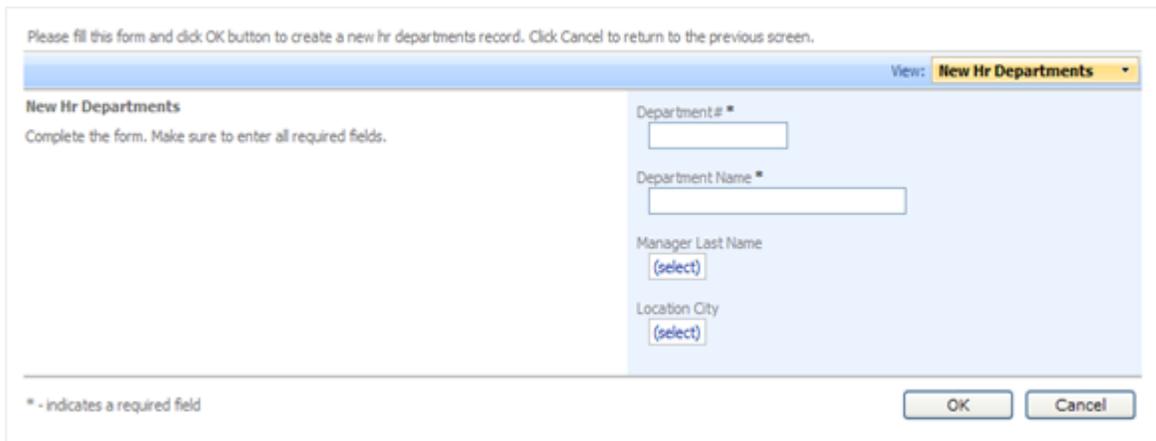


## Using Oracle Sequence

Oracle database server provides support for sequences of unique values that are typically used to generate unique IDs for primary key columns or new records. [Data Aquarium Framework](#) and [Aquarium Express](#) are supporting automatic execution of static *SQL* statements just before a table record insertion takes place.

Consider the application created from *HR demo* schema that comes with Oracle database servers. The *DEPARTMENTS* table has a matching *DEPARTMENTS\_SEQ* sequence that can be used to supply unique values for the primary key *DEPARTMENT\_ID*.

Form *createForm1* is displayed below. You can see that the primary key field is visible on the form and can be changed by user.



Let's modify the data controller descriptor `~/Controllers/HR_DEPARMENTS.xml` to use the sequence for primary key column values.

The first step is a definition of command that executes just before a new record is inserted into database.

```
<command id="GetSequence" type="Text" event="Inserting">
  <text><![CDATA[select departments_seq.nextval from dual]]></text>
  <output>
```

```

    <fieldOutput fieldName="DEPARTMENT_ID"/>
  </output>
</command>

```

Attribute *event* tells the framework about the timing of execution, element *text* defines the actual *SQL* statement, and element *fieldOutput* directs the framework to copy the first column in the first row of command result set to the *DEPARTMENT\_ID* field.

The second and last step of modification is to hide the *DEPARTMENT\_ID* field from user interface.

```

<view id="createForm1" type="Form" commandId="command1"
  label="New Hr Departments">
  <headerText>Please fill this form and click OK button to create
    a new hr departments record. Click Cancel to return to the
    previous screen.</headerText>
  <categories>
    <category headerText="New Hr Departments">
      <description>Complete the form. Make sure to enter all
        required fields.</description>
      <dataFields>
        <dataField fieldName="DEPARTMENT_ID" columns="15" hidden="true"/>
        <dataField fieldName="DEPARTMENT_NAME" columns="30" />
        <dataField fieldName="MANAGER_ID" aliasFieldName="MANAGER_LAST_NAME"
      />
        <dataField fieldName="LOCATION_ID" aliasFieldName="LOCATION_CITY" />
      </dataFields>
    </category>
  </categories>
</view>

```

Attribute *hidden* on the field *DEPARTMENT\_ID* does the job.

Here is how the form is changed.

Please fill this form and click OK button to create a new hr departments record. Click Cancel to return to the previous screen.

View: **New Hr Departments**

**New Hr Departments**  
Complete the form. Make sure to enter all required fields.

Department Name \*  
New Department

Manager Last Name  
(select)

Location City  
South Brunswick ↻

\* - indicates a required field

OK Cancel

The new department is displayed in the list below.

This is a list of hr departments records.

New Actions View: **Departments**

**A filter has been applied. Location City is equal to South Brunswick.**

Department Name	Manager Last Name	Location City	Manager Department Name	Manager Department Location City	Manager Department Location Country Name	Manager Department Location Country Region Name	Manager Job Title	Location Country Name	Location Country Region Name
New Department	n/a	South Brunswick	n/a	n/a	n/a	n/a	n/a	United States of America	Americas

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