

# NaturalONE

## Sample Applications

Version 9.3.1

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This document applies to NaturalONE Version 9.3.1 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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## Preface

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This documentation explains how to install and use the sample applications that are provided with NaturalONE. It is organized under the following headings:

**Installing the Sample Applications**

How to install the sample applications from the welcome page.

**Hello World Application**

The Hello World application is the preferred starting point for using NaturalONE. This is a simple sample which demonstrates a Natural project which implements a Hello World application by using Natural for Ajax.

**Travel Approval Application**

This sample demonstrates a Natural project which implements an Ajax application for a business travel approval system.

**Natural for Ajax Demos**

A collection of small Natural for Ajax samples which demonstrate how to use the different controls and how to bind them to Natural server-side processing.

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# 1

## About this Documentation

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## Document Conventions

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| Convention     | Description                                                                                                                                                                                                    |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bold</b>    | Identifies elements on a screen.                                                                                                                                                                               |
| Monospace font | Identifies service names and locations in the format <i>folder.subfolder.service</i> , APIs, Java classes, methods, properties.                                                                                |
| <i>Italic</i>  | Identifies:<br><br>Variables for which you must supply values specific to your own situation or environment.<br>New terms the first time they occur in the text.<br>References to other documentation sources. |
| Monospace font | Identifies:<br><br>Text you must type in.<br>Messages displayed by the system.<br>Program code.                                                                                                                |
| { }            | Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.                                                                     |
|                | Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the   symbol.                                                                                                |
| [ ]            | Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.                                                                                              |
| ...            | Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).                                                                                      |

## Online Information and Support

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### Product Documentation

You can find the product documentation on our documentation website at <https://documentation.softwareag.com>.

### Product Training

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### Tech Community

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- Browse through our vast knowledge base.
- Ask questions and find answers in our discussion forums.
- Get the latest Software GmbH news and announcements.
- Explore our communities.
- Go to our public GitHub and Docker repositories at <https://github.com/softwareag> and <https://hub.docker.com/publishers/softwareag> and discover additional Software GmbH resources.

## Product Support

Support for Software GmbH products is provided to licensed customers via our Empower Portal at <https://empower.softwareag.com>. Many services on this portal require that you have an account. If you do not yet have one, you can request it at <https://empower.softwareag.com/register>. Once you have an account, you can, for example:

- Download products, updates and fixes.
- Search the Knowledge Center for technical information and tips.
- Subscribe to early warnings and critical alerts.
- Open and update support incidents.
- Add product feature requests.

## Data Protection

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Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.



## 2 Installing the Sample Applications

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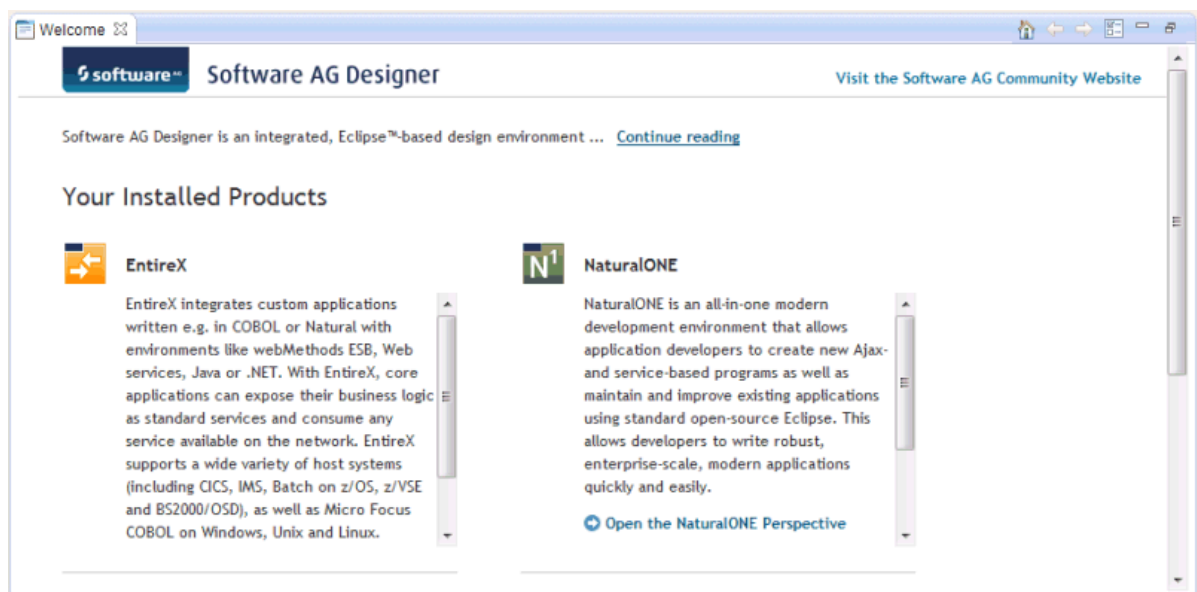
When you start the Software AG Designer for the very first time, you will see a so-called “Welcome” page. From this page, you can install several sample applications for NaturalONE. If the welcome page is not visible, you can open it as described below.

 **Important:** Before installing a sample application, open the NaturalONE perspective and wait until the startup of the local Tomcat server has completed. When you start NaturalONE for the very first time, this will take some time. In the **Console** view, you can keep track of the Tomcat status.

### > To install a sample application

- 1 From the **Help** menu of Eclipse, choose **Welcome**.

The welcome page appears.



- 2 In the NaturalONE list box, scroll down until you see the following links for the sample applications.

- ➔ Hello World application
- ➔ Travel Approval application
- ➔ Database access application
- ➔ Natural for Ajax demos
- ➔ Natural for Ajax responsive tutorial

- 3 To install a sample application, click the corresponding link in the NaturalONE list box.

The sample application is copied to your workspace. The **Project Explorer** view is automatically shown, containing the new sample application as a new project.



**Tip:** To get more space for the views of the Natural perspective, close the welcome page.

- 4 After installing a sample application, it is recommended that you rebuild the project using the **Clean** command from the **Project** menu.

If the **Build Automatically** command in the **Project** menu is currently not active, make sure that **Start a build immediately** is switched on in the **Clean** dialog box.

# 3

## Hello World Application

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## About the Sample Application

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The Hello World application is the preferred starting point for using NaturalONE. This is a simple sample which demonstrates a Natural project which implements a Hello World application by using Natural for Ajax.

## Installing the Sample Application

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Install the sample application by clicking **Hello World application** on the welcome page. A new project named "NaturalONE Hello World Sample Application" will then be shown in the **Project Explorer** view. See also [Installing the Sample Applications](#).

## Starting the Sample Application

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You start your first Natural application by executing the program `HELLO-P.NSP` in the `SAMPL4ONE` library.

### ➤ To start the sample application

- 1 In the **Project Explorer** view, expand the project **NaturalONE Hello World Sample Application**.



**Note:** By default, the environment to which a Natural project pertains is shown next to the project name. For the sample applications, the environment name is "natural-runtime". This is the local Natural runtime which enables you to execute your applications without having to use a remote development environment. The number in parentheses which is also shown next to the project name indicates the number of Natural libraries in this project. This is part of the so-called label decoration.

There are two folders:

#### ■ **Natural-Libraries**

**Natural-Libraries** contains the folder **SAMP4ONE**. This is the Natural library for this sample application.

**SAMP4ONE** contains the folder **SRC**. This folder contains the Natural source files.

**HELLO-A.NS8** is the Natural adapter, that is, the Natural interface to the Ajax page.

**HELLO-P.NSP** is the Natural program which implements this simple Hello World application.

■ **User-Interface-Components**

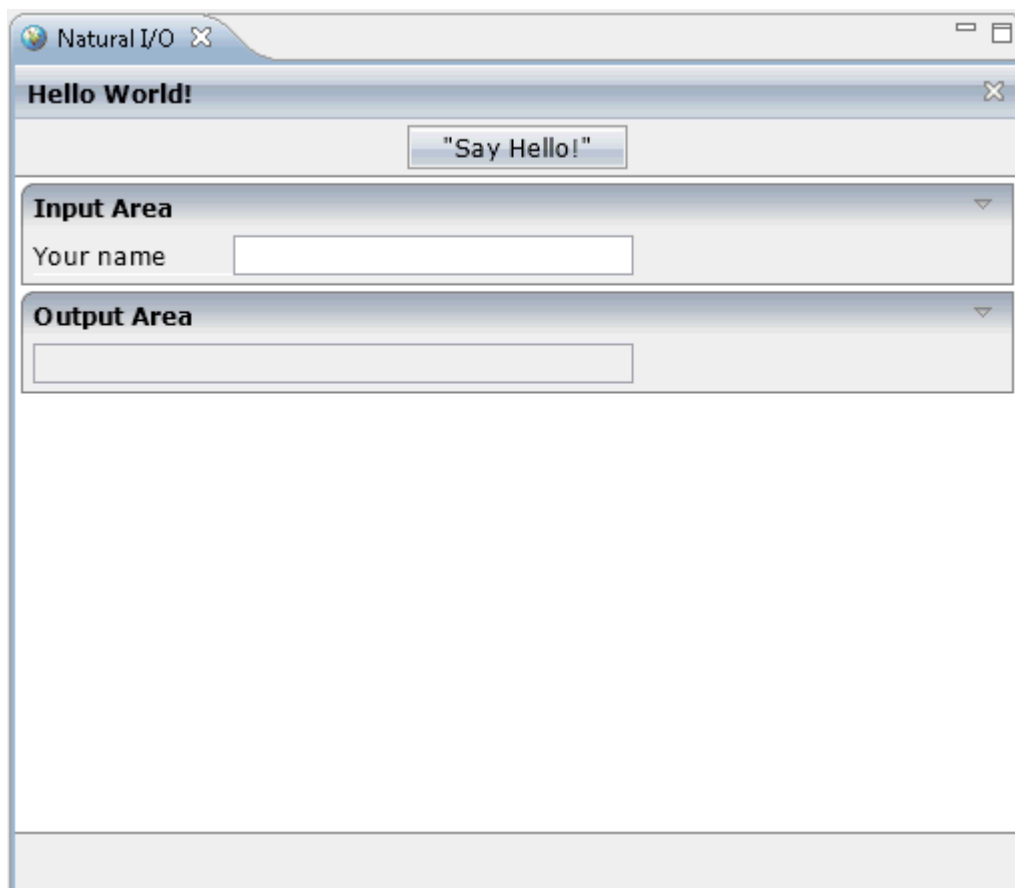
**User-Interface-Components** contains the folder **samplecomponents** which in turn contains the folder **xml**.

**helloworld.xml** contains the Ajax page layout. This page layout is defined with the Layout Painter, which is invoked from the context menu with **Open With > Layout Painter**.

For detailed information about the Natural for Ajax technology, see *Natural for Ajax*.

- 2 Select the program **HELLO-P.NSP**, invoke the context menu and choose **Run As > Natural Application**.

The output is now shown.



- 3 Enter your name in the **Input Area** and choose the **Say Hello** button.

Your name is now shown in the **Output Area**.



## 4 Travel Approval Application

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## About the Sample Application

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The Travel Support System (this is the name that you can see on the screen when executing the application) is a small sample application for NaturalONE. As a sample application, its focus is to show NaturalONE functionality rather than being a full-fledged travel support application.

The Travel Support System (TSS) allows you to request and approve business trips. Flights, hotels and even more external information such as cell phone expenses or car rentals can be entered with the trip request. For the destination, weather information can be queried. A manager can do both, request own trips as well as approve trips that have been requested by employees. After the manager has approved single or multiple requests, the manager can print an itinerary or receive the itinerary as a PDF file.

The usage of the travel approval application is described below.

## Prerequisites

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In order to use the sample application, Adabas Version 6.1.9 or above must be installed and started.

## Installing the Sample Application

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Install the sample application by clicking **Travel Approval application** on the welcome page. A new project named "Travel" will then be shown in the **Project Explorer** view. See also [Installing the Sample Applications](#).

## Defining the Use of an External Web Browser

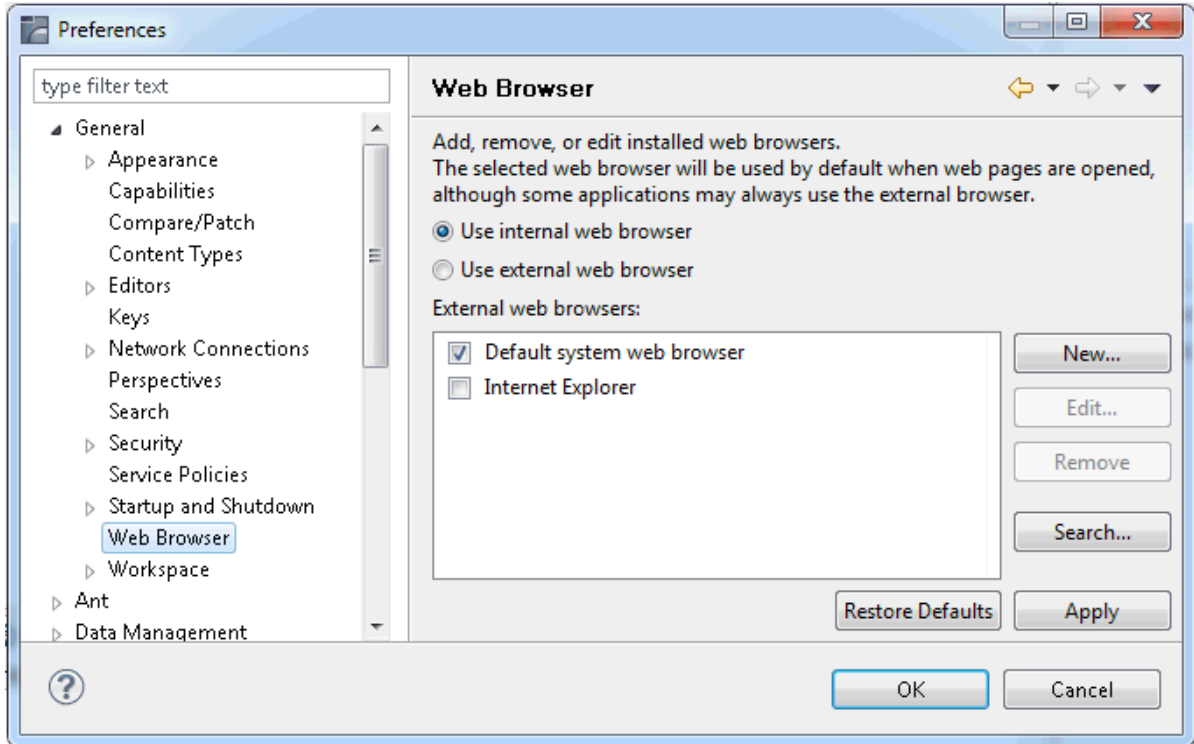
---

You will now make sure that the sample application is executed in an external web browser and not in the internal web browser.

➤ **To define the use an external web browser**

- 1 From the **Window** menu, choose **Preferences**.
- 2 Expand the **General** node and select **Web Browser**.

The following page appears.



- 3 Select the **Use external web browser** option button and choose the **OK** button.

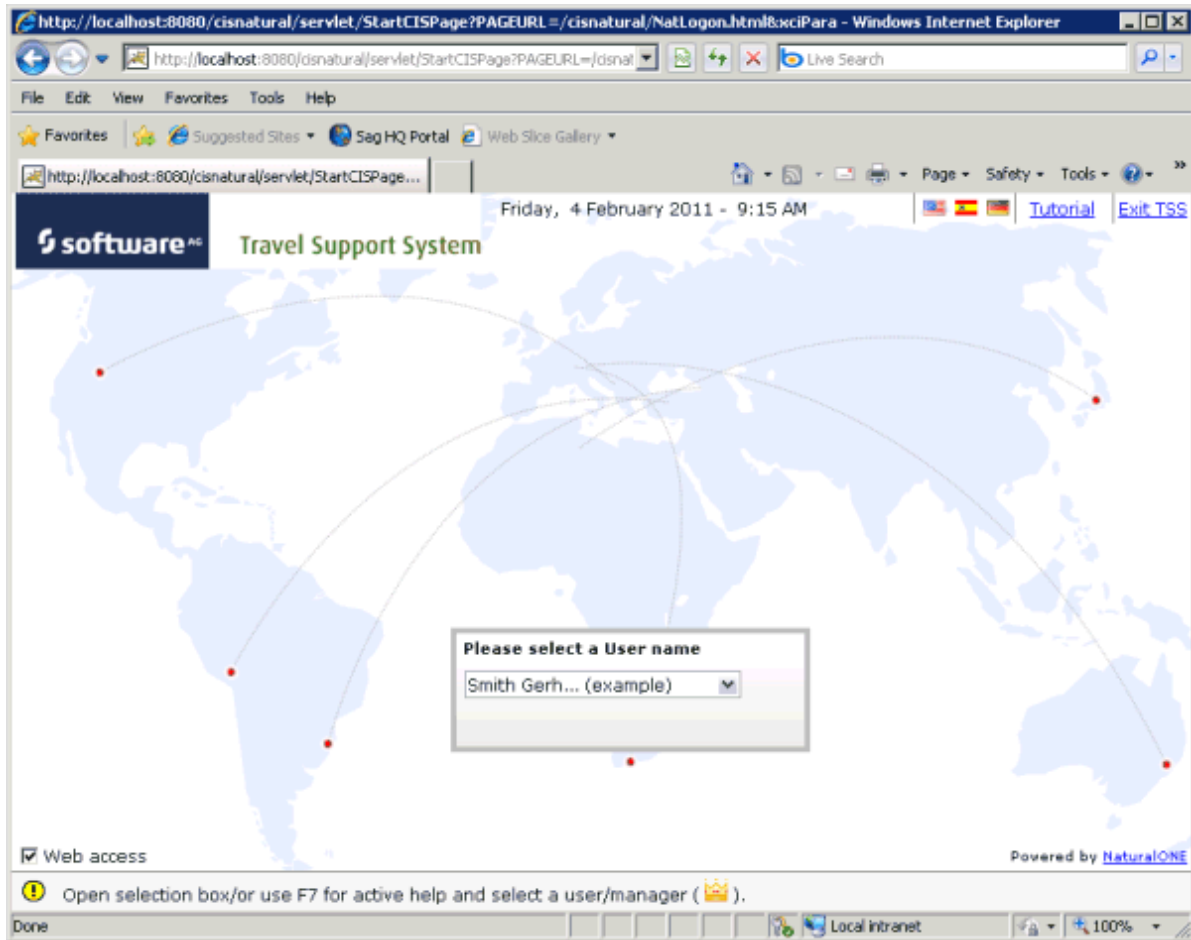
## Starting the Sample Application

You start the sample application by executing the program `LOGIN.NSP` in the `TRAVEL` library.

### ➤ To start the sample application

- 1 In the **Project Explorer** view, expand the project **Travel**.
- 2 Expand the following nodes:
  1. **Natural-Libraries**
  2. **TRAVEL**
  3. **SRC**
- 3 Scroll down until you see the program name `LOGIN.NSP`.
- 4 Select `LOGIN.NSP`, invoke the context menu and choose **Run As > Natural Application**.

The sample application is executed. Since you have specified so in the preferences, it is executed in an external browser window.



## Logging in as an Employee for Requesting a Business Trip

You will now log in as an employee (with limited rights) and request a business trip.

### ➤ To log in as an employee

- 1 In the **Please select a User name** dialog, type "A" over the name that is currently shown in the drop-down list box.

The drop-down list box opens, displaying the names of all employees and managers which start with the letter "A". This information comes from the Adabas demo database.

**Please select a User name**

a

- ABELLAN KEPA
- ACHIESON ROBERT
- ADAM SIMONE (manager)
- ADKINSON JEFF
- ADKINSON PHYLLIS
- ADKINSON HAZEL (manag
- ADKINSON DAVID
- ADKINSON CHARLIE

- 2 Select the name "ADKINSON DAVID".

**Please select a User name**

ADKINSON DAVID

[Enter New Request](#)

- 3 Choose the **Enter New Request** button.

The following screen appears. Here, you will enter your travel request.

software<sup>™</sup> Travel Support System

Friday, 4 February 2011 - 9:31 AM You're logged in as DAVID ADKINSON [Log-out](#)

**New Travel Request**

Reason

Departure information

City,Country Pick a date

Return information

City,Country Pick a date

**Travel Expenses**

**My Travels**

Travel Details Total cost

**Map**

**Flight Booking**

Select a flight

**Hotel Booking**

Select a hotel

**Other Expenses (CSV file)**

Add other expenses from a .csv file.

[Upload .csv](#)

**Weather**

Select a City for forecast

Washington 4°C

Beijing 11°C

Start by filling Travel reason, departure and return info

## Entering a Travel Request with Flight and Hotel Information

---

You will now enter and submit your travel request. This includes the following information:

- City and date for departure.
- City and date for return flight.
- Flight number.
- Hotel name.

### ➤ To enter a travel request

- 1 In the **Reason** text box, enter the reason for your travel plans. For example:



**New Travel Request**

Reason

I have a series of meetings with customers regarding our new product NaturalONE.

- 2 Under **Departure information**, open the drop-down list box.



Departure information

City, Country

Washington, USA,

Beijing, China

Frankfurt, Germany

Paris, France

Toronto, Canada

Melbourne, Australia

Moscow, Russia

Amsterdam, Netherlands

Vienna, Austria

City, Country

Pick a date

Pick a date

Total cost

- 3 Select **Toronto, Canada**.
- 4 Click on **Pick a date** which is shown to the right of the departure information.
- 5 In the resulting **Date Input** dialog, select the desired date for your flight to Toronto (for example, February 21, 2012).
- 6 Under **Return information**, open the drop-down list box.

Departure information  
 City, Country 2012-02-21  
 Return information  
 City, Country Pick a date  
 Washington, USA,  
 Beijing, China  
 Frankfurt, Germany  
 Paris, France  
 Toronto, Canada  
 Melbourne, Australia  
 Moscow, Russia  
 Amsterdam, Netherlands  
 Vienna, Austria  
 City, Country  
 Total cost

- 7 Select **Beijing, China**.
- 8 Click on **Pick a date** which is shown to the right of the return information.
- 9 In the resulting **Date Input** dialog, select the desired date for your return flight from Beijing (for example, February 28, 2012).

Departure information  
 Toronto, Canada 2012-02-21  
 Return information  
 Beijing, China 2012-02-28

You have now entered the basic information needed to make travel plans. Next, you will book a flight and a hotel.

- 10 Under **Flight Booking**, open the drop-down list box.

**Flight Booking**  
 Select a flight  
 British Airways Flight: # 7684 ,  
 Lufthansa Flight: # 1 , 988  
 BMI Flight: # 9803 , 469  
 Singapore Airlines Flight: # 696  
 Austrian Airlines Flight: # 2239  
 Swiss Flight: # 423 , 423  
 Air France Flight: # 5705 , 878  
 Continental Airlines Flight: # 42  
 Iberia Airlines Flight: # 7 , 975  
 Select a flight

- 11 Select **Continental Airlines Flight: #4207**.

The selected flight is shown under **Travel Expenses**.

| Travel Expenses                     |       |
|-------------------------------------|-------|
| * Detail                            | Cost  |
| Continental Airlines Flight: # 4207 | 777.0 |

Submit Request Delete rows Cancel Request 777

- 12 Under **Hotel Booking**, open the drop-down list box.

Hotel Booking

Select a hotel

- HILTON,150
- FOUR SEASONS,109
- SHERATON,89
- WALDORF ASTORIA,250
- RITZ CARLTON,200
- EDEN ROCK,69
- GRAND MERCURE ROXY,99
- SOFITEL,125
- HOLIDAY INN,66

Select a hotel

- 13 Select **HILTON,150**.

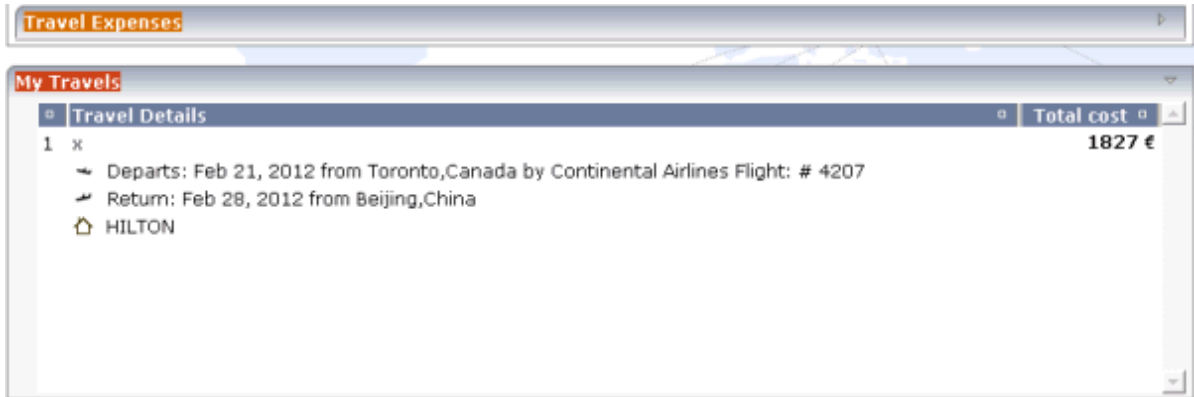
The selected hotel is also shown under **Travel Expenses**, including the costs (7 nights \* 150 = 1050). The total cost has also been updated (1827).

| Travel Expenses                     |        |
|-------------------------------------|--------|
| * Detail                            | Cost   |
| Continental Airlines Flight: # 4207 | 777.0  |
| HILTON                              | 1050.0 |

Submit Request Delete rows Cancel Request 1827

- 14 Choose the **Submit Request** button.

The **Travel Expenses** area is closed, and the **My Travels** area shows the travel details.



At the bottom of the screen, you can see a message informing you that the travel request has been accepted (pending approval), and that you can now either create a new request or log out.

## Adding Additional Expenses to Your Travel Request

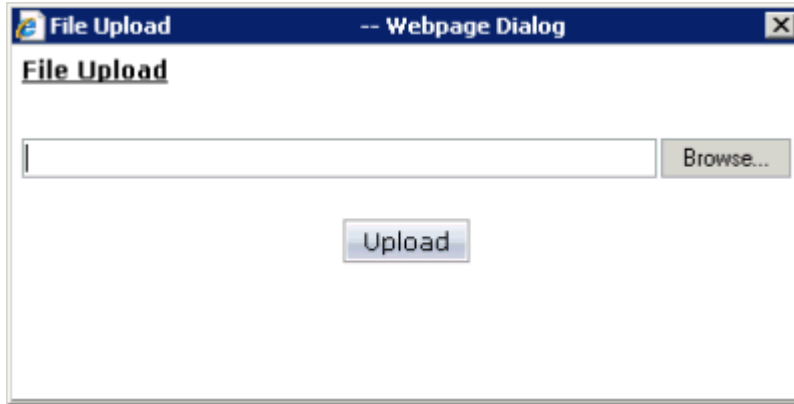
You will now add additional expenses from a CSV file to your travel request. This is just for demonstration purposes and you will delete these expenses before you log out.

### ➤ To add additional expenses

- 1 Under **Other Expenses**, choose the **Upload .csv** button.



The **File Upload** dialog appears.



- 2 Choose the **Browse** button.
- 3 In the resulting **Choose File to Upload** dialog, navigate to the location of your Eclipse workspace. Here, you can find the project directory that has been created for your travel application.

The demo CSV file which comes with the travel application is located in the *Expenses* folder of the project and has the name *expenses\_trip1.csv*.

- 4 Select the file *expenses\_trip1.csv* and choose the **Open** button.

The path to the selected file is shown in the **File Upload** dialog.

- 5 In the **File Upload** dialog, choose the **Upload** button.

The contents of the CSV file is shown under **Travel Expenses**.



You will now delete the two items that were added from the CSV file.

- 6 Select both lines (press SHIFT or CTRL to select the second line).
- 7 Choose the **Delete rows** button.
- 8 Log out by clicking on the **Log-out** link which is located at the top right of the screen.

The login screen containing the **Please select a User name** dialog is shown again.

## Logging in as a Manager for Approving Travel Requests

In order to approve the travel request you have just entered, you will now log in as a manager.

### ➤ To log in as a manager

- 1 In the **Please select a User name** dialog, open the drop-down list box and select the name "ARCONADA PEDRO".

For this user, an **Approve Requests** button is shown which is only available to managers.

- 2 Choose the **Approve Requests** button.

The following screen appears, listing the travel requests that are waiting for approval.

**Travel cost details**

**Employee details**

Name DAVID ADKINSON - SECRETARY (dept. MGMT10)  
 Address 11 HOLLY GREEN  
 City CHAPEL HILL  
 Country USA Zip Code 27514

**Travel details**

Travel Reason  
 Leaving Toronto, Canada On 2012-02-21  
 Traveling to Beijing, China Returning 2012-02-28

**Department (MGMT) statistics**

**Travel budget**

Total cost: 1827  
 Total cost of flights: 777  
 Continental Airlines Flight: # 4207  
 Total cost of hotels: 1050  
 HILTON

**Members of staff - Requests status**

| Name           | Approved | Pending |
|----------------|----------|---------|
| DAVID ADKINSON | 0        | 1       |

**Submit approved requests**

| Employee       | Request info                                   | Cost   |
|----------------|------------------------------------------------|--------|
| DAVID ADKINSON | Continental Airlines Flight: # 4207 / HILTON / | 1827.0 |

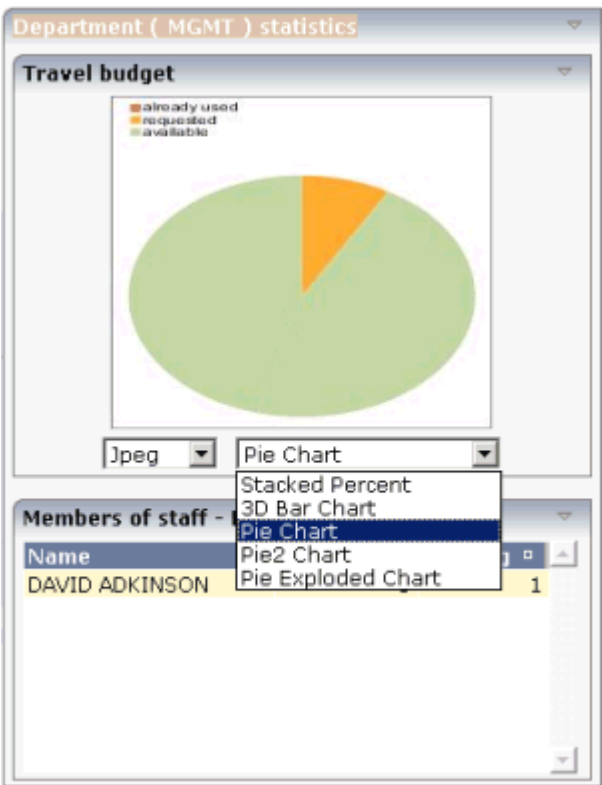
Click a Travel Request row for details, DoubleClick to approve

# Approving a Travel Request

After you have logged in as a manager, you can approve travel requests.

> **To approve a travel request**

- 1 Under **Department (MGMT) statistics**, open the drop-down list box for the different types of pie charts.

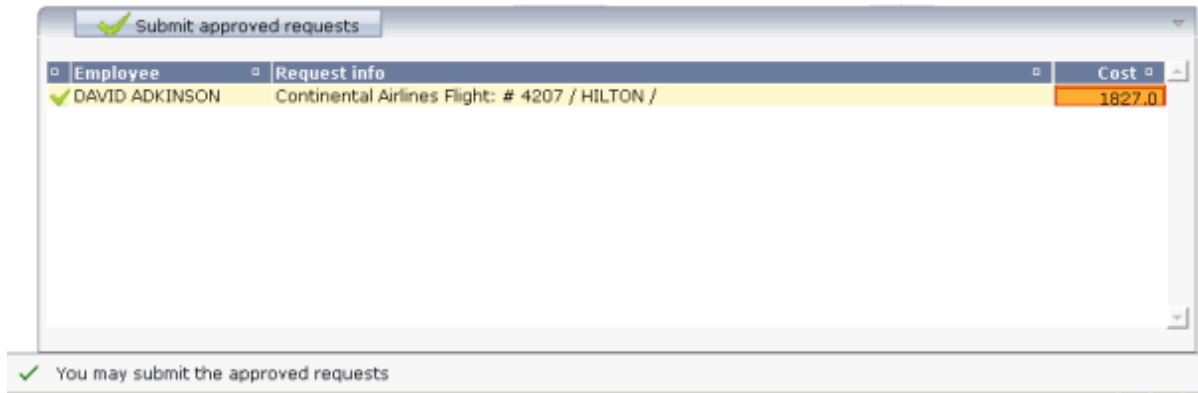


- 2 Select **Pie Exploded Chart**.

A different chart is shown, indicating the total travel budget that is available for the department, and how much of the budget is currently requested.

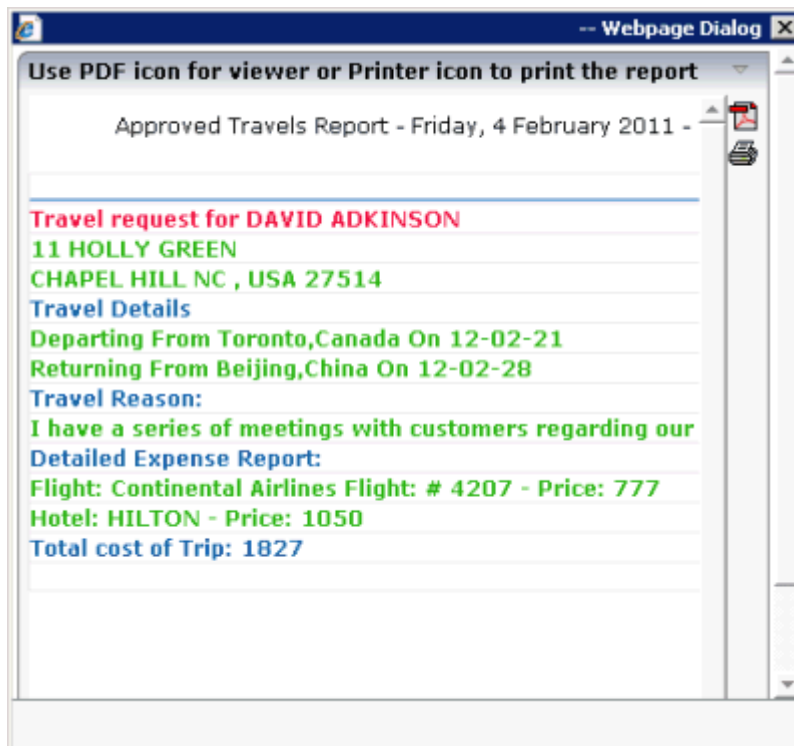
- 3 In the table at the bottom left of the screen (below the **Submit approved requests** button), double-click the row containing the employee name "DAVID ADKINSON".

A check mark is now shown in front of the row, and a message is shown at the bottom of the screen informing you that you may submit the approved requests.



- 4 Choose the **Submit approved requests** button.

The following dialog appears, containing the travel details for David Adkinson.



- 5 Click on the PDF icon (📄) at the top right of the dialog.

When appropriate PDF viewing software such as Adobe Reader is installed, the PDF output is shown and you can print it.



# 5

## Natural for Ajax Demos

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## About the Natural for Ajax Demos

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The Natural for Ajax demos show you how to use the different controls and write the corresponding Natural server-side processing. When you start one of the samples, a corresponding description is shown which explains the sample and provides implementation hints.

## Installing the Natural for Ajax Demos

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Install the samples by clicking **Natural for Ajax Demos** on the welcome page. A new project named "NaturalAjaxDemos" will then be shown in the **Project Explorer** view. See also [Installing the Sample Applications](#).

## Starting the Natural for Ajax Demos

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You can start the main program which lets you select single samples by executing the program MENU-NJX.NSP.

You can also start single samples directly by executing the corresponding program, for example, CALCUL-P.