Processes Online User Guide

Classes and Objects

1 INTRODUCTION

With *Processes Online*, you can define *classes*, (or *entity types*), and thereafter, persist the class definitions. Class definition includes definition of a set of the attributes of the class, called *standard attributes*, and designating one of these attributes as the *key* of the class. You can thereafter define additional attributes of these classes, called *custom attributes*, as may be required for one or more applications. You can interactively, as well as programmatically (using the Java DBaaS APIs), perform CRUD operations on objects belonging to these classes. In *Processes Online*, there are 8 built-in classes, viz., Employee, Customer, Vendor, Member, Faculty, Student, Doctor and Patient.

The Main Menu of *Processes Online* is shown below:-

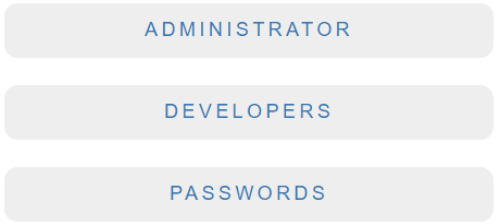

Figure 1

Let us presume the Administrator has registered one or more employees, and authorized one or more of them to function as application developers; e.g.:-

LIST OF EMPLOYEES

Sl. No.	Entity ID	Name	Email	Authorized application developer (i.e., has access to Java DBaaS APIs)
1	ADMIN3	Sarah Connor	eflh010@gmail.com	Yes
2	ADMIN2	Rohit Shetty	eflh007@gmail.com	No
3	ADMIN1	Ramachandra Rao	eflh003@gmail.com	Yes

Figure 2

An authorized application developer, e.g., Ramachandra Rao, can click **DEVELOPERS** in the Main Menu, login, and access the **Database Management Main Menu**:-

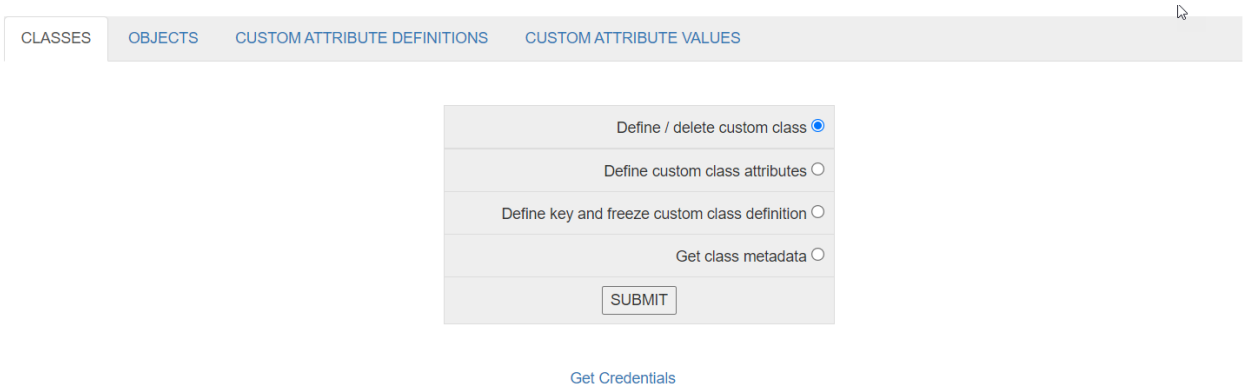

Figure 3

2 DEFINING CUSTOM CLASSES AND CREATING OBJECTS

Rao has been asked to develop an application for registering distributors of the company's products. Rao begins by defining a custom class, called Distributor. He decides that this class will have the following standard attributes, viz.,

1. DistrID (Distributor ID)
2. DistrName (Distributor Name)
3. DistrAddress (Distributor's Address)
4. RepName (Name of the Distributor's Representative)
5. RepEmail (Email ID of the Distributor's Representative)

DistrID, DistrName, DistrAddress and RepName are of datatype, String, while RepEmail is of datatype, Email. DistrID is the key.

Rao selects **Define / delete custom class** under the **CLASSES** tab in Figure 3, and clicks **SUBMIT**. He then selects **Define a new custom class**, enters the name of the new class, viz., Distributor, in the form shown below:-

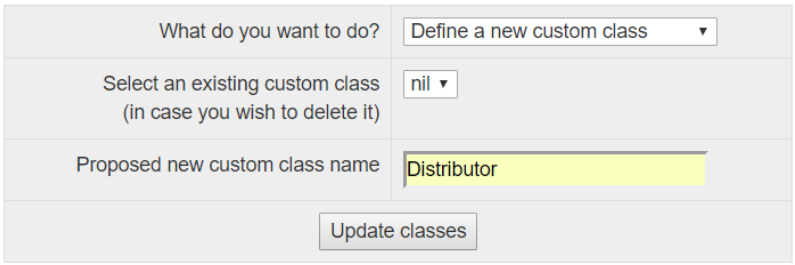

Figure 4

He now clicks **Update classes**, and receives a message that the new custom class, Distributor, has been defined.

He next selects **Define custom class attributes**, and clicks **SUBMIT**:-

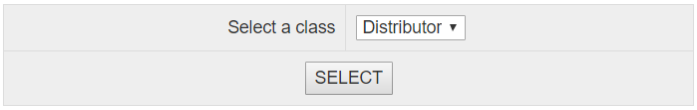

Figure 5

He now selects the class, Distributor, then clicks **SELECT**:-

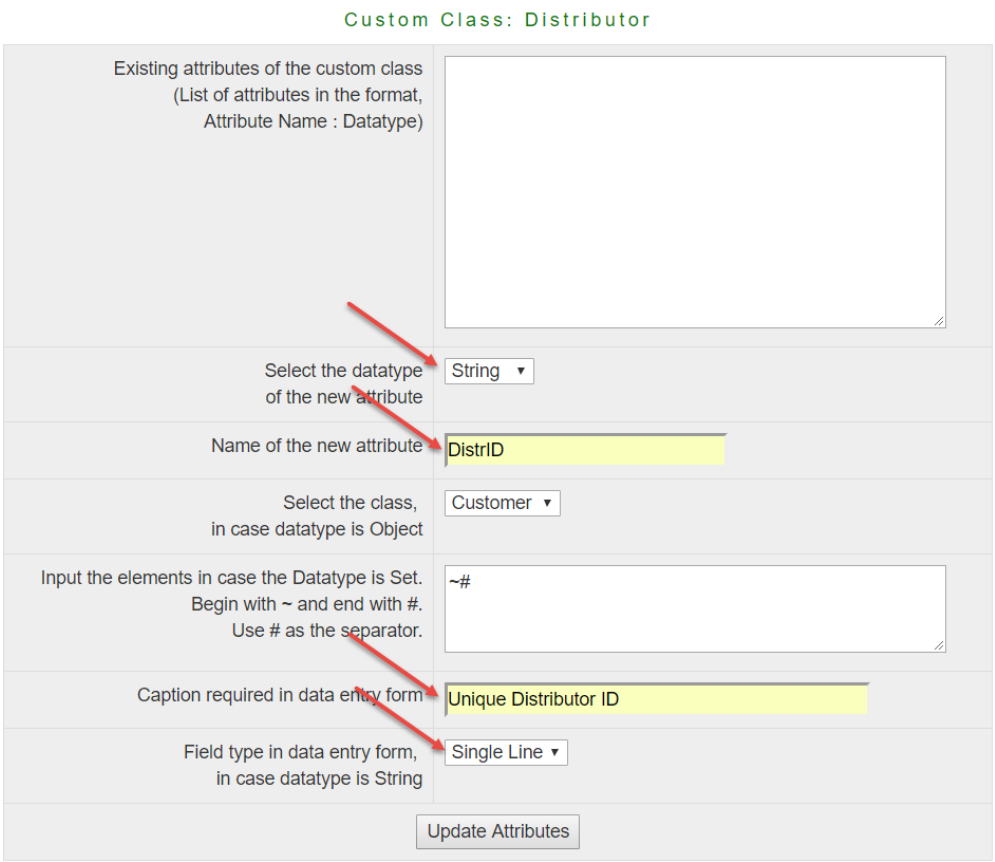

Figure 6

Carefully note the data entered in the form in Figure 6 for defining the attribute, DistrID. Now He clicks **Update Attributes**, and receives an appropriate success message.

Rao defines the remaining attributes, DistrName, DistrAddress, RepName, and RepEmail, in exactly the same way.

He next selects **Define key and freeze custom class definition** under **CLASSES** tab, and clicks **SUBMIT**:-

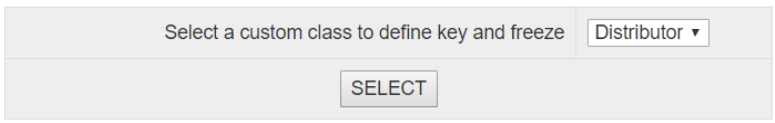

Figure 7

He now selects the custom class, Distributor, then clicks **SELECT**:-

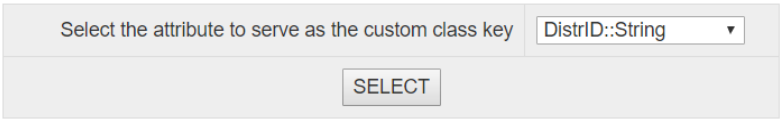

Figure 8

He now selects the attribute, DistrID, then clicks **SELECT**. He ends up receiving a success message.

The resulting metadata for the class, Distributor, can be seen by selecting **Get class metadata** in Figure 3:-

CLASS: Distributor

Sl. No.	Attribute Name	Datatype
1	DistrID (Key)	String
2	DistrName	String
3	DistrAddress	String
4	RepName	String
5	RepEmail	Email

Figure 9

Rao now selects **Create Object** under **OBJECTS** tab, and sees the corresponding menu:-

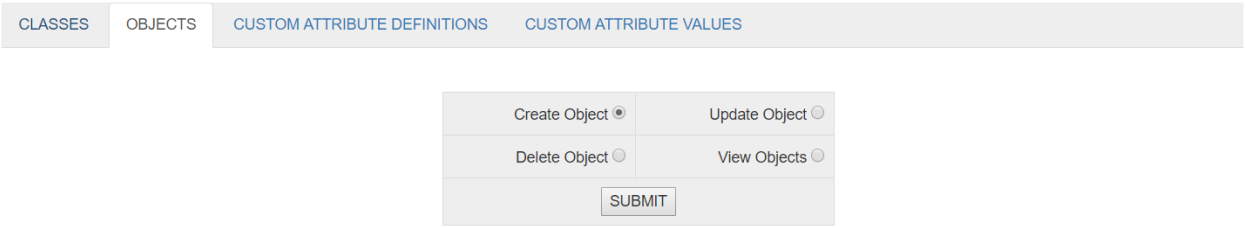

Figure 10

He proceeds to define 3 Distributor objects by selecting **Create Object** in the above menu, just for testing. By selecting **View Objects**, He can see the current status:-

List of entities of type: Distributor

Sl. No.	DistrID	DistrName	DistrAddress	RepName	RepEmail
1	RELDIST	Reliable Distributors Inc	Boston, MA, U.S.A.	Bill O'Reilly	enflo001@gmail.com
2	GPLAINS	Great Plains Supplies Inc	New York, N.Y., U.S.A.	Steve Burbank	eflh010@gmail.com
3	ASKUS	Ask Us For Anything Inc	Santa Clara, CA, U.S.A.	Edgar Trump	enflo008@gmail.com

Figure 11

He now proceeds to delete all three Distributor objects, by selecting **Delete Object**. In the normal course, Distributor objects will be created by the Distributor Management application, whose development will be taken up in *Processes Online User Guide – Web Application Development Tutorial*.

3 DEFINING CUSTOM ATTRIBUTES AND ASSIGNING VALUES

Rao decides to define a custom attribute named RegDistrAuth of datatype, Set, of the class, Employee. The elements of the set are Yes and No. If RegDistrAuth is set to Yes for any given employee, it means that employee can access the Distributor Management application.

Rao now proceeds to create the custom attribute named RegDistrAuth. Rao clicks the tab, **CUSTOM ATTRIBUTE DEFINITIONS**, then selects **Define Custom Attribute**:-

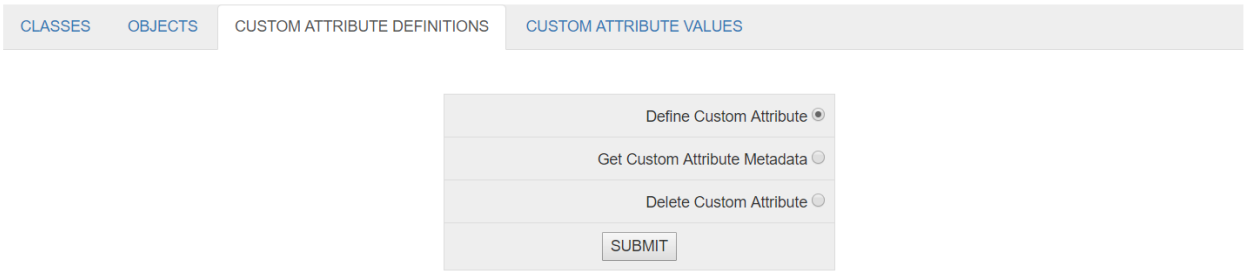

Figure 12

He clicks the **SUBMIT** button. He now enters data pertaining to the custom attribute, viz., RegDistrAuth:-

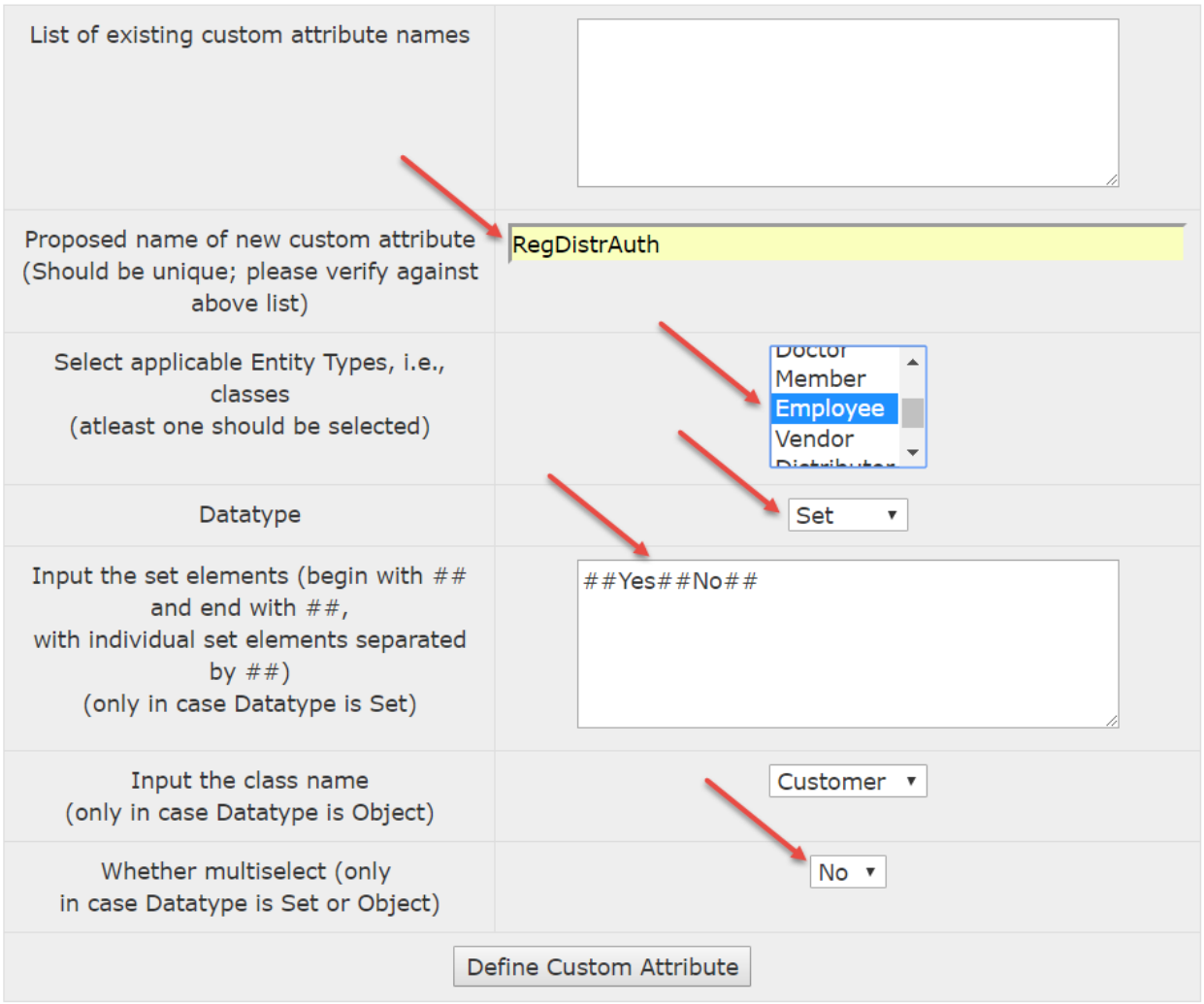

Figure 13

Carefully see what data He has entered above. Now He clicks **Define Custom Attribute**. He now sees a success message.

Now for assigning custom attribute values. Rao selects **Assign/Update Custom Attribute Values** under **CUSTOM ATTRIBUTE VALUES** tab, clicks the **SUBMIT** button:-

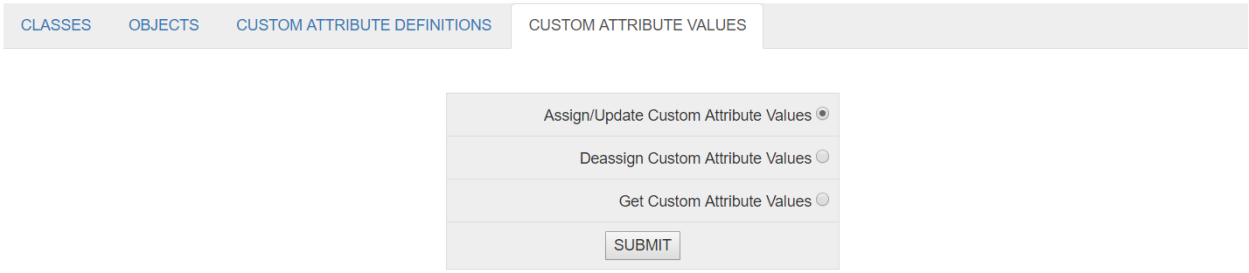

Figure 13

He now selects Employee:-

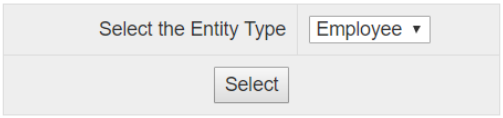

Figure 14

He clicks **Select**, selects the employee, Rohit Shetty, and the custom attribute, RegDistrAuth:-

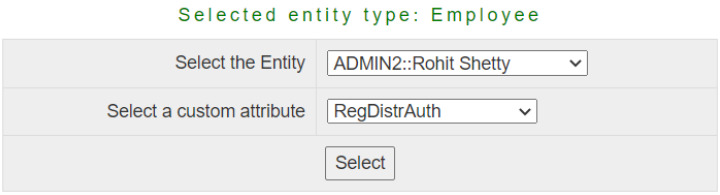

Figure 15

He now clicks **Select**, then selects the value, Yes, then clicks **Update Object**:-

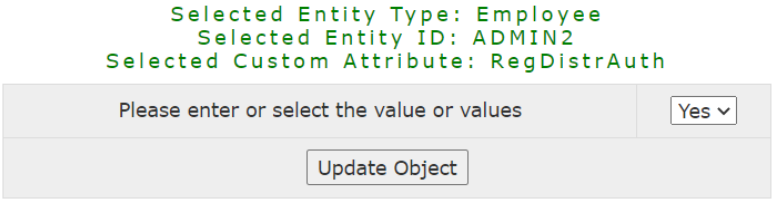

Figure 16

This way, the Register Distributor application can be accessed only by ADMIN2::Rohit Shetty.