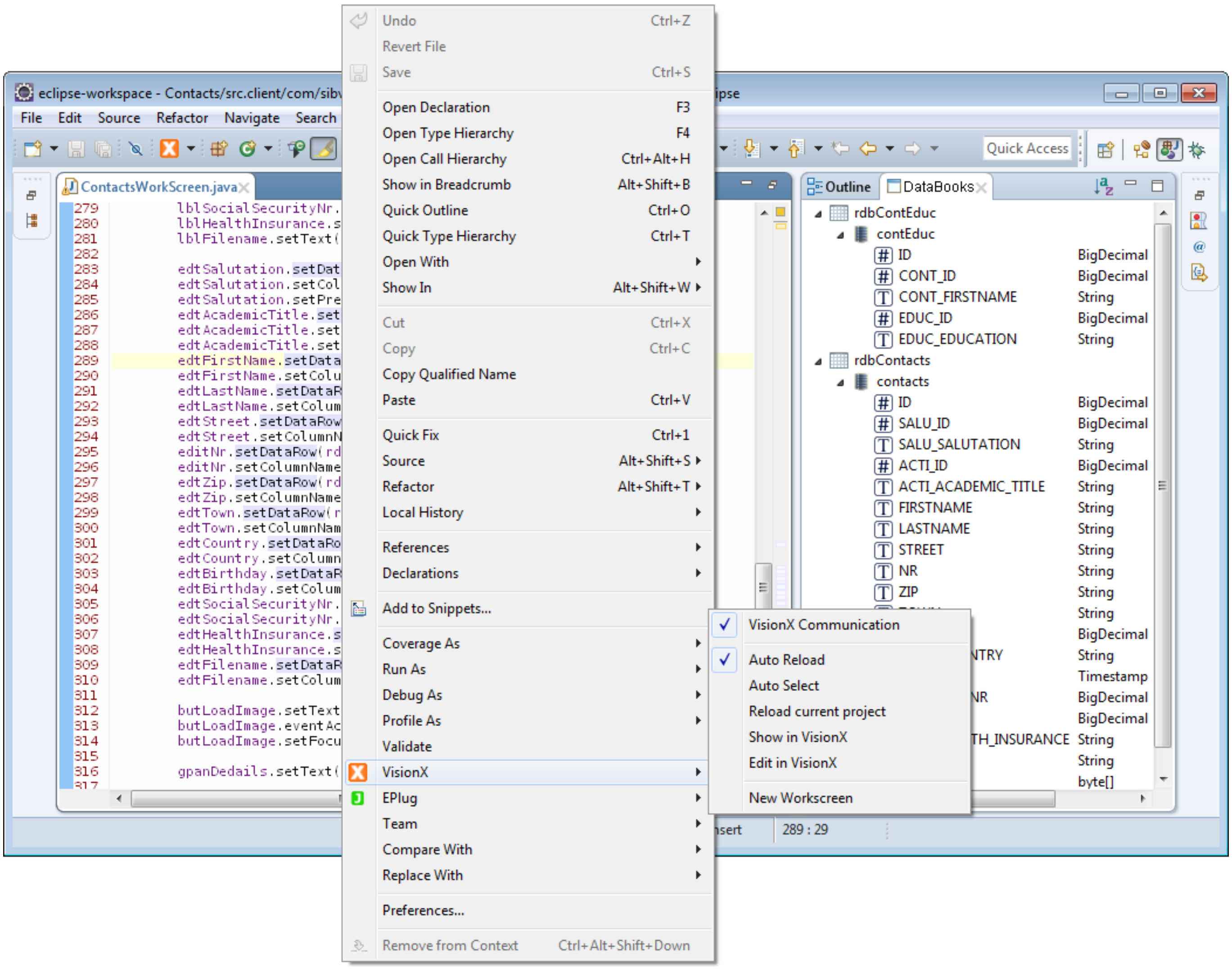
- rdbContEduc
  - contEduc

ID	BigDecimal
CONT_ID	BigDecimal
CONT_FIRSTNAME	String
EDUC_ID	BigDecimal
EDUC_EDUCATION	String

- rdbContacts
  - contacts

ID	BigDecimal
SALU_ID	BigDecimal
SALU_SALUTATION	String
ACTI_ID	BigDecimal
ACTI_ACADEMIC_TITLE	String
FIRSTNAME	String
LASTNAME	String
STREET	String
NR	String
ZIP	String
TOWN	String
CTRY_ID	BigDecimal
CTRY_COUNTRY	String
BIRTHDAY	Timestamp
SOCIALSECNR	BigDecimal
HEIN_ID	BigDecimal
HEIN_HEALTH_INSURANCE	String
FILENAME	String
IMAGE	byte[]

It can also be toggled through the context menu of the editor.



Notification of Changes

EPlug has the ability to inform VisionX that changes to the sources have occurred, and that it should reload the application. That can be done manually by selecting the command from the menus, or the automatic reloading can be activated.

When automatic reloading is activated, VisionX will automatically reload the application every time a file in the project has been changed.

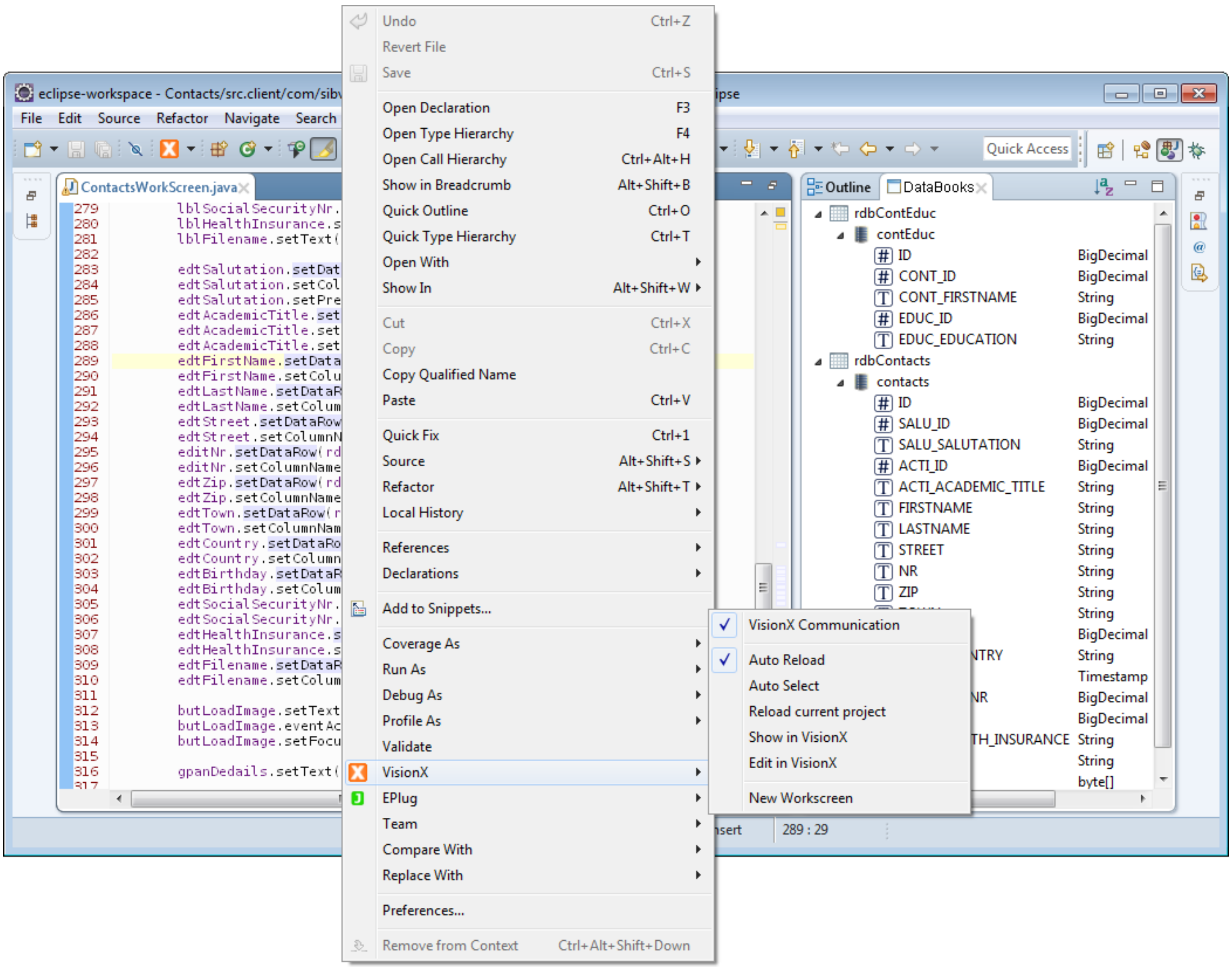
Synchronizing the Selection

The selection between VisionX can also be synchronized either manually, through the same menus, or by automatic means.

The selection in Eclipse is the position of the cursor in the text editor; he selection in VisionX is the actual selection of components in the design mode. If design mode is not active in VisionX, it will not be turned on.

Additional Commands

There are various additional commands available to interact with VisionX.



```
        lblSocialSecurityNr.
        lblHealthInsurance.s
        lblFilename.setText(

        edtSalutation.setDat
        edtSalutation.setCol
        edtSalutation.setPre
        edtAcademicTitle.set
        edtAcademicTitle.set
        edtAcademicTitle.set
        edtFirstName.setData
        edtFirstName.setColu
        edtLastName.setDataR
        edtLastName.setColum
        edtStreet.setDataRow
        edtStreet.setColumnN
        editNr.setDataRow(rd
        editNr.setColumnName
        edtZip.setDataRow(rd
        edtZip.setColumnName
        edtTown.setDataRow(r
        edtTown.setColumnNam
        edtCountry.setDataRo
        edtCountry.setColumn
        edtBirthday.setDataR
        edtBirthday.setColum
        edtSocialSecurityNr.
        edtSocialSecurityNr.
        edtHealthInsurance.s
        edtHealthInsurance.s
        edtFilename.setDataR
        edtFilename.setColum

        butLoadImage.setText
        butLoadImage.eventAc
        butLoadImage.setFocu

        gpanDedails.setText(
```

Edit in VisionX

The currently selected item or source file is also selected in VisionX, and the design mode is turned on in VisionX.

New Workscreen

The New Workscreen Wizard is opened in VisionX.