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This article describes how to create and use Eclipse Wizards. It is based on the Eclipse 4.4 release but covers also the Eclipse 3.x releases.

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1. Eclipse Wizards

1.1. What is a wizard

In Eclipse, a *wizard* is commonly used for the creation of new elements, imports or exports. It can also be used for the execution of any task involving a sequential series of steps. A wizard should be used if there are many steps in the task, and they must be completed in a specific order.

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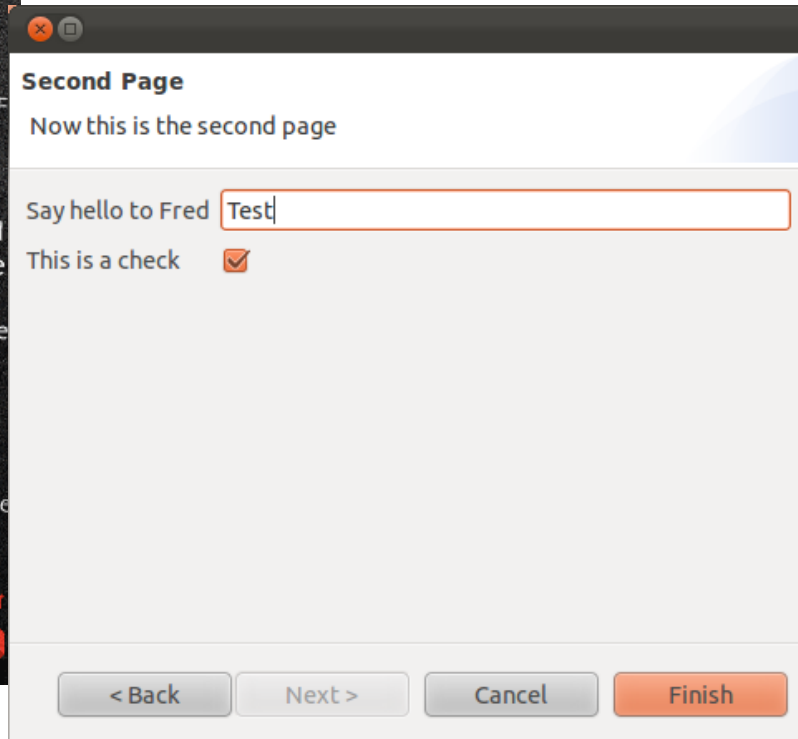
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When the wizard window is opened, this window blocks the remaining user interface until the user finishes the task in the wizard or cancels.

The following screenshot shows the second page of a wizard.



JFace orders the buttons differently depending on the platform.

1.2. Wizards and WizardPages

The `Wizard` class from the `org.eclipse.jface.wizard` package provides the functionality to build custom wizards. This class controls the navigation between the different pages and provides the base user interface, for example, an area for error and information messages.

A wizard contains one or several pages of the type `WizardPage`. Such a page is added to a `Wizard` object via the `addPage()` method.

A `WizardPage` must create a new `Composite` in its `createControl()` method. This new `Composite` must use the `Composite` of the method parameter as parent. It also must call the `setControl()` method with this new `Composite` as parameter. If this is omitted, Eclipse will throw an error.

1.3. Starting the Wizard

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Typically, a wizard is opened via a menu or toolbar entry or via a `SelectionListener` on a button.

1.4. Changing the page order

To control the order of the `WizardPage` object, you can override the `getNextPage()` method in the `Wizard`. This allows you to change the order of the pages depending on the data in the wizard and pages.

The following code snippet demonstrates this approach.

```
// todo is an object available in the wizard
// JAVA

private TodoWizardPage1 page1 = new TodoWizardPage1(todo);
private TodoWizardPage2 page2 = new TodoWizardPage2();
private TodoWizardPage3 specialPage = new
    TodoWizardPage3(todo);

@Override
public void addPages() {
    addPage(page1);
    addPage(page2);
    addPage(specialPage);
}

@Override
public IWizardPage getNextPage(IWizardPage currentPage) {
    if (todo.isDone()) {
        return specialPage;
    }
    if (currentPage == page1) {
        return page2;
    }
    return null;
}
```

1.5. Working with data in the wizard

To use the same data in different pages of your wizard, pass them to the wizard pages via their constructor parameters.

The `isVisible()` method is called whenever the `WizardPage` either gets visible or invisible. Call the `super.isVisible()` method and check the current status of the page. If the page is visible, assign the data of your object to the user interface components.

1.6. Updating the Wizard buttons from a WizardPage


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button in the wizard becomes active.

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The Wizard class defines the `canFinish` method in which you
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can define if the wizard can be completed.

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If the status changes, you can update the buttons in the Wizard (e.g., the `Next` and the `Finish` button) from a `WizardPage` via the `getWizard().getContainer().updateButtons()` method call.

1.7. Adding your wizard to the New, Import and Export commands

In Eclipse 3.x you can register a wizard via the `org.eclipse.ui.newWizards` extension point.

This includes your wizard in the standard dialog for new projects which can be used via the command `org.eclipse.ui.newWizard`.

This is also possible for the export and import wizard commands.



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2. Exercise: Wizards Example

The following gives an example of a wizard with two pages.

Create the following `MyPageOne` and `MyPageTwo` classes.


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[\(http://www.vogella.com\)](http://www.vogella.com/) **import** org.eclipse.jface.wizard.WizardPage;

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[Books \(http://www.vogella.com/books/\)](http://www.vogella.com/books/) **import** org.eclipse.swt.layout.GridLayout;

[\(http://www.vogella.com/\)](http://www.vogella.com/) **import** org.eclipse.swt.widgets.Composite;

[Company \(http://www.vogella.com/company/\)](http://www.vogella.com/company/) **import** org.eclipse.swt.widgets.Label;

[Donate \(http://www.vogella.com/support.html\)](http://www.vogella.com/support.html) **import** org.eclipse.swt.widgets.Text;

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```

import org.eclipse.jface.wizard.WizardPage;
import org.eclipse.swt.events.KeyEvent;
import org.eclipse.swt.events.KeyListener;
import org.eclipse.swt.layout.GridLayout;
import org.eclipse.swt.widgets.Composite;
import org.eclipse.swt.widgets.Label;
import org.eclipse.swt.widgets.Text;

public class MyPageOne extends WizardPage {
    private Text text1;
    private Composite container;

    public MyPageOne() {
        super("First Page");
        setTitle("First Page");
        setDescription("Fake Wizard: First page");
    }

    @Override
    public void createControl(Composite parent) {
        container = new Composite(parent, SWT.NONE);
        GridLayout layout = new GridLayout();
        container.setLayout(layout);
        layout.numColumns = 2;
        Label label1 = new Label(container,
SWT.NONE);

        label1.setText("Put a value here.");

        text1 = new Text(container, SWT.BORDER |
SWT.SINGLE);
        text1.setText("");
        text1.addKeyListener(new KeyListener() {

            @Override
            public void keyPressed(KeyEvent e) {
            }

            @Override
            public void keyReleased(KeyEvent e) {
                if
(!text1.getText().isEmpty()) {
                    setPageComplete(true);
                }
            }
        });
        GridData gd = new
GridData(GridData.FILL_HORIZONTAL);
        text1.setLayoutData(gd);
        // required to avoid an error in the system
        setControl(container);
        setPageComplete(false);
    }

    public String getText1() {
        return text1.getText();
    }
}

```


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import org.eclipse.swt.events.KeyEvent;

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import org.eclipse.swt.events.KeyListener;

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import org.eclipse.swt.layout.GridLayout;

import org.eclipse.swt.widgets.Button;

import org.eclipse.swt.widgets.Composite;

import org.eclipse.swt.widgets.Label;

import org.eclipse.swt.widgets.Text;

import org.eclipse.swt.widgets.Text;

import org.eclipse.swt.widgets.Text;

import org.eclipse.swt.widgets.Text;

public class MyPageTwo **extends** WizardPage {

private Text text1;

private Composite container;

public MyPageTwo() {

super("Second Page");

setTitle("Second Page");

setDescription("Now this is the second

page");

setControl(text1);

}
@Override
public void createControl(Composite parent) {

 container = **new** Composite(parent, SWT.NONE);

 GridLayout layout = **new** GridLayout();

container.setLayout(layout);

layout.numColumns = 2;

 Label label1 = **new** Label(container,

SWT.NONE);

label1.setText("Say hello to Fred");

 text1 = **new** Text(container, SWT.BORDER |

SWT.SINGLE);

text1.setText("");

 text1.addListener(**new** KeyListener() {

@Override
public void keyPressed(KeyEvent e) {

// TODO Auto-generated method

stub

}

@Override
public void keyReleased(KeyEvent e) {

if

(!text1.getText().isEmpty()) {

 setPageComplete(**true**);

}

}

});

 GridData gd = **new**

GridData(GridData.FILL_HORIZONTAL);

text1.setLayoutData(gd);

 Label labelCheck = **new** Label(container,

SWT.NONE);

labelCheck.setText("This is a check");

 Button check = **new** Button(container,

SWT.CHECK);

 check.setSelection(**true**);

// required to avoid an error in the system

setControl(container);

 setPageComplete(**false**);

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[return text1.getText\(\);](#)
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Create the following class called *MyWizard*.

```
package de.vogella.rcp.intro.wizards.wizard;

import org.eclipse.jface.wizard.Wizard;

public class MyWizard extends Wizard {

    protected MyPageOne one;
    protected MyPageTwo two;

    public MyWizard() {
        super();
        setNeedsProgressMonitor(true);
    }

    @Override
    public String getWindowTitle() {
        return "Export My Data";
    }

    @Override
    public void addPages() {
        one = new MyPageOne();
        two = new MyPageTwo();
        addPage(one);
        addPage(two);
    }

    @Override
    public boolean performFinish() {
        // Print the result to the console
        System.out.println(one.getText1());
        System.out.println(two.getText1());

        return true;
    }
}
```

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To show the wizard you could, for example, add a `Button` to your part and call the Wizard via a `SelectionListener` on the `Button`.



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```

button.addSelectionListener(new SelectionAdapter() {
    @Override
    public void widgetSelected(SelectionEvent e) {
        WizardDialog wizardDialog = new
        WizardDialog(parent, new MyWizard(),
        if (wizardDialog.open() == Window.OK) {
            System.out.println("Ok pressed");
        } else {
            System.out.println("Cancel pressed");
        }
    }
});

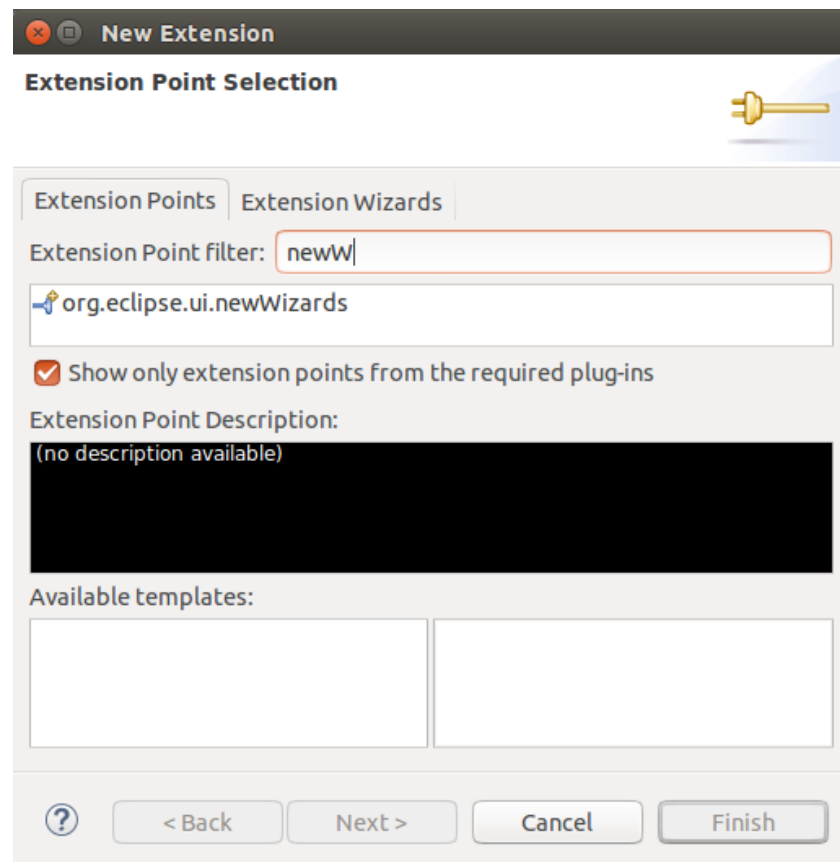
```

3. Exercise: Eclipse IDE New Wizard

Provide a wizard in the *New* dialog of the Eclipse IDE.

3.1. Using the org.eclipse.ui.newWizards extension point

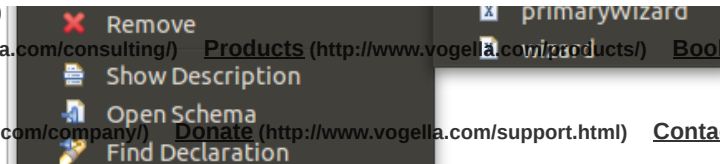
When a wizard should be provided as new wizard in the *New* dialog, the *org.eclipse.ui.newWizards* extension point has to be used.



Add a category to this extension point.


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This category should be called *Vogella*.

Extension Element Details

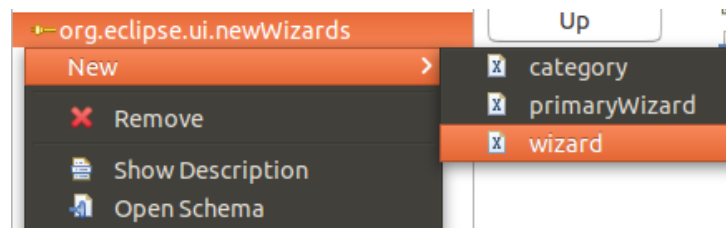
Set the properties of 'category' Required fields are denoted by '*'.

id*:

name*:

parentCategory:

Add a wizard to this extension point.



When clicking on the *class** hyperlink of the wizard entry, the following dialog will appear. Use the data depicted on the image.


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Source folder:

☐ Enclosing type:

Name:

Modifiers: ☒ public ☐ package ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass:

Interfaces:

Which method stubs would you like to create?

☐ public static void main(String[] args)

☒ Constructors from superclass

☒ Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))

☐ Generate comments

The result will look like this:

de.vogella.rcp.intro.wizards | MyNewWizard.java

Extensions

Define extensions for this plug-in in the following section.

type filter text

☒ org.eclipse.core.runtime.applic
☒ org.eclipse.ui.perspectives
☒ org.eclipse.ui.commands
☒ org.eclipse.ui.menus
☒ org.eclipse.ui.views
☒ org.eclipse.ui.newWizards
☒ MyNewWizard (wizard)
☒ Vogella (category)

Extension Element Details

Set the properties of 'wizard' Required fields are denoted by '*'.

id*:

name*:

class*:

icon:

category:

project:

finalPerspective:

preferredPerspectives:

helpHref:

descriptionImage:

canFinishEarly:

hasPages:

Overview | Dependencies | Runtime | **Extensions** | Extension Points | Build | MANIFEST.MF | plugin.xml | build.properties

3.2. Implement the INewWizard interface

The MyNewWizard implementation will look similar to this:


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import org.eclipse.jface.viewers.IStructuredSelection;

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import org.eclipse.jface.viewers.IStructuredSelection;

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import org.eclipse.ui.INewWizard;

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import org.eclipse.ui.IWorkbench;

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public class MyNewWizard extends Wizard implements INewWizard
public MyNewWizard() {

// ...
// other MyWizard code
// ...

@Override
public void init(IWorkbench workbench,
 IStructuredSelection selection) {
 // initialize wizard with workbench and the
 current selection

}

@Override
public boolean performFinish() {
 return false;

}

}

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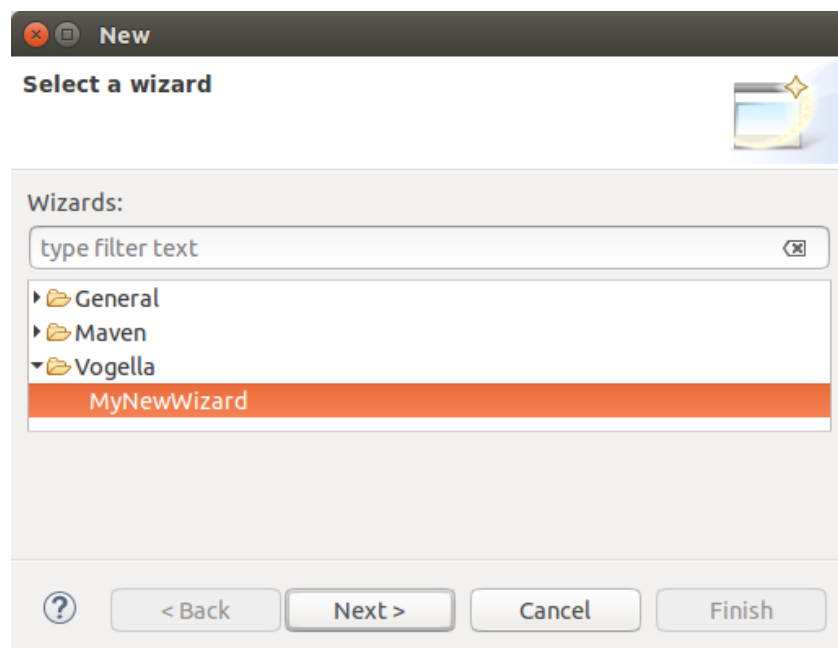
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3.3. Validate

Optionally the two wizard pages from previous exercises can be added to this new wizard.

Start an Eclipse IDE and open the *New* dialog by using the File ► New ► Other... menu or simply press **CTRL + N** and choose the MyNewWizard wizard.





4. Exercise: Eclipse IDE Import Wizard

4.1. Target

Provide a wizard in the *Import* dialog of the Eclipse IDE.

4.2. Implement an import wizard

Implementing an *import wizard* is pretty similar to implementing a *new wizard*.

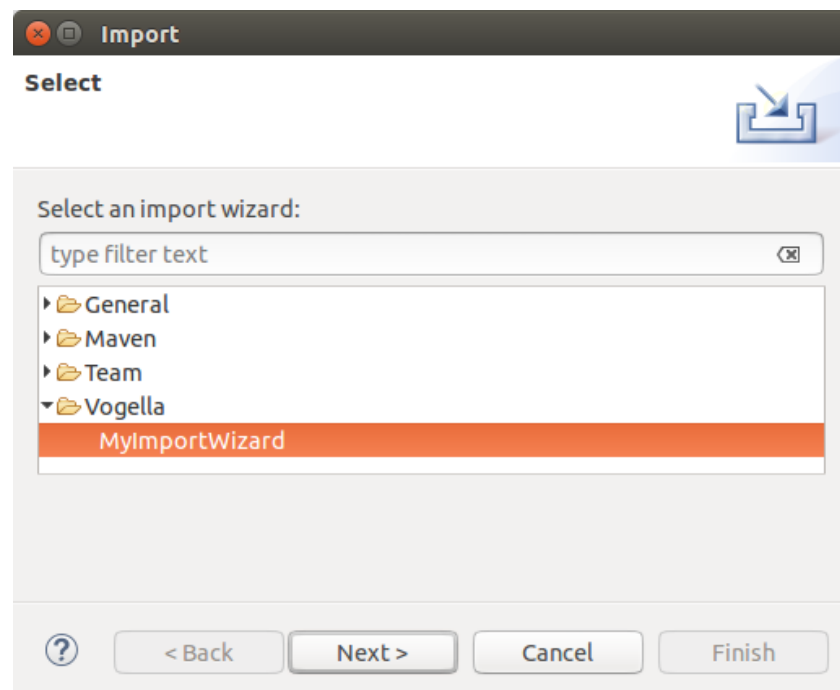
The main difference is that the `org.eclipse.ui.importWizards` extension point and the `IImportWizard` interface has to be used.

Therefore almost every step from [exercise-new-wizard] can be adapted.

4.3. Validate

Optionally the two wizard pages from previous exercises can be added to this new wizard.

Start an Eclipse IDE and open the *Import* dialog by using the File ► Import... menu and choose the *MyImportWizard* wizard.



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