Apex

(Introduction to Apex)

Exercise Guide


salesforce

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Exercise 0-2: Creating a Sandbox Organization

Goal:

Create a development environment that resembles production.

Scenario:

Universal Containers developers have successfully deployed their application to production. However, now the customers are so pleased that they want to add more features and change the current features.

Tasks:

1. Download your lab files.
2. Create a sandbox (full) organization.

Time:

5 minutes

Instructions:

1. Download your lab files.
   A. In your org, navigate to the **Documents** tab.
   B. Ensure that `Shared Documents` is selected for the **Folder** option, and click **Go!.**
   C. Select the **View** option for `LabFilesForDEV501.`
   D. When prompted, download the zip file to your Desktop.
   E. Unpack the zip file to a folder on the Desktop.
2. Create the sandbox (full) organization
   A. Navigate to **Setup | Sandboxes**
   B. Click **New Sandbox**
   C. On this screen, where you add Sandbox Information and choose the Sandbox License:
      i. **Name:** `Dev`
      ii. **Description:** This is a development environment.
      iii. **Type:** Full (Warning: Make sure you select this correctly!)
      iv. Click **Next**
   D. On this screen, where you choose your Sandbox Options:
      i. **Object data included:** All
      ii. **Include Chatter Data:** Selected
      iii. Click **Create**

Note: The time it takes to complete the full copy will depend on the length of the queue at the time requested. You will receive an email letting you know when it has been completed.

Review:

1. Why are you creating a sandbox?

Exercise 1-1: Retrieving the Force.com (Apex) Developer's Guide

Goal:

Retrieve the Force.com Apex Code Developer's Guide PDF version and view the HTML version.

Scenario:

The Force.com Apex Developer's Guide provides a resource that can be referenced for questions regarding Apex language.

Tasks:

1. Review the Apex Code Developer's Guide.
2. Review the Apex Code Cheat Sheet. (Optional)

Time:

10 minutes

Instructions:

1. Review the Apex Code Developer's Guide.
   A. Open a browser window and navigate to the Salesforce Developers website:
      `http://developer.salesforce.com`
   B. From the site menu, navigate to **Library | Documentation.**
   C. Scroll down to locate the **Force.com Apex Code Developer's Guide.** Click on it to view the HTML version of the guide.
   D. Right click the **PDF Download** link. Save the PDF to your desktop by choosing **Save Target As.**
2. Review the Apex Code Cheat Sheet. (Optional)
   A. In a web browswer, navigate to:
      `https://developer.salesforce.com/page/Cheat_Sheets`
   B. Locate, download, and review the App Logic: Apex Code Cheat Sheet. The Cheat Sheet is a handy guide to Apex syntax.

Review:

1. What type of information can you find in the Reference section of the documentation?

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2. Does the Apex documentation contain the full specifications for SOQL syntax?

Exercise 1-2: Installing and Configuring the Force.com IDE

Goal:

Install and configure the Force.com IDE.

Scenario:

Universal Containers wants to use the Force.com IDE for its development needs. The company needs to understand how to install and configure the Force.com IDE before it can begin developing in its Salesforce org. Note: Supporting sites for the Force.com IDE are located at Developer Force under the Tools section: http://wiki.developerforce.com/page/Force.com_IDE_Installation

Tasks:

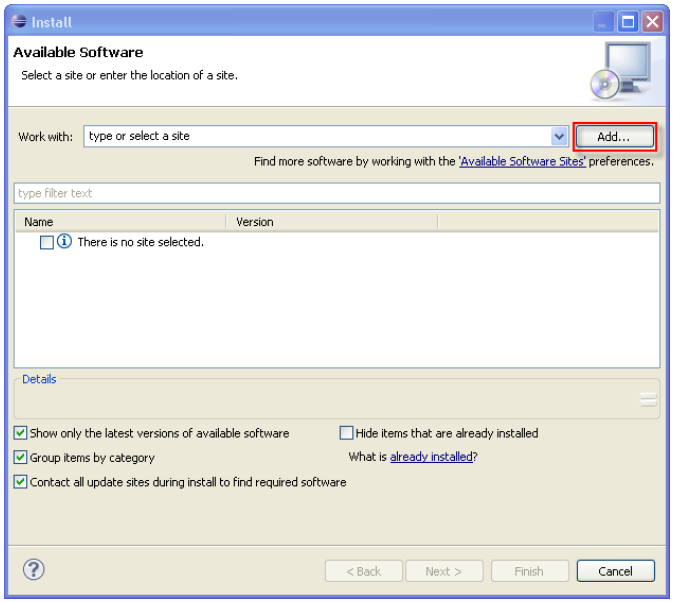
1. Add a remote site to Eclipse.
2. Download and install the Force.com IDE plug-in from the remote site.
3. Restart Eclipse.

Time:

30 minutes

Instructions:

1. Add a remote site to Eclipse.
   A. Double-click the Eclipse icon to launch Eclipse.
   B. In Eclipse, navigate to **Help | Install New Software…**



   C. Click **Add…**

D. In the Add Site dialog box, type the following:
   i. **Name:** `Force.com IDE`
   ii. **Location:** `http://media.developerforce.com/force-ide/eclipse42`
E. Click **OK.**

2. Download and install the Force.com IDE plug-in from the remote site.
   A. Deselect the checkbox `Show only latest versions of available software.`
   B. Select the checkbox for the latest version that starts with the number 30. If that version doesn't exist, select the topmost checkbox `Force.com IDE.`
   C. Click **Next.**
   D. In the **Install Details** dialog box, click **Next** again.
   E. Select `I accept the terms…`**,** and click **Finish.**
3. Restart Eclipse.
   A. After taking a few minutes to install, Eclipse will prompt you to restart the application. Click **Yes.**
   B. After Eclipse restarts, select **Window | Open Perspective | Other** and select **Force.com**. Click **OK.**

Review:

1. Do you have to use the Force.com IDE for Apex development? Is there another option?

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2. After developing Apex code in a sandbox, how can the Force.com IDE help you move that code to production?

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Exercise 1-3: Creating a Force.com IDE Project

Goal:

Create a Force.com project using the Force.com IDE.

Scenario:

Universal Containers needs to create an environment for developers to be able create and update Salesforce code. To get their environment ready, they will need to prepare a project workspace within the Force.com IDE.

Tasks:

1. Create a new Force.com project.
2. Retrieve the Universal Containers organization code into the project.

Time:

15 minutes

Instructions:

1. Double-click the Eclipse shortcut on the desktop to launch Eclipse.
2. On the Eclipse menu bar, select **Window | Open Perspective | Other | Force.com** and then click **OK.**
3. Navigate to **File | New | Force.com Project.**
4. Enter the following information on the **Create New Force.com Project** dialog box:
   A. **Project name:** (enter your Salesforce org username as the project name)
   B. **Username:** (enter your Salesforce username for this course, appended with '`.dvorg`')
   C. **Password:** (enter your Salesforce password for this course)
   D. **Security Token:** (leave blank unless instructed differently)
   E. **Environment:** `Sandbox`

      Note: Remember that if you are creating a project in sandbox, you will need to use those credentials for this project.

   F. Click **Next.**
   G. Select `Selected metadata components` and click **Choose…**
   H. Click **Select All** to choose all metadata component types and click **OK.**
   I. Click **Finish.** If you receive a message to enable password recovery, click **No.**
5. Right-click the newly created project in the left-hand navigation pane and select **Properties.** Review the contents of the window and click **OK** when done.

Review:

1. When would we use the Security Token in the connection information?

2. When would we want to select `None` as our default project contents?

3. How do we ensure we see the specific menu items and layout associated with Force.com?

Exercise 1-4: Examining a Hello World Example

Goal:

Examine an Apex code sample and answer some discussion questions about it.

Scenario:

Universal Containers is new to Apex, so its developers want to start with the basics. Analyze the class and trigger and clarify some questions that they have.

Tasks:

Examine the following class and trigger code and answer the following questions.

Time:

10 minutes

Instructions:

1. Examine the following class and trigger code and answer the following questions.

Class

```
C1   public class HelloWorldPositionClass {
C2    public static void helloWorld(List<Position__c> positions){
C3      for (Position__c p:positions){
C4        if (p.Hello__c != 'World') {
C5          p.Hello__c = 'World';
C6        }
C7      }
C8    }
C9   }
```

Trigger

```
T1    trigger HelloWorldPositionTrigger on Position__c (before insert,
                                            before update) {
T2       List<Position__c> positions = Trigger.new;
T3       HelloWorldPositionClass.helloWorld(positions);
T4    }
```

Discussion Questions

1. What does this code do? Log in to your org and create and save some positions to verify this.

2. What do `before insert` and `before update` indicate in line `T1`? What other options are likely available?

3. What is `Trigger.new` in line `T2`? What does it contain?

4. What does `List<Position__c>` represent? Why is there `__c` after `Position`?

5. How many times does the `FOR` loop in line `C3` execute?

6. What does `p.Hello__c` represent? Why is it `p.Hello__c` instead of `positions.Hello__c`?

7. Did we need the class here or could we have made this work just in a trigger? What might be a reason to architect the functionality with a class?

8. What are some examples of ways you could use triggers?