

Exam : 070-489

**Title : Developing Microsoft
SharePoint Server 2013
Advanced Solutions**

Version : Demo

1. Topic 1, Trey Research

Background

You develop an intranet portal for Trey Research. End users of the portal are researchers and office staff.

Business Requirements

All end users must be able to customize their profile with relevant information. Researchers must store research papers, upload supporting documents, and search content.

Storage

The portal must use an existing Microsoft SQL Server database to access and store work profile information and research papers.

Data Access

- The portal must use Business Connectivity Services (BCS) to access data from external systems.
- Researchers must search content from SharePoint and external systems.
- Researchers must manage a research topic and related content as a single entity.

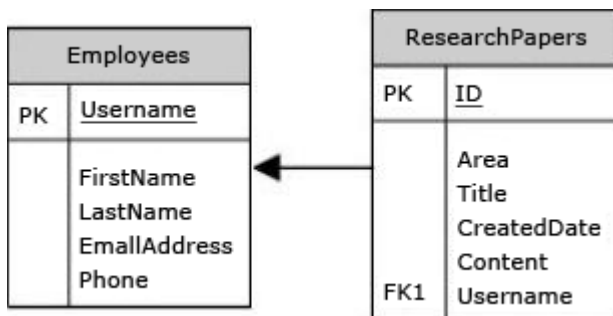
User Profile

- Employees must be able to customize their profile.
- Administrators must be able to create new profile properties.

Technical Requirements

Data Store

The data model for the database entities is shown below:



Users must not be allowed to update the Employees.Username and ResearchPapers.ID fields. The fields uniquely distinguish the corresponding entity.

Access External Data

- You must create an external content type named TreyResearch to access the SQL data source. During development, the data source will be accessible locally.
- You must develop an app to access the fields named Employee Name and Research Paper Title.
- Researchers must be able to find all research papers that are written by a particular employee.
- A research paper always must be associated with the employee that wrote it.

Document Management

- Researchers must be able to upload research papers and relevant supporting materials into a document set named Research Content.
- All the document sets must be stored in a list named ResearchPapers.
- All documents that are uploaded must contain the prefix DOC in the file name.

Environment

The SQL database will be on a different physical server when the solution is deployed to a production environment. The solution must use the SQL Server user named sqltrey to connect to the database. The BCS service is configured and running in the production environment.

Personalize

- You must use custom profile properties to add a new section to the user profile properties page.
- The solution must use the client-side object model (CSOM) to upload employee profile pictures.
- Employees must be able to change their display name on the site.
- Each employee's page must display the value of the DisplayName and Title fields.

Search

- The Microsoft Bing API web service must be used to search for research papers. No code must be written.
- The app must use a Content Enrichment web service named AbstractIndexer. The app must use the AbstractIndexer service to index search content.
- The solution must store large-sized media files in a dedicated SQL Server database.
- The database must use the ResearchPapers.ID field as the foreign key to associate the field with the TreyResearch external content type.

Application Structure

Relevant portions of the solution files are shown below. (Line numbers in the code segments are included for reference only and include a two-character prefix that denotes the specific file to which they belong.)

App.js

```
AJ01  var context;
AJ02  var web;
AJ03  var user;
AJ04
AJ05
AJ06      $.ajax({
AJ07          url: listURL,
AJ08          headers: {
AJ09              "accept": "application/json",
AJ10              "X-RequestDigest": $("#__REQUESTDIGEST").val()
AJ11          },
AJ12          success: this.showItems,
AJ13          error: this.failMethod
AJ14      });
AJ15  }
AJ16
AJ17  this.showItems = function (data) {
AJ18      $("#Container").children().remove();
AJ19      $.each(data.d.results, function (key, val) {
AJ20          var item = $("#EmployeeInfoTemplate").clone()
AJ21              .attr("id", val.BdcIdentity)
AJ22              .fadeIn("slow");
AJ23          ...
AJ24          item.appendTo("#Container");
AJ25      });
AJ26  }
AJ27
AJ28  this.failMethod = function (jqXHR, textStatus, errorThrown) {
AJ29      alert('failed: ' + errorThrown);
AJ30  }
AJ31  }
AJ32  ExecuteOrDelayUntilScriptLoaded(getEmployees, "sp.js");
AJ33  });
AJ34
AJ35  function getEmployees() {
AJ36      var grid = new AppLevelECT.Grid
AJ37      ("ColumnContainer", 3, _spPageContextInfo.webServerRelativeUrl);
AJ38      grid.init();
AJ39  }
```

ManageUserProfiles.es

```

MP01 namespace ManageUserProfiles
MP02 {
MP03     class ProfileProperties
MP04     {
MP05         public static void AddProfileProperty(string name, string displayName,
MP06         bool isMultivalued)
MP07         {
MP08             using (SPSite site = new SPSite("http://treyresearch.com/users"))
MP09             {
MP10                 SPServiceContext svcContext = SPServiceContext.GetContext(site);
MP11                 try
MP12                 {
MP13                     ProfilePropertyManager prfPropMgr;
MP14                     ProfileSubtypeManager prfTypeMgr;
MP15                     ProfileSubtypePropertyManager prftypePropMgr;
MP16                     ProfileTypePropertyManager typPropMgr;
MP17                     ProfileSubtypeProperty prfTypeProp;
MP18                     ProfileTypeProperty prfProp;
MP19                     ProfileSubtype prfType;
MP20                     CorePropertyManager corePropMgr;
MP21                     CoreProperty coreProp;
MP22                     prfPropMgr = new UserProfileConfigManager(svcContext)
MP23                     .ProfilePropertyManager;
MP24                     prfTypeProp = prftypePropMgr.Create(prfProp);
MP25                     prfTypeProp.IsUserEditable = true;
MP26                     prfTypeProp.DefaultPrivacy = Privacy.Public;
MP27                     prfTypeProp.UserOverridePrivacy = true;
MP28                     prftypePropMgr.Add(prfTypeProp);
MP29                 }
MP30                 catch (System.Exception e)
MP31                 {
MP32                     throw new Exception("Error occurred: " + e.ToString());
MP33                 }
MP34             }
MP35         }
MP36     }
MP37
MP38
MP39
MP40 public void UploadPicture(string account, string picURL)
MP41 {
MP42     try
MP43     {
MP44     }
MP45     catch (Exception e)
MP46     {
MP47         throw new Exception("Error occurred: " + e.ToString());
MP48     }
MP49 }
MP50
MP51
MP52 public UserProfileProperties GetUserProfileProperties(string account)
MP53 {
MP54     var userprfProps = new UserProfileProperties();
MP55
MP56     var clientContext = new ClientContext("http://treyresearch.com/users");

```

ContentManagement.es

```

CM01 private void CreateDocumentSets()
CM02 {
CM03     using (SPSite site = new SPSite("http://treyresearch.com/sites"))
CM04     {
CM05         using (SPWeb web = site.RootWeb)
CM06         {
CM07
CM08         }
CM09     }
CM10 }

```

DRAG DROP

You need to add code to line MP22 to create the custom profile property.

How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once or not at all. You may need to drag the split bar between panes or scroll to view content.)

Answer Area	
Create(coreProp)	corePropMgr = prfPropMgr.GetCoreProperties();
Create(corePropMgr)	coreProp = corePropMgr. ;
Create(true)	coreProp.Name = name;
Create(false)	coreProp.DisplayName = displayName;
GetProfileSubtypeProperties	coreProp.IsMultivalued = isMultivalued;
GetProfileTypeProperties	coreProp.Type = PropertyDataType.StringMultiValue;
GetCoreProperties	coreProp.Length = 1024;
	corePropMgr.Add(coreProp);
	typPropMgr = prfPropMgr
	. (ProfileType.User);
	prfProp = typPropMgr. ;
	prfProp.IsVisibleOnViewer = true;
	typPropMgr.Add(prfProp);
	...
	prftypePropMgr = prfPropMgr
	. (prfType.Name);

Answer:

	Answer Area
Create(corePropMgr)	corePropMgr = prfPropMgr.GetCoreProperties();
Create(false)	coreProp = corePropMgr. Create(true) ;
GetCoreProperties	coreProp.Name = name; coreProp.DisplayName = displayName; coreProp.IsMultivalued = isMultivalued; coreProp.Type = PropertyDataType.StringMultiValue ; coreProp.Length = 1024; corePropMgr.Add(coreProp); typPropMgr = prfPropMgr . GetProfileTypeProperties (ProfileType.User); prfProp = typPropMgr. Create(coreProp) ; prfProp.IsVisibleOnViewer = true ; typPropMgr.Add(prfProp); . . . prfTypePropMgr = prfPropMgr . GetProfileSubtypeProperties (prfType.Name);

2.DRAG DROP

You need to add code to line MP57 to display the required properties for the user profile.

How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

	Answer Area
clientContext.Load(usrPrfProps);	var peopleManager = new PeopleManager(clientContext);
clientContext.LoadQuery(usrPrfProps);	
.GetUserProfilePropertyFor(usrPrfProps);	var usrPrfProps = new UserProfilePropertiesForUser(clientContext, account, prfProps);
.GetUserProfilePropertiesFor(usrPrfProps);	var profilePropertyValues = peopleManager.
string[] prfProps = new string[] { "DisplayName", "Title" };	
string[] prfProps = new string[] { "PreferredName", "Title" };	
var prfProps = new ArrayList() { "DisplayName", "Title" };	clientContext.ExecuteQuery();

Answer:

	Answer Area
clientContext.LoadQuery(usrPrfProps);	var peopleManager = new PeopleManager(clientContext);
.GetUserProfilePropertyFor(usrPrfProps);	string[] prfProps = new string[] { "DisplayName", "Title" };
	var usrPrfProps = new UserProfilePropertiesForUser(clientContext, account, prfProps);
	var profilePropertyValues = peopleManager.
	.GetUserProfilePropertiesFor(usrPrfProps);
string[] prfProps = new string[] { "PreferredName", "Title" };	clientContext.Load(usrPrfProps);
var prfProps = new ArrayList() { "DisplayName", "Title" };	clientContext.ExecuteQuery();

3.You need to configure the external content type to search for research papers.

Which indexing connector should you use?

- A. .NET Type Connector
- B. WCF Service Connector
- C. Custom Connector
- D. SQL Server Connector

Answer: B

4.You need to generate document identifiers for each new document that is uploaded to the site.

What should you do?

- A. Create a derived class that inherits from the abstract class named Microsoft.Office.DocumentManagement.DocumentId and then override all of the abstract methods.
- B. Create a derived class that inherits from the abstract class named Microsoft.Office.DocumentManagement.DocumentIdProvider and then override all of the virtual members.
- C. Create a derived class that inherits from the Microsoft.Office.DocumentManagement.DocumentIdProvider abstract class and then implement all abstract members.
- D. Create a class to implement the Microsoft.Office.DocumentManagement.IDocumentId interface and then override all of the virtual members.

Answer: B

5.DRAG DROP

You need to configure authentication for the external content type in the production environment.

Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)

	Answer Area
Add the sqltrey user login to the Secure Store Service.	
Configure permissions to allow the user that is logged in to have access to the Secure Store Service.	
Stop the Business Data Connectivity service.	
Create a Secure Store Service application as a target application.	
Connect to the external data source by using the Impersonated Custom Identity and the target application name.	
Connect to the external data source by using the Impersonated Windows Identity and the target application name.	

Answer:

Answer Area	
Configure permissions to allow the user that is logged in to have access to the Secure Store Service.	Stop the Business Data Connectivity service.
Create a Secure Store Service application as a target application.	Add the sqltrey user login to the Secure Store Service.
Connect to the external data source by using the Impersonated Custom Identity and the target application name.	Connect to the external data source by using the Impersonated Windows Identity and the target application name.

Explanation:

* From scenario:

You must create an external content type named TreyResearch to access the SQL data source. During development, the data source will be accessible locally.

The solution must use the SQL Server user named sqltrey to connect to the database.