무료 전자 책

배우기

sharepoint

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Stack Overflow contributors.

#sharepoint

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1:

SharePoint Microsoft SharePoint .

- **SharePoint Foundation** : SharePoint SharePoint 2016 .
- **SharePoint Server** : SharePoint . SharePoint . BI , SharePoint Foundation .
- **SharePoint Online** : SharePoint . .

Office 365 SharePoint Online Microsoft . SharePoint .

SharePoint .

- SharePoint 2013 - SharePoint 2016 - : SharePoint -
- Office 365 SharePoint : SharePoint
- SharePoint Online SharePoint (Office 365) : SharePoint
- SharePoint 2013 SharePoint Online . http://www.buckleyplanet.com/2014/06/sharepoint-online-vs-onprem-feature-comparison.html

2003	SharePoint Portal Server	2002-07-09
2003	SharePoint Portal Server 2003	2003-11-23
2007	SharePoint Server 2007	2007-01-27
2010	Microsoft SharePoint Server 2010	2010-07-15
2013	Microsoft SharePoint Server 2013	2013-01-09
2016	Microsoft SharePoint Server 2016	2016-05-01

Examples

SharePoint 2016

SharePoint 2016 SharePoint 16 . 2016 5 4 . SharePoint 2016 . SharePoint . .

SharePoint . SharePoint , , , . RAM .

- 64 4
- 12 - 24GB RAM ( )
- 80GB
- 100GB
- 64 Windows Server 2012 R2 " "

- SQL Server 2014 SQL Server 2016
- .NET Framework 4.5.2 .NET Framework 4.6
-

SharePoint SharePoint .

- . .
- SharePoint Setup.exe .
-
- .
- "" .
- .
- .

SharePoint 2016 . -> SharePoint 2016 -> SharePoint 2016 .

- .
- . .
-
  - SQL Server . .
  - SharePoint_Config
  - DOMAIN \ user . *
  - .
- . .
-
- (SharePoint) (NTLM (Kerberose)) .
-
- .
- .
- % COMMONPROGRAMFILES % \ Microsoft Shared \ Web Server Extensions \ 16 \ LOG

, . Central Admin .

- -> -> .
- .
- .
- .
  -
  - DOMAIN \ user .
- .
- ( )
  - , , ( )
  - (,) URL . SharePoint
- .

.

SharePoint Framework

dev.office.com/sharepoint SharePoint Framework .

SharePoint Framework Office 365 SharePoint Online SharePoint . SharePoint Framework SharePoint SharePoint

SharePoint (Hello World 1) hello world . dev.office.com github .

SharePoint Hello World .

1. Yeoman SharePoint Generator .

   yo @ microsoft / SharePoint

2. . Visual Studio .

3. gulp SharePoint Workbench

4. SharePoint Online

   URL : ' https : //your-sharepoint-site/_layouts/workbench.aspx '

SharePoint ULS

SharePoint (ULS) . .

Microsoft ULS . .

ID . ID ; a (:). ULS ID .

SPMonitoredScope

SPMonitoredScope .

```
using (new SPMonitoredScope("Feature Monitor"))
{
    // My code here
}
```

. ISPScopedPerformanceMonitor .

: https://riptutorial.com/ko/sharepoint/topic/950/--

2: JavaScript (JSOM)

JavaScript SharePoint 2010 . .

SharePoint JavaScript

SharePoint 2013 JavaScript .

SharePoint 2010 " " HTML .

`SP` , SharePoint 2013 .

SharePoint 2010 JavaScript .

JSOM

JavaScript .

1. `ClientContext` `ClientContext` .
2. `ClientContext` SharePoint (: , ,) .
3. . .
4. `load` `ClientContext` .
5. `ClientContext` `executeQueryAsync` .
6. .

JSOM SharePoint , REST .NET .

Examples

```
function getContentTypes(site_url,name_of_the_library){
    var ctx = new SP.ClientContext(site_url);
    var web = ctx.get_web();
    list = web.get_lists().getByTitle(name_of_the_library);

    // You can include any property of the SP.ContentType object (sp.js), for this example we
are just getting the name
    ctx.load(list,'ContentTypes.Include(Name)');
    ctx.executeQueryAsync(onQuerySucceeded, onQueryFailed);
}

function onQuerySucceeded(sender, args) {
    // var list is the one that we used in function "getContentTypes"
    var contentTypesEnumerator = (list.get_contentTypes()).getEnumerator();

    while (contentTypesEnumerator.moveNext()) {
        var contentType = contentTypesEnumerator.get_current();
        alert(contentType.get_name());
    }
}

function onQueryFailed(sender, args) {
    alert('Request failed. ' + args.get_message() + '\n' + args.get_stackTrace());
}
```

```
SP.SOD.executeOrDelayUntilScriptLoaded( function(){ deleteItem(1); }, "sp.js");

function deleteItem(id){
    var clientContext = new SP.ClientContext();
    var list = clientContext.get_web().get_lists().getByTitle("List Title");
    var item = list.getItemById(id);
    item.deleteObject();
    clientContext.executeQueryAsync(function(){
        alert("Item #"+id+" deleted successfully!");
    },function(sender,args){alert(args.get_message());});
}
```

```
SP.SOD.executeOrDelayUntilScriptLoaded(createItem,"sp.js");

function createItem(){
    var clientContext = new SP.ClientContext();
    var list = clientContext.get_web().get_lists().getByTitle("List Title");
    var newItem = list.addItem();
    newItem.set_item("Title","Example Title");
    newItem.update();
    clientContext.load(newItem); // only needed to retrieve info from newly created item
    clientContext.executeQueryAsync(function(){
        var itemId = newItem.get_item("ID");
        alert("Item #"+itemId+" Created Successfully!");
    },function(sender,args){
        alert(args.get_message());
    });
}
```

.

1. addItem .
2. set_item .
3. update .
4. executeQueryAsync .

load . .

. ListItemCreationInformation underlyingObjectType SP.FileSystemObjectType.folder leafName
.

addItem .

```
// ...
var itemCreateInfo = new SP.ListItemCreationInformation();
itemCreateInfo.set_underlyingObjectType(SP.FileSystemObjectType.folder);
itemCreateInfo.set_leafName(folderName);
var newItem = list.addItem(itemCreateInfo);
// ...
```

ClientContext executeQueryAsync .

.

```
SP.SOD.executeOrDelayUntilScriptLoaded(createFolder,"sp.js");

function createFolder(){
    var now = new Date();
    var timeStamp = now.getYear() + "-" + (now.getMonth()+1) + "-" + now.getDate()
        + "T" + now.getHours()+"_"+now.getMinutes()+"
"+now.getSeconds()+"_"+now.getMilliseconds();
    var clientContext = new SP.ClientContext();
    var list = clientContext.get_web().get_lists().getByTitle("Library Title");
    var itemCreateInfo = new SP.ListItemCreationInformation();
    itemCreateInfo.set_underlyingObjectType(SP.FileSystemObjectType.folder);
    itemCreateInfo.set_leafName(timeStamp);
    var newItem = list.addItem(itemCreateInfo);
    newItem.update();
    clientContext.load(newItem);
    var rootFolder = list.get_rootFolder(); // Note: use a list's root folder to determine its
server relative URL
    clientContext.load(rootFolder);
    clientContext.executeQueryAsync(function(){
        var itemId = newItem.get_item("ID");
        var name = newItem.get_item("FileLeafRef");
        SP.UI.ModalDialog.showModalDialog(
            {
                title: "Folder \""+name+"\" (#"+itemId+") Created Successfully!",
                url: rootFolder.get_serverRelativeUrl() + "/" + name
            }
        );
    },function(sender,args){alert(args.get_message());});
}
```

```
SP.SOD.executeOrDelayUntilScriptLoaded(showUserInfo,"sp.js");

function showUserInfo(){
    var clientContext = new SP.ClientContext();
    var user = clientContext.get_web().get_currentUser();
    clientContext.load(user);
    clientContext.executeQueryAsync(function(){
            var details = "ID: "+user.get_id()+"\n"+
                "Title: "+user.get_title()+"\n"+
                "Login: "+user.get_loginName()+"\n"+
                "Email: "+user.get_email();
            alert(details);
        },function(sender,args){alert(args.get_message());})
}
```

ID

```
SP.SOD.executeOrDelayUntilScriptLoaded(myFunction,"sp.js");

function myFunction(){
    var clientContext = new SP.ClientContext();
    var list = clientContext.get_web().get_lists().getByTitle("List Title");
    var item = list.getItemById(1); // get item with ID == 1
    clientContext.load(item);
    clientContext.executeQueryAsync(
        function(){ // onSuccess
```

```
            var title = item.get_item("Title");
            alert(title);
        },
        function(sender,args){ // onError
            alert(args.get_message());
        }
    );
}
```

CAML

SP.CamlQuery `set_viewXml` CAML .

```
SP.SOD.executeOrDelayUntilScriptLoaded(showListItems,"core.js");

function showListItems(){
    var clientContext = new SP.ClientContext();
    var list = clientContext.get_web().get_lists().getByTitle("List Title");
    var camlQuery = new SP.CamlQuery();
    camlQuery.set_viewXml(
        "<View><Query>" +
            "<Where>" +
                "<Eq><FieldRef Name=\"Title\"/><Value Type=\"Text\">Value</Value></Eq>" +
            "</Where>" +
            "<OrderBy><FieldRef Name=\"Modified\" Ascending=\"FALSE\"/></OrderBy>" +
        "</Query>"+
        //"<RowLimit>5000</RowLimit>" +
        "</View>");
    var items = list.getItems(camlQuery);
    clientContext.load(items);
    clientContext.executeQueryAsync(function(){
        var itemArray = [];
        var itemEnumerator = items.getEnumerator();
        while(itemEnumerator.moveNext()){
            var item = itemEnumerator.get_current();
            var id = item.get_item("ID");
            var title = item.get_item("Title");
            itemArray.push(id + ": " + title);
        }
        alert("ID: Title\n"+itemArray.join("\n"));
    },function(sender,args){alert(args.get_message());});
}
```

CAML

CAML `RowLimit` 2 .

`get_listItemCollectionPosition` SP.CamlQuery `set_listItemCollectionPosition` .

```
SP.SOD.executeOrDelayUntilScriptLoaded(showListItems,"sp.js");

function showListItems(){
    var itemArray = [];
```

```
    var clientContext = new SP.ClientContext();
    var list = clientContext.get_web().get_lists().getByTitle("List Title");
    var viewXml =
        "<View><Query>" +
            "<OrderBy><FieldRef Name=\"Modified\" Ascending=\"FALSE\"/></OrderBy>" +
        "</Query>"+
          "<RowLimit>1</RowLimit>" +
        "</View>";
    var camlQuery = new SP.CamlQuery();
    camlQuery.set_viewXml(viewXml);
    var items = list.getItems(camlQuery);
    clientContext.load(items);
    clientContext.executeQueryAsync(loadResults,showError);

    function loadResults(){
        var resultsFound = false;
        var itemEnumerator = items.getEnumerator();
        while(itemEnumerator.moveNext()){
            var item = itemEnumerator.get_current();
            var id = item.get_item("ID");
            var title = item.get_item("Title");
            itemArray.push(id + ": " + title);
        }
        var pos = items.get_listItemCollectionPosition();// <- get position
        if(pos !== null){ // <-- position is null when no more results are returned
            if(confirm("Results so far: \nID: Title\n"+itemArray.join("\n"))){
                camlQuery = new SP.CamlQuery();
                camlQuery.set_listItemCollectionPosition(pos);// <- set position for next
batch
                camlQuery.set_viewXml(viewXml);
                items = list.getItems(camlQuery);
                clientContext.load(items);
                clientContext.executeQueryAsync(loadResults,showError);
            }
        }else{
            alert("Total Results: \nID: Title\n"+itemArray.join("\n")); // <- display when no
more results
        }
    }
    function showError(sender,args){
        alert(args.get_message());
    }
}
```

JavaScript (JSOM) : https://riptutorial.com/ko/sharepoint/topic/1316/javascript-----jsom--

3: JavaScript

- var options = SP.UI. $ create_DialogOptions ();
- var modalDialog = SP.UI.ModalDialog.showModalDialog (options);

options	
url	URL . **url** **html** . **url** **html** .
HTML	HTML .
	x .
	y .
	. **false** 768px .
	. **false** 576px .
allowMaximize	.
showMaximized	.
showClose	[ ] .
	.
dialogReturnValueCallback	. SP.UI.DialogResult *DialogResult* *ReturnValue* : .
args	.

`SP.UI.ModalDialog` SharePoint 2010 JavaScript SharePoint 2013, Office365 2016 .

:

- SP.UI.ModalDialog.showModalDialog MSDN ()
- SP.UI.DialogResult MSDN

Examples

```
SP.SOD.executeOrDelayUntilScriptLoaded(showDialog,"sp.js");

function showDialog(){
    var options = SP.UI.$create_DialogOptions();
    options.url = "/mySite/lists/myList/NewForm.aspx";
    options.dialogReturnValueCallback = myCallBackFunction;
    SP.UI.ModalDialog.showModalDialog(options);
```

```
    function myCallBackFunction(result,data){
        switch(result){
            case SP.UI.DialogResult.invalid:
                alert("The dialog result was invalid");
                break;
            case SP.UI.DialogResult.cancel:
                alert("You clicked cancel or close");
                break;
            case SP.UI.DialogResult.OK:
                alert("You clicked OK, creating an item in the list.");
                break;
        }
    }
}
```

```
SP.SOD.executeOrDelayUntilScriptLoaded(showDialog,"sp.js");

function showDialog(){
    SP.UI.ModalDialog.showModalDialog(
        { url: "/org/it/web/wik/Lists/ExampleCode/DispForm.aspx?ID=6" }
    );
}
```

```
SP.SOD.executeOrDelayUntilScriptLoaded(showDialog,"sp.js");

function showDialog(){
    var dialogOptions = SP.UI.$create_DialogOptions();
    dialogOptions.title = "Your Title Here!";
    var dummyElement = document.createElement("div");
    dummyElement.style.textAlign = "center";
    dummyElement.appendChild(document.createElement("br"));
    dummyElement.appendChild(document.createTextNode("Some beautifully crafted text."));
    dummyElement.appendChild(document.createElement("br"));
    dialogOptions.html = dummyElement;
    SP.UI.ModalDialog.showModalDialog(dialogOptions);
}
```

JavaScript : https://riptutorial.com/ko/sharepoint/topic/6868/javascript----

4: REST

REST URL

REST API SharePoint 2010 SharePoint 2013 . SharePoint 2010 REST API `/_vti_bin/ListData.svc` URL ListData . SharePoint 2013 `/_api/lists/` `/_api/web` URL .

URL `http://server/site` `http://server/site server server site` .

URL ...	SharePoint 2010	SharePoint 2013
:	`/_vti_bin/ListData.svc/ListName`	`/_api/lists('ListGuid')`
:	`/_vti_bin/ListData.svc/ListName(1)`	`/_api/lists('ListGuid')/items(1)`
:	( )	`/_api/web`

.

`ListData.svc` SharePoint 2013 .

REST

REST JavaScript XMLHttpRequest jQuery AJAX .

XMLHttpRequest

```
var xhr = new XMLHttpRequest();
xhr.open(verb, url, true);
xhr.setRequestHeader("Content-Type","application/json");
xhr.send(data);
```

jQuery AJAX

```
$.ajax({
    method: verb,
    url: url,
    headers: { "Content-Type":"application/json" },
    data: data
});
```

AJAX JavaScript AJAX .

Examples

`.top` `.select` (`$select=id, Title, uri`) .

```
function GetListItems(){
    $.ajax({
        url: "../_api/web/lists/getbytitle('List Title')/items?$top=50"
        contentType: "application/json;odata=verbose",
        method: "GET",
        headers: { "accept": "application/json;odata=verbose" },
        success: function (data) {
            $.each(data.d.results, function(index,item){
                //use item to access the individual list item
                console.log(item.Id);
            });
        },
        error: function(error){
            console.log(error);
        }
    });
    }
```

```
function GetListItem(){
    $.ajax({
        url: "../_api/web/lists/getbytitle('List Title')/items(1)",
        contentType: "application/json;odata=verbose",
        method: "GET",
        headers: { "accept": "application/json;odata=verbose" },
        success: function (data) {
            console.log(data.d.Id);
        },
        error: function(error){
            console.log(error);
        }
    });
    }
```

.

()		
		?
	( )	( )

	()	/ (:)
NumLegs		

. SharePoint `Type` JSON `TypeId` . AJAX URL .

. `People/Groups` `Title` , `EMail` .

: . `NumLegs` `Type/NumLegs` .

```
// webUrl: The url of the site (ex. https://www.contoso.com/sites/animals)
// listTitle: The name of the list you want to query
// selectFields: the specific fields you want to get back
// expandFields: the name of the fields that need to be pulled from lookup tables
// callback: the name of the callback function on success
function getItems(webUrl,listTitle,selectFields, expandFields, callback){
    var endpointUrl = webUrl + "/_api/web/lists/getbytitle('" + listTitle + "')/items";
    endpointUrl+= '?$select=' + selectFields.join(",");
    endpointUrl+= '&$expand=' + expandFields.join(",");
    return executeRequest(endpointUrl,'GET', callback);
}

function executeRequest(url,method,callback,headers,payload)
{
    if (typeof headers == 'undefined'){
        headers = {};
    }
    headers["Accept"] = "application/json;odata=verbose";
    if(method == "POST") {
        headers["X-RequestDigest"] = $("#__REQUESTDIGEST").val();
    }

    var ajaxOptions =
    {
    url: url,
    type: method,
    contentType: "application/json;odata=verbose",
    headers: headers,
    success: function (data) { callback(data) }
    };
    if(method == "POST") {
    ajaxOptions.data = JSON.stringify(payload);
    }

    return $.ajax(ajaxOptions);
}

// Setup the ajax request by setting all of the arguments to the getItems function
function getAnimals() {
    var url = "https://www.contoso.com/sites/animals";
    var listTitle = "AnimalListing";

    var selectFields = [
        "Title",
        "Age",
        "Value",
        "Type/Title",
        "Type/NumLegs"
    ];

    var expandFields = [
        "Type/Title",
```

```
        "Type/NumLegs"
    ];

    getItems(url, listTitle, selectFields, expandFields, processAnimals);
}

// Callback function
// data: returns the data given by SharePoint
function processAnimals(data) {
    console.log(data);
    // Process data here
}

// Start the entire process
getAnimals();
```

`MultiLookupColumnName` ID 1 2 .

jQuery AJAX

2010

```
var listName = "YourListName";
var lookupList = "LookupListName";
var idOfItemToUpdate = 1;
var url = "/server/site/_vti_bin/ListData.svc/"+listName+"("+idOfItemToUpdate+")";
var data = JSON.stringify({
    MultiLookupColumnName:[
        {__metadata:{uri:"http://yoursiteurl/_vti_bin/ListData.svc/"+lookupList+"(1)"}},
        {__metadata:{uri:"http://yoursiteurl/_vti_bin/ListData.svc/"+lookupList+"(2)"}}
    ]
});
$.ajax({
    method: 'POST',
    url: url,
    contentType: 'application/json',
    headers: {
      "X-HTTP-Method" : "MERGE",
      "If-Match" : "*"
    },
    data: data
});
```

2013

```
var listGuid = "id-of-list-to-update"; // use list GUID here
var lookupGuid = "id-of-lookup-list"; // use lookup list GUID here
var idOfItemToUpdate = 1;
var url = "/server/site/_api/lists('"+ listGuid + "')/items("+ idOfItemToUpdate + ")";
var data = JSON.stringify({
    MultiLookupColumnName:[
        {__metadata:{uri:"http://yoursiteurl/_api/lists('" + lookupGuid + "')/items(1)"}},
        {__metadata:{uri:"http://yoursiteurl/_api/lists('" + lookupGuid + "')/items(2)"}}
    ]
});
$.ajax({
    method: 'POST',
    url: url,
    contentType: 'application/json',
```

```
    headers: {
      "X-HTTP-Method" : "MERGE",
      "If-Match" : "*"
    },
    data: data
});
```

XMLHttpRequest

2010

```
var listName = "YourListName";
var lookupList = "LookupListName";
var idOfItemToUpdate = 1;
var url = "/server/site/_vti_bin/ListData.svc/YourListName("+idOfItemToUpdate+")";
var data = JSON.stringify({
    MultiLookupColumnName:[
       {__metadata:{uri:"http://yoursiteurl/_vti_bin/ListData.svc/"+lookupList+"(1)"}},
        {__metadata:{uri:"http://yoursiteurl/_vti_bin/ListData.svc/"+lookupList+"(2)"}}
    ]
});
var xhr = new XMLHttpRequest();
xhr.open("POST",url,true);
xhr.setRequestHeader("X-HTTP-Method", "MERGE");
xhr.setRequestHeader("If-Match", "*");
xhr.setRequestHeader("Content-Type","application/json");
xhr.send(data);
```

2013

```
var listGuid = "id-of-list-to-update";
var lookupGuid = "id-of-lookup-list";
var idOfItemToUpdate = 1;
var url = "/server/site/_api/lists('"+ listGuid + "')/items("+ idOfItemToUpdate + ")";
var data = JSON.stringify({
    MultiLookupColumnName:[
        {__metadata:{uri:"http://yoursiteurl/_api/lists('" + lookupGuid + "')/items(1)"}},
        {__metadata:{uri:"http://yoursiteurl/_api/lists('" + lookupGuid + "')/items(2)"}}
    ]
});
var xhr = new XMLHttpRequest();
xhr.open("POST",url,true);
xhr.setRequestHeader("X-HTTP-Method", "MERGE");
xhr.setRequestHeader("If-Match", "*");
xhr.setRequestHeader("Content-Type","application/json");
xhr.send(data);
```

REST .

1. `$orderby` n `$skip=n` `$skip=n` .
2. `$top=n` `$top=n` `$orderby` `$skip` n .

```
var endpointUrl = "/_api/lists('guid')/items"; // SP2010: "/_vti_bin/ListData.svc/ListName";
$.getJSON(
    endpointUrl + "?$orderby=Id&$top=1000",
    function(data){
```

```
        processData(data); // you can do something with the results here
        var count = data.d.results.length;
        getNextBatch(count, processData, onComplete); // fetch next page
    }
);

function getNextBatch(totalSoFar, processResults, onCompleteCallback){
    $.getJSON(
        endpointUrl + "?$orderby=Id&$skip="+totalSoFar+"&$top=1000",
        function(data){
            var count = data.d.results.length;
            if(count > 0){
                processResults(data); // do something with results
                getNextBatch(totalSoFar+count, callback); // fetch next page
            }else{
                onCompleteCallback();
            }
        }
    );
}
```

SharePoint ID .

SharePoint REST API ID .

:

listName - .

newItemBody - .

: var newItemBody = {__metadata : { 'type': 'SP.Data.MyListNameItem'}, : 'Some title value'};

```
function CreateListItemWithDetails(listName, newItemBody) {

    var item = newItemBody;
    return $.ajax({
        url: _spPageContextInfo.siteAbsoluteUrl + "/_api/web/lists/getbytitle('" + listName +
"')/items",
        type: "POST",
        contentType: "application/json;odata=verbose",
        data: JSON.stringify(item),
        headers: {
            "Accept": "application/json;odata=verbose",
            "X-RequestDigest": $("#__REQUESTDIGEST").val(),
            "content-Type": "application/json;odata=verbose"
        }

    });
}

CreateListItemWithDetails(listName, newItemBody)
    .then(function(data){
        //success callback
        var NewlyCreatedItemId = data.d.ID;
    }, function(data){
        //failure callback
    });
```

SharePoint 2010 REST CRUD

REST Create .

`POST` HTTP . POST URL . `application/json` . JSON serialize . JavaScript :

```
function createListItem(webUrl,listName, itemProperties, success, failure) {

    $.ajax({
        url: webUrl + "/_vti_bin/listdata.svc/" + listName,
        type: "POST",
        processData: false,
        contentType: "application/json;odata=verbose",
        data: JSON.stringify(itemProperties),
        headers: {
            "Accept": "application/json;odata=verbose"
        },
        success: function (data) {
            success(data.d);
        },
        error: function (data) {
            failure(data.responseJSON.error);
        }
    });
}
```

```
var taskProperties = {
    'TaskName': 'Order Approval',
    'AssignedToId': 12
};

createListItem('https://contoso.sharepoint.com/project/','Tasks',taskProperties,function(task){

    console.log('Task' + task.TaskName + ' has been created');
  },
  function(error){
    console.log(JSON.stringify(error));
  }
);
```

REST .

`GET` HTTP . GET URL . `application/json` . :

```
function getListItemById(webUrl,listName, itemId, success, failure) {
    var url = webUrl + "/_vti_bin/listdata.svc/" + listName + "(" + itemId + ")";
    $.ajax({
        url: url,
        method: "GET",
        headers: { "Accept": "application/json; odata=verbose" },
        success: function (data) {
            success(data.d);
        },
        error: function (data) {
            failure(data.responseJSON.error);
        }
    });
```

```
}
```

```
getListItemById('https://contoso.sharepoint.com/project/','Tasks',2,function(taskItem){
    console.log(taskItem.TaskName);
  },
  function(error){
    console.log(JSON.stringify(error));
  }
);
```

.

`POST` HTTP . `MERGE` `X-HTTP-Method` . URL POST `If-Match` ETag * . :

```
function updateListItem(webUrl,listName,itemId,itemProperties,success, failure)
{
   getListItemById(webUrl,listName,itemId,function(item){

      $.ajax({
         type: 'POST',
         url: item.__metadata.uri,
         contentType: 'application/json',
         processData: false,
         headers: {
                "Accept": "application/json;odata=verbose",
                "X-HTTP-Method": "MERGE",
                "If-Match": item.__metadata.etag
         },
         data: Sys.Serialization.JavaScriptSerializer.serialize(itemProperties),
         success: function (data) {
                success(data);
         },
         error: function (data) {
                failure(data);
         }
      });

   },
   function(error){
       failure(error);
   });

}
```

```
var taskProperties = {
    'TaskName': 'Approval',
    'AssignedToId': 12
};


updateListItem('https://contoso.sharepoint.com/project/','Tasks',2,taskProperties,function(item){

    console.log('Task has been updated');
  },
  function(error){
    console.log(JSON.stringify(error));
  }
);
```

.

`POST` HTTP . `DELETE` `X-HTTP-Method` . URL POST `If-Match` ETag . :

```
function deleteListItem(webUrl, listName, itemId, success, failure) {
    getListItemById(webUrl,listName,itemId,function(item){
        $.ajax({
            url: item.__metadata.uri,
            type: "POST",
            headers: {
                "Accept": "application/json;odata=verbose",
                "X-Http-Method": "DELETE",
                "If-Match": item.__metadata.etag
            },
            success: function (data) {
                success();
            },
            error: function (data) {
                failure(data.responseJSON.error);
            }
        });
    },
   function (error) {
       failure(error);
   });
}
```

```
deleteListItem('https://contoso.sharepoint.com/project/','Tasks',3,function(){
    console.log('Task has been deleted');
  },
  function(error){
    console.log(JSON.stringify(error));
  }
);
```

REST : https://riptutorial.com/ko/sharepoint/topic/3045/rest-

5: SharePoint 2013

(CSR) SharePoint 2013 . SharePoint (,). . XSLT HTML JavaScript .

Examples

CSR /

CSR " **ID** " " **(LinkTitle)** " .

1 : JS

```
(function () {

    function registerRenderer() {
        var ctxForm = {};
        ctxForm.Templates = {};

        ctxForm.Templates = {
            Fields : {
                'LinkTitle': { //------ Change Hyperlink of LinkTitle
                    View : function (ctx) {
                        var url = String.format('{0}?ID={1}',
"/sites/Lists/testlist/EditItem.aspx", ctx.CurrentItem.ID);
                        return String.format('<a href="{0}" onclick="EditItem2(event,
\'{0}\');return false;">{1}</a>', url, ctx.CurrentItem.Title);
                    }
                },
                'ID' : { //------ Change Hyperlink from ID field
                    View : function (ctx) {
                        var url = String.format('{0}?ID={1}',
"/IssueTracker/Lists/testlist/DisplayItem.aspx", ctx.CurrentItem.ID);
                        return String.format('<a href="{0}" onclick="EditItem2(event,
\'{0}\');return false;">{1}</a>', url, ctx.CurrentItem.ID);
                    }
                },

            }
        };
        SPClientTemplates.TemplateManager.RegisterTemplateOverrides(ctxForm);
    }
    ExecuteOrDelayUntilScriptLoaded(registerRenderer, 'clienttemplates.js');

})();
```

2 : JS js (: ~ sitecollection / SiteAssets / CSRCodeFile.js).

(: JSlink . "~ sitecollection / YourJSfFilePath".)

3 : Appy and Done

CSR SharePoint

CSR SharePoint "" .

```
(function () {

    function RemoveFields(ctx) {
        var fieldName = "Date"; // here Date is field or column name to be hide
        var header = document.querySelectorAll("[displayname=" + fieldName +
"]")[0].parentNode;
        var index = [].slice.call(header.parentNode.children).indexOf(header) + 1;
        header.style.display = "none";
        for (var i = 0, cells = document.querySelectorAll("td:nth-child(" + index + ")"); i <
cells.length; i++) {
            cells[i].style.display = "none";
        }
    }

    function registerRenderer() {
        var ctxForm = {};
        ctxForm.Templates = {};
        ctxForm.OnPostRender = RemoveFields;
        SPClientTemplates.TemplateManager.RegisterTemplateOverrides(ctxForm);
    }
    ExecuteOrDelayUntilScriptLoaded(registerRenderer, 'clienttemplates.js');

})();
```

CSR /

SharePoint , , , , / CSR . .

-
- ID
-
- .

: 1 JS `CSRValidations.js` JS .

```
        (function () {

        // Create object that have the context information about the field that we want to
change it's output render
        var fieldContext = {};
        fieldContext.Templates = {};
        fieldContext.Templates.Fields = {
            // Apply the new rendering for Email field on New and Edit Forms
            "Title": {
                "NewForm": titleFieldTemplate,
                "EditForm":  titleFieldTemplate
            },
            "Full_x0020_Name": {
                "NewForm": fullNameFieldTemplate,
                "EditForm":  fullNameFieldTemplate
            },
            "Email": {
                "NewForm": emailFieldTemplate,
                "EditForm":  emailFieldTemplate
            },
```

```
            "Mobile_x0020_Phone": {
                "NewForm": mobilePhoneFieldTemplate,
                "EditForm":  mobilePhoneFieldTemplate
            }
        };

        SPClientTemplates.TemplateManager.RegisterTemplateOverrides(fieldContext);

    })();

    // This function provides the rendering logic
    function emailFieldTemplate(ctx) {

        var formCtx = SPClientTemplates.Utility.GetFormContextForCurrentField(ctx);

        // Register a callback just before submit.
        formCtx.registerGetValueCallback(formCtx.fieldName, function () {
            return document.getElementById('inpEmail').value;
        });

        //Create container for various validations
        var validators = new SPClientForms.ClientValidation.ValidatorSet();
        validators.RegisterValidator(new emailValidator());

        // Validation failure handler.
        formCtx.registerValidationErrorCallback(formCtx.fieldName, emailOnError);

        formCtx.registerClientValidator(formCtx.fieldName, validators);

        return "<span dir='none'><input type='text' value='" + formCtx.fieldValue + "'
maxlength='255' id='inpEmail' class='ms-long'> \ <br><span id='spnEmailError' class='ms-
formvalidation ms-csrformvalidation'></span></span>";
    }

    // Custom validation object to validate email format
    emailValidator = function () {
        emailValidator.prototype.Validate = function (value) {
            var isError = false;
            var errorMessage = "";

            //Email format Regex expression
            //var emailRejex = /\S+@\S+\.\S+/;
            var emailRejex = /^(([^<>()[\]HYPERLINK
"\\.,;:\s@\"\\.,;:\s@\"]+(\.[^<>()[\]HYPERLINK "\\.,;:\s@\"\\.,;:\s@\"]+)*)|(\".+\"))@((\[[0-
9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\])|(([a-zA-Z\-0-9]+\.)+[a-zA-Z]{2,}))$/;

            if (value.trim() == "") {
                isError = true;
                errorMessage = "You must specify a value for this required field.";
            }else if (!emailRejex.test(value) && value.trim()) {
                isError = true;
                errorMessage = "Please enter valid email address";
            }

            //Send error message to error callback function (emailOnError)
            return new SPClientForms.ClientValidation.ValidationResult(isError, errorMessage);

        };
    };

    // Add error message to spnError element under the input field element
```

```
    function emailOnError(error) {
        document.getElementById("spnEmailError").innerHTML = "<span role='alert'>" +
error.errorMessage + "</span>";
    }

    // This function provides the rendering logic
    function titleFieldTemplate(ctx) {

        var formCtx = SPClientTemplates.Utility.GetFormContextForCurrentField(ctx);
        // Register a callback just before submit.

        formCtx.registerGetValueCallback(formCtx.fieldName, function () {
            return document.getElementById('inpTitle').value;
        });

        //Create container for various validations
        var validators = new SPClientForms.ClientValidation.ValidatorSet();
        validators.RegisterValidator(new titleValidator());

        // Validation failure handler.
        formCtx.registerValidationErrorCallback(formCtx.fieldName, titleOnError);

        formCtx.registerClientValidator(formCtx.fieldName, validators);

        return "<span dir='none'><input type='text' value='" + formCtx.fieldValue + "'
maxlength='255' id='inpTitle' class='ms-long'> \ <br><span id='spnTitleError' class='ms-
formvalidation ms-csrformvalidation'></span></span>";
    }

    // Custom validation object to validate title format
    titleValidator = function () {
        titleValidator.prototype.Validate = function (value) {
            var isError = false;
            var errorMessage = "";

            if (value.trim() == "") {
                isError = true;
                errorMessage = "You must specify a value for this required field.";
            }

            //Send error message to error callback function (titleOnError)
            return new SPClientForms.ClientValidation.ValidationResult(isError, errorMessage);

        };
    };

    // Add error message to spnError element under the input field element
    function titleOnError(error) {
        document.getElementById("spnTitleError").innerHTML = "<span role='alert'>" +
error.errorMessage + "</span>";
    }

    // This function provides the rendering logic
    function mobilePhoneFieldTemplate(ctx) {

        var formCtx = SPClientTemplates.Utility.GetFormContextForCurrentField(ctx);

        // Register a callback just before submit.
        formCtx.registerGetValueCallback(formCtx.fieldName, function () {
            return document.getElementById('inpMobilePhone').value;
        });
```

```
        //Create container for various validations
        var validators = new SPClientForms.ClientValidation.ValidatorSet();
        validators.RegisterValidator(new mobilePhoneValidator());

        // Validation failure handler.
        formCtx.registerValidationErrorCallback(formCtx.fieldName, mobilePhoneOnError);

        formCtx.registerClientValidator(formCtx.fieldName, validators);

        return "<span dir='none'><input type='text' value='" + formCtx.fieldValue + "'
maxlength='255' id='inpMobilePhone' class='ms-long'> \ <br><span id='spnMobilePhoneError'
class='ms-formvalidation ms-csrformvalidation'></span></span>";
    }

    // Custom validation object to validate mobilePhone format
    mobilePhoneValidator = function () {
        mobilePhoneValidator.prototype.Validate = function (value) {
            var isError = false;
            var errorMessage = "";

            //MobilePhone format Regex expression
            //var mobilePhoneRejex = /\S+@\S+\.\S+/;
            var mobilePhoneRejex = /^[0-9]+$/;

            if (value.trim() == "") {
                isError = true;
                errorMessage = "You must specify a value for this required field.";
            }else if (!mobilePhoneRejex.test(value) && value.trim()) {
                isError = true;
                errorMessage = "Please enter valid mobile phone number";
            }

            //Send error message to error callback function (mobilePhoneOnError)
            return new SPClientForms.ClientValidation.ValidationResult(isError, errorMessage);

        };
    };

    // Add error message to spnError element under the input field element
    function mobilePhoneOnError(error) {
        document.getElementById("spnMobilePhoneError").innerHTML = "<span role='alert'>" +
error.errorMessage + "</span>";
    }

    // This function provides the rendering logic
    function fullNameFieldTemplate(ctx) {

        var formCtx = SPClientTemplates.Utility.GetFormContextForCurrentField(ctx);

        // Register a callback just before submit.
        formCtx.registerGetValueCallback(formCtx.fieldName, function () {
            return document.getElementById('inpFullName').value;
        });

        //Create container for various validations
        var validators = new SPClientForms.ClientValidation.ValidatorSet();
        validators.RegisterValidator(new fullNameValidator());

        // Validation failure handler.
        formCtx.registerValidationErrorCallback(formCtx.fieldName, fullNameOnError);
```

```
        formCtx.registerClientValidator(formCtx.fieldName, validators);

        return "<span dir='none'><input type='text' value='" + formCtx.fieldValue + "'
maxlength='255' id='inpFullName' class='ms-long'> \ <br><span id='spnFullNameError' class='ms-
formvalidation ms-csrformvalidation'></span></span>";
    }

    // Custom validation object to validate fullName format
    fullNameValidator = function () {
        fullNameValidator.prototype.Validate = function (value) {
            var isError = false;
            var errorMessage = "";

            //FullName format Regex expression
            var fullNameRejex = /^[a-z ,.'-]+$/i;

            if (value.trim() == "") {
                isError = true;
                errorMessage = "You must specify a value for this required field.";
            }else if (!fullNameRejex.test(value) && value.trim()) {
                isError = true;
                errorMessage = "Please enter valid name";
            }

            //Send error message to error callback function (fullNameOnError)
            return new SPClientForms.ClientValidation.ValidationResult(isError, errorMessage);

        };
    };

    // Add error message to spnError element under the input field element
    function fullNameOnError(error) {
        document.getElementById("spnFullNameError").innerHTML = "<span role='alert'>" +
error.errorMessage + "</span>";
    }
```

: 2 . .

: 3 -> JS -> js (: ~ sitecollection / SiteAssets / CSRValidations.js)

: 4 .

CSR

"IsApprovalNeeded" " ?" .

. CSR ( ).

...

```
(function () {

    function preTaskFormRenderer(renderCtx) {
       modifyColumns(renderCtx);
    }

    function modifyColumns(renderCtx)
```

```
    {
      var arrayLength= renderCtx.ListSchema.Field.length;
        for (var i=0; i < arrayLength;i++)
        {
           if(renderCtx.ListSchema.Field[i].DisplayName == 'IsApprovalNeeded')
             {
               var newTitle= "Is Approval Needed?";
               var linkTitleField = renderCtx.ListSchema.Field[i];
               linkTitleField.DisplayName = newTitle;
             }
         }
    }

    function registerRenderer()
    {
      var ctxForm = {};
      ctxForm.Templates = {};
      ctxForm.OnPreRender = preTaskFormRenderer;
      SPClientTemplates.TemplateManager.RegisterTemplateOverrides(ctxForm);
    }

    ExecuteOrDelayUntilScriptLoaded(registerRenderer, 'clienttemplates.js');

})();
```

SharePoint 2013 : https://riptutorial.com/ko/sharepoint/topic/8317/sharepoint-2013---

6: SharePoint

SharePoint

: http://www.letsharepoint.com/what-is-user-information-list-in-sharepoint-2013/

Examples

SharePoint 2013 : SharePoint 2013 JSOM

SharePoint 2013 : SharePoint 2013 JSOM

JSOM (Javascript Object Model) UPS (User Profile Service) . UPS .

- . AccountName, FirstName, LastName, WorkEmail .

- , , , . Active Directory .

- , . . SharePoint .

JSOM JSOM (CSOM REST) " .

* / .

JSOM

SharePoint .

Visual Studio 2013 "SharePoint 2013 " . SharePoint ( ). mu SharePoint Online URL SharePoint Hosted App . .

3.) / .

4.) "Default.aspx" JavaScript .

.

SharePoint : https://riptutorial.com/ko/sharepoint/topic/9876/sharepoint--

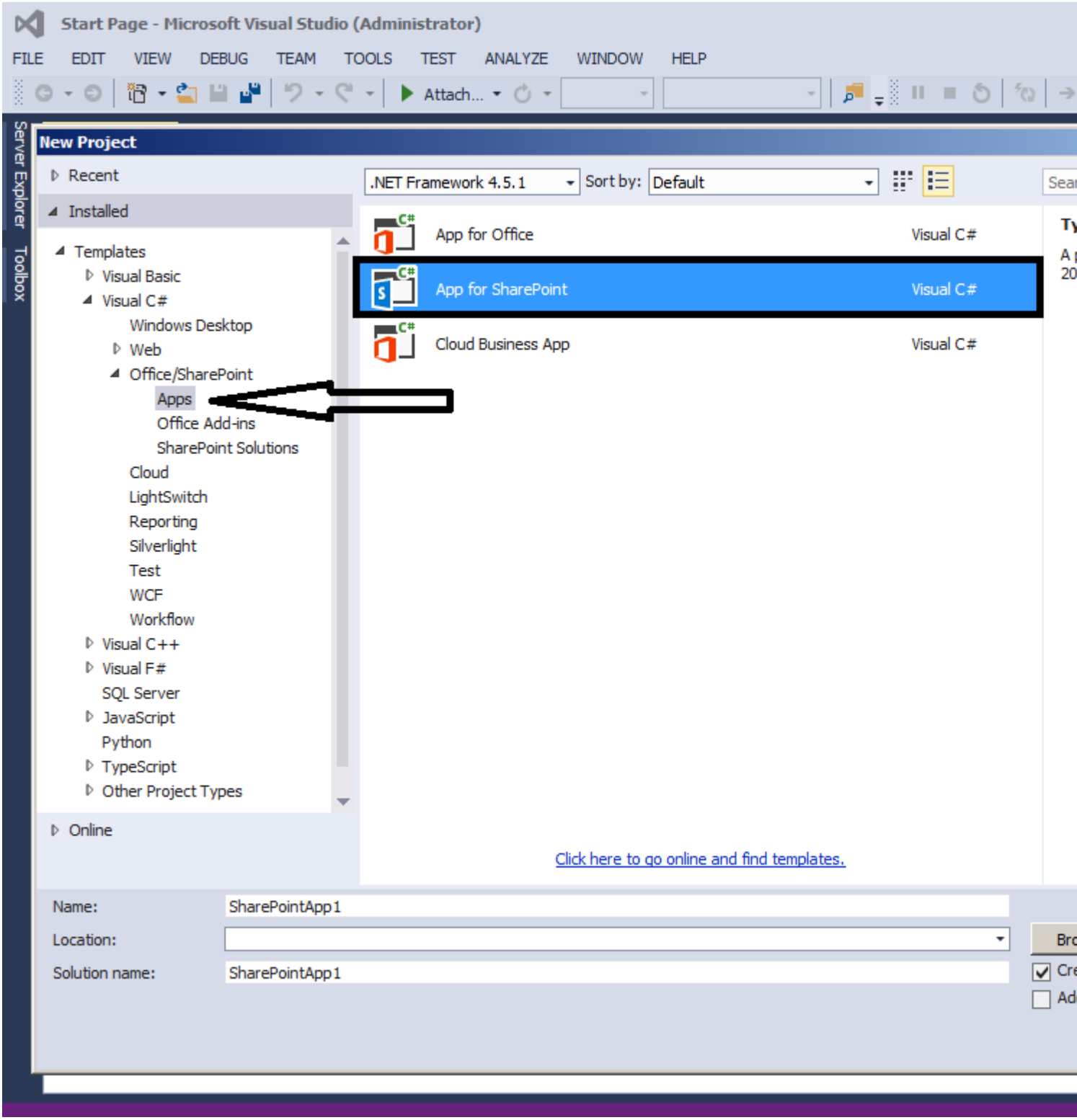
7:

Examples

App Development Visual Studio 2013 . .> https://www.visualstudio.com/products/free-developer-offers-vs

.

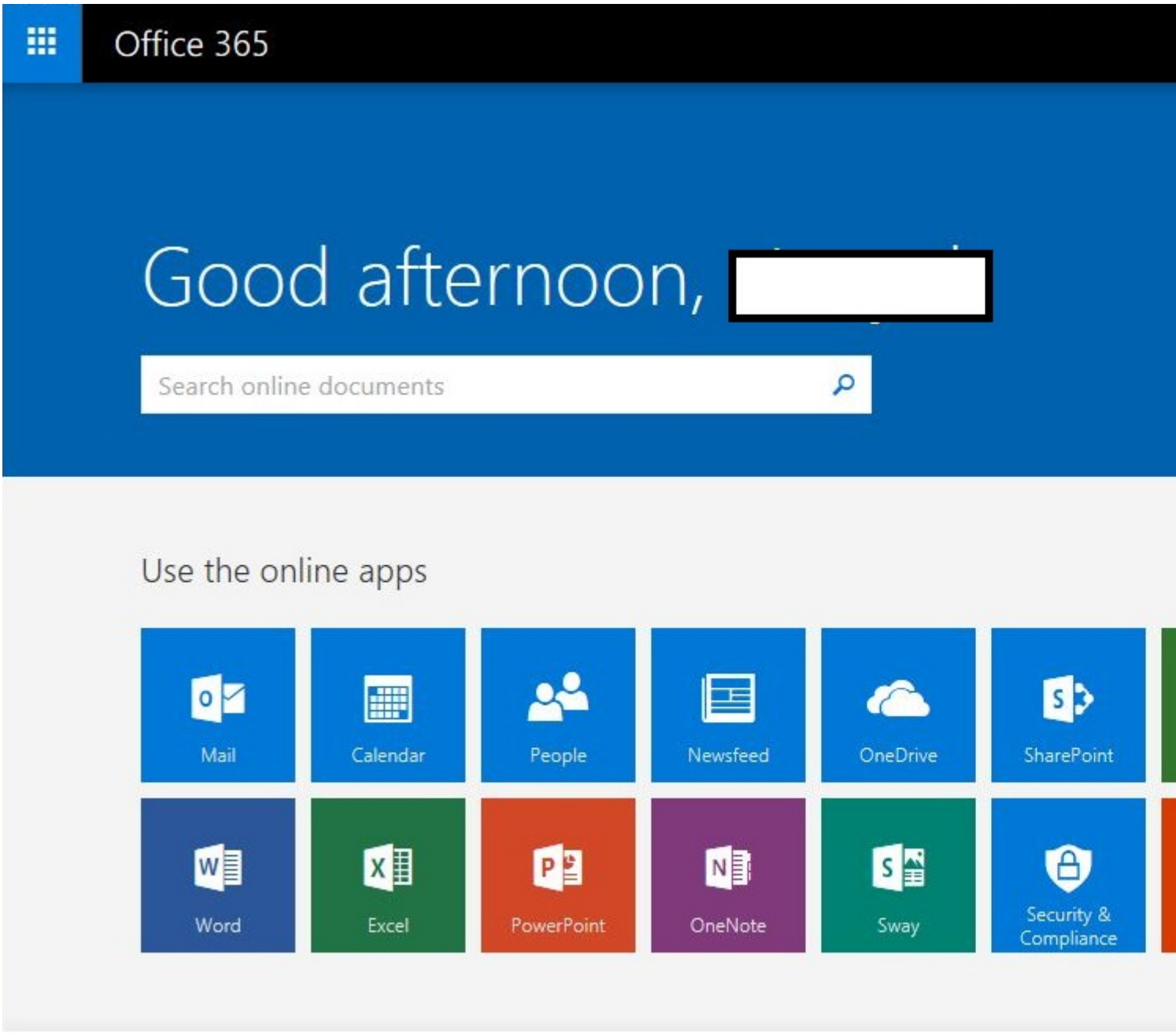
Office / SharePoint App .



VS , **Microsoft Office Developer Tools** https://www.visualstudio.com/en-us/features/office-tools-vs.aspx

Visual Studio SharePoint . > 1 Office 365 . https://profile.microsoft.com/RegSysProfileCenter/wizardnp.aspx?wizid=14b845d0-938c-45af-b061-f798fbb4d170&lcid=1033

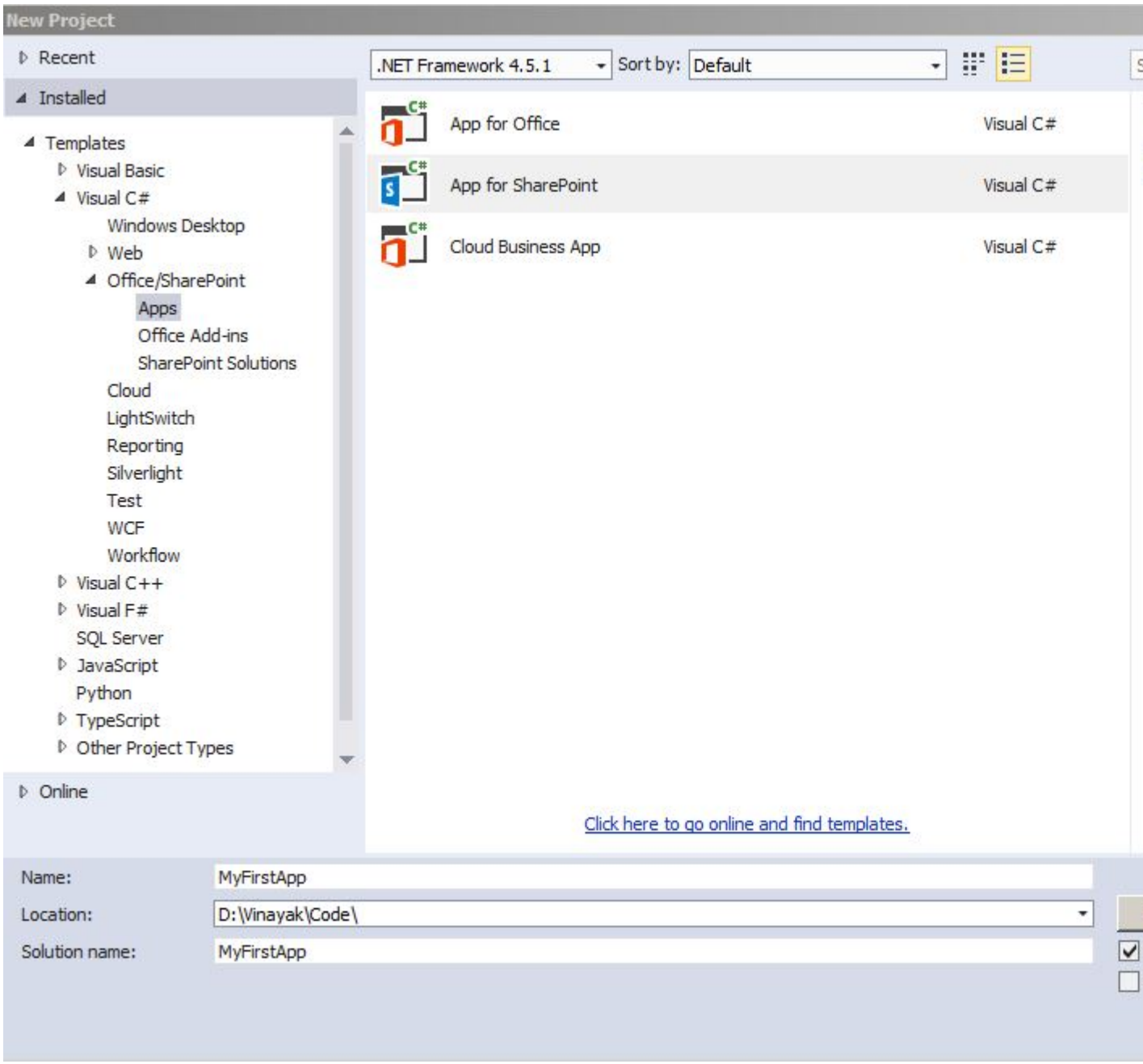
https://www.office.com/ center URL .



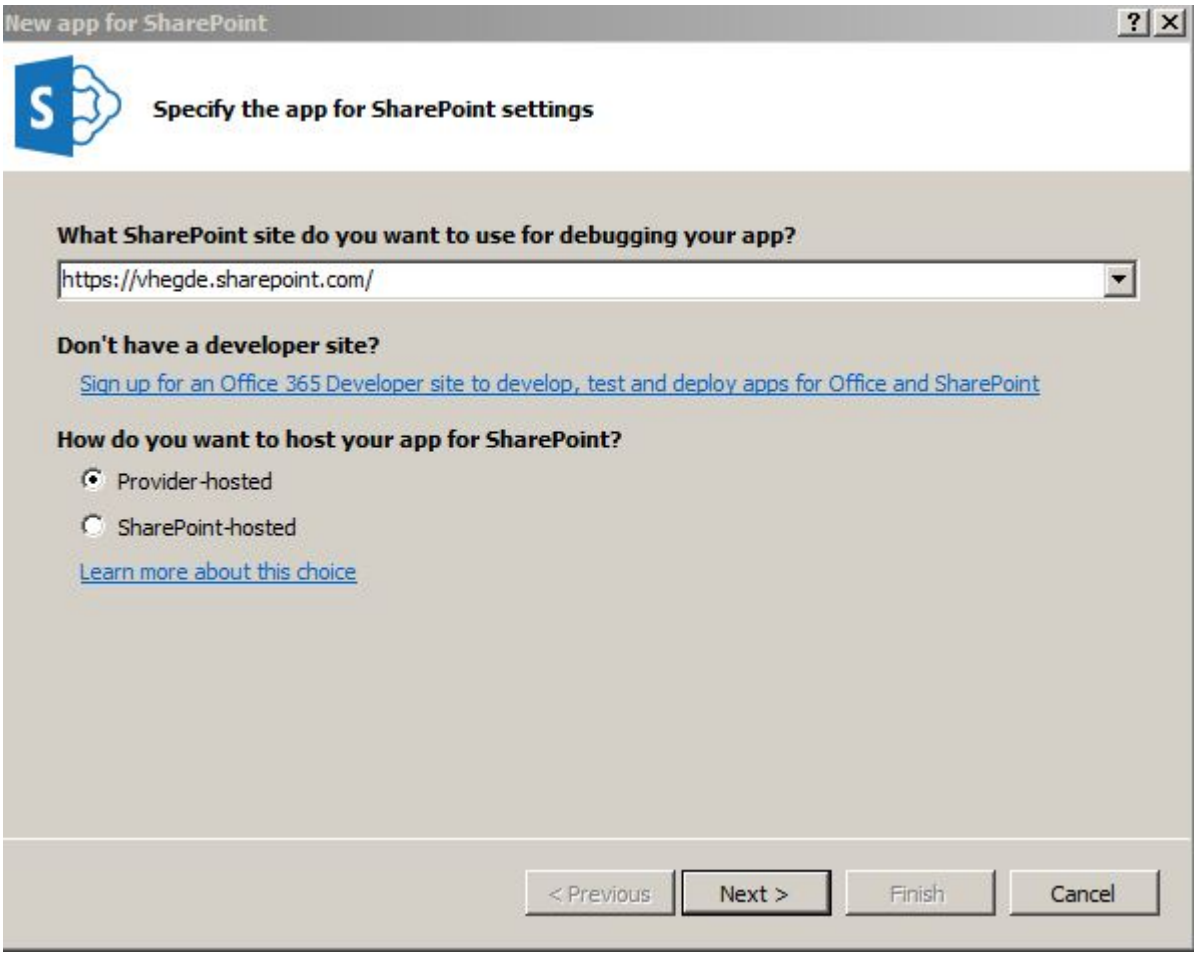
Visual Studio

.

1.
2.

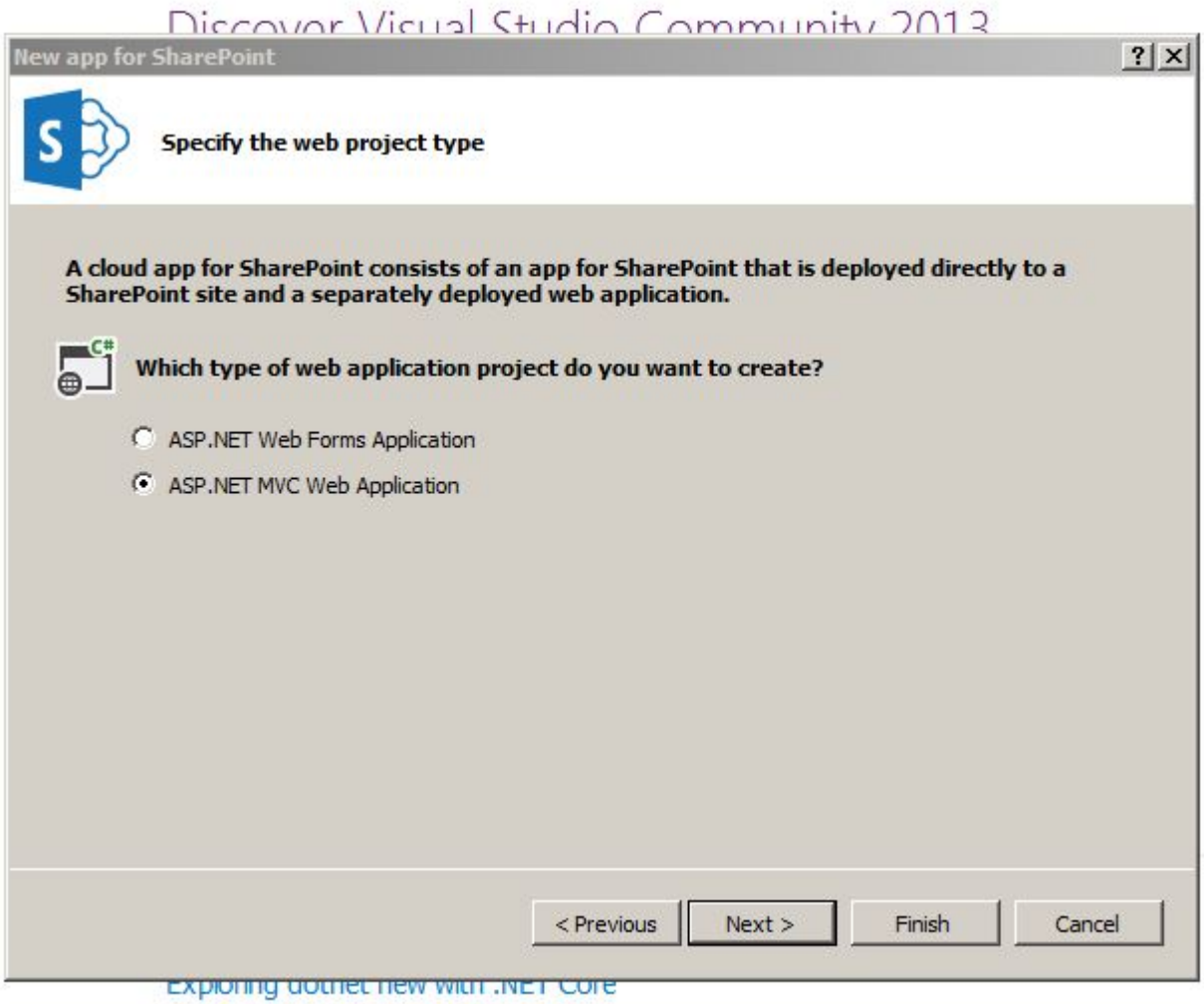


3. URL Provider-hosted .



4. .

5. MVC Webform . MCV .

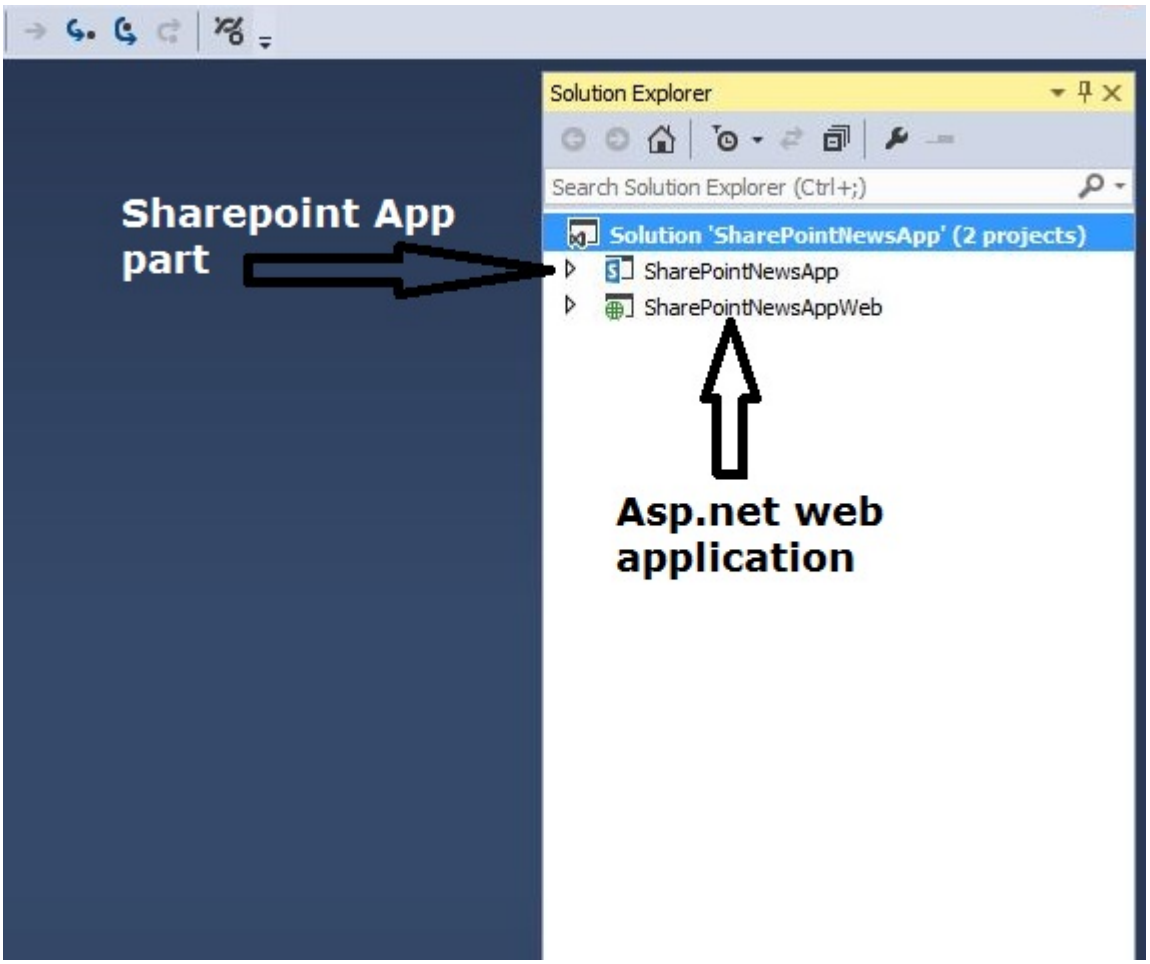


Wednesday, July 27, 2016

I'm very enjoying the "dotnet" command line. Mostly I do "dotnet new" and then add to the default Hello World app with the Visual Studio Code editor. Recently, though, I realized that the -t "type" and -l "lang" options are there

6. ? Windows Azure .

7. 2 . SharePoint app-part asp.net .

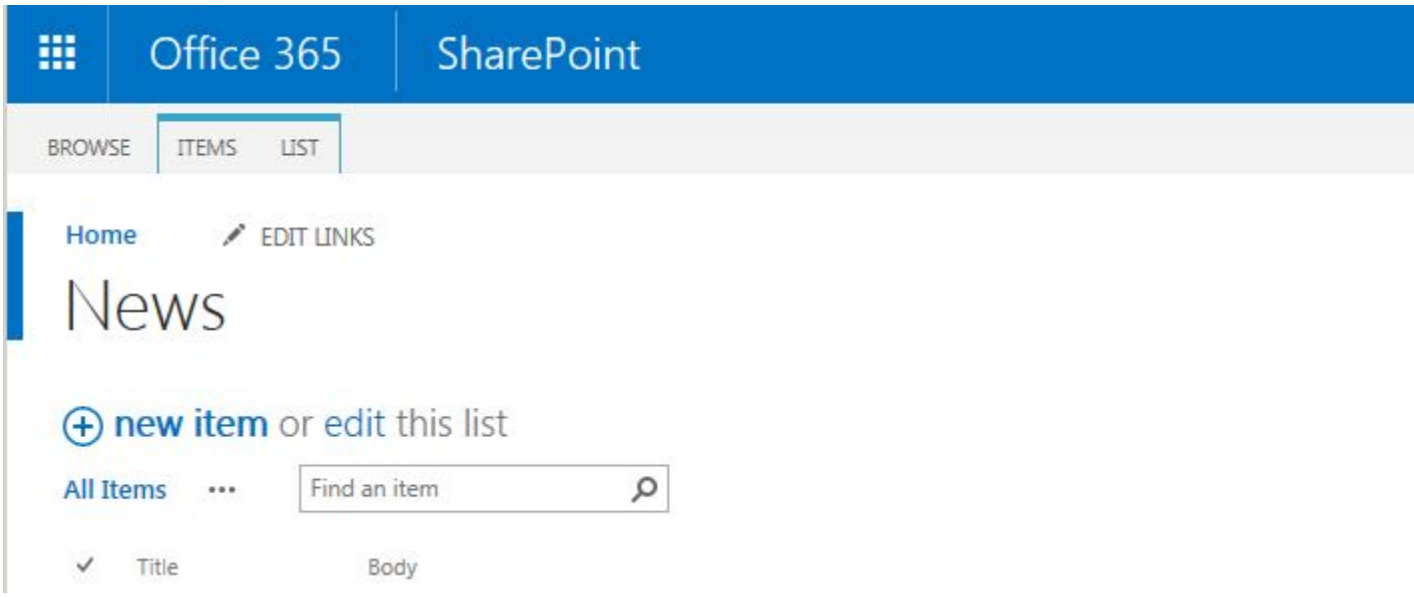


.

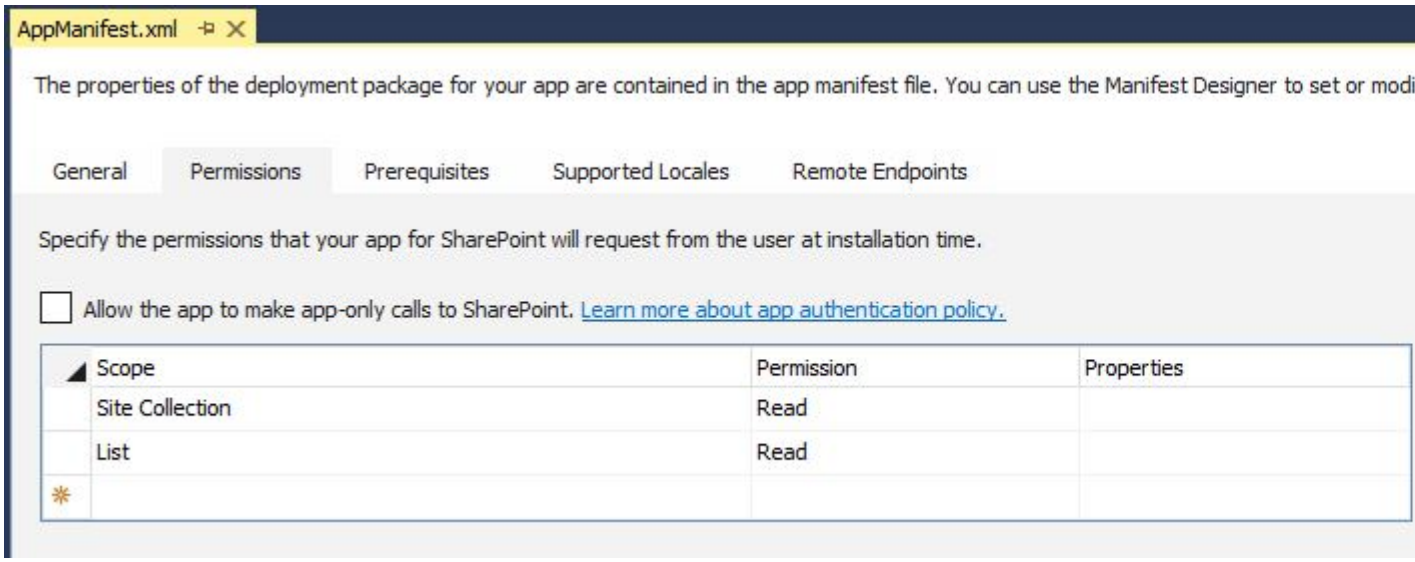
.

1. SharePoint

2. 3 Body, Summery, ThumbnailImageUrl



3. SharePoint AppManifest.xml .



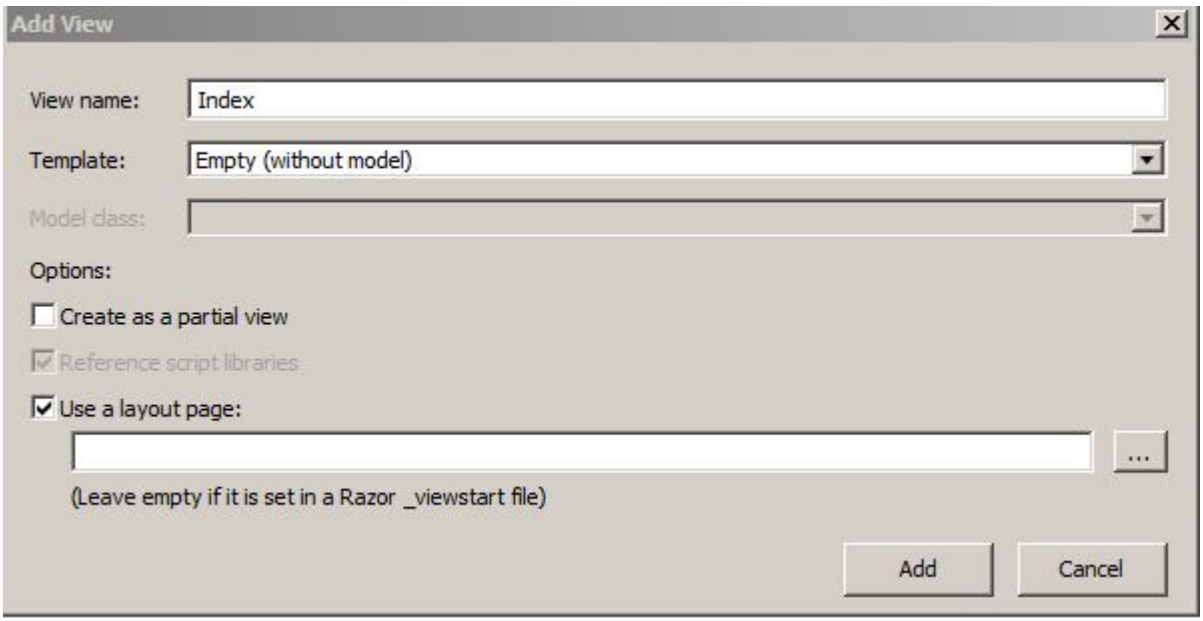
4. HomeController . MVC . webform default.aspx.cs .

5. . .

```
[SharePointContextFilter]
public ActionResult Index()
{
    User spUser = null;

    var spContext = SharePointContextProvider.Current.GetSharePointContext(HttpContext);
    List<NewsList> newsList = new List<NewsList>();
    using (var clientContext = spContext.CreateUserClientContextForSPHost())
    {
        if (clientContext != null)
        {
            spUser = clientContext.Web.CurrentUser;

            clientContext.Load(spUser, user => user.Title);

            clientContext.ExecuteQuery();

            ViewBag.UserName = spUser.Title;

            List lst = clientContext.Web.Lists.GetByTitle("News");
            CamlQuery queryNews = CamlQuery.CreateAllItemsQuery(10);
            ListItemCollection newsItems = lst.GetItems(queryNews);
            clientContext.Load(newsItems, includes => includes.Include(i => i.Id, i =>
i.DisplayName, i => i["ThumbnailImageUrl"], i => i["Summery"]));

            clientContext.ExecuteQuery();

            if (newsItems != null)
            {
                foreach (var lstProductItem in newsItems)
                {
                    newsList.Add(
                        new NewsList
                        {
                            Id = Convert.ToInt32(lstProductItem.Id.ToString()),
                            Title = lstProductItem.DisplayName.ToString(),
                            Summery = lstProductItem["Summery"].ToString(),
                            Thumbnail = lstProductItem["ThumbnailImageUrl"].ToString()
```

```
                        });
                }
            }
        }
    }

    return View(newsList);
}
```

6. **.** .



7. **Index.cshtml . >**

8. index.cshtml .

```
@model List<SharePointNewsAppWeb.Models.NewsList>
 @{
 ViewBag.Title = "My News - browse latest news";
}
 <br />
 @foreach (var item in Model)
 {
 <div class="row panel panel-default">
  <div class="col-xs-3">
    <a href="/home/aticle?ArticleId=@item.Id">
        <img class="img-responsive" style="max-height:200px;max-width:100%;"
src="@item.Thumbnail" alt="@item.Title" />
    </a>
</div>
<div class="col-xs-9 panel-default">
    <div class="panel-heading">
        <h4><a href="/home/aticle?ArticleId=@item.Id">@item.Title.ToUpper()</a></h4>
    </div>
    <div class="panel-body">
        <p>@item.Summery</p>
    </div>
</div>
```

9.

Model CS .

```
 using System;
 using System.Collections.Generic;
 using System.Linq;
 using System.Web;

 namespace SharePointNewsAppWeb.Models
{
  public class NewsApp
   {

   }
 public class NewsList
  {

public int Id { get; set; }

public string Title { get; set; }

public string Summery { get; set; }

public string Thumbnail { get; set; }
 }
 public class FullArticle
 {

  public int Id { get; set; }

  public string Title { get; set; }

  public string Body { get; set; }

 }
}
```

10. F5 . .

.

. .

1. HomeController

```
[SharePointContextFilter]
public ActionResult Aticle(int ArticleId)
{
    User spUser = null;

    var spContext = SharePointContextProvider.Current.GetSharePointContext(HttpContext);
    FullArticle article = new FullArticle();
    using (var clientContext = spContext.CreateUserClientContextForSPHost())
    {
        if (clientContext != null)
        {
            spUser = clientContext.Web.CurrentUser;

            clientContext.Load(spUser, user => user.Title);
```

```
            clientContext.ExecuteQuery();

            ViewBag.UserName = spUser.Title;

            List lst = clientContext.Web.Lists.GetByTitle("News");
            CamlQuery queryNews = new CamlQuery();
            queryNews.ViewXml = @"<View><Query><Where><Eq><FieldRef Name='ID'/>" +
"<Value Type='Number'>" + ArticleId + "</Value></Eq></Where></Query>" +
                "<ViewFields><FieldRef Name='ID'/><FieldRef Name='Title'/><FieldRef
Name='Body'/></ViewFields></View>";//
            ListItemCollection newsItems = lst.GetItems(queryNews);
            clientContext.Load(newsItems, includes => includes.Include(i => i.Id, i =>
i.DisplayName, i => i["Body"]));

            clientContext.ExecuteQuery();

            if (newsItems != null)
            {
                foreach (var lstProductItem in newsItems)
                {
                    article.Id = Convert.ToInt32(lstProductItem.Id.ToString());
                    article.Title = lstProductItem.DisplayName.ToString();
                    article.Body = lstProductItem["Body"].ToString();
                }
            }
        }
    }
    return View(article);
}
```

2. Action Action View . **Aticle** .

```
  @model SharePointNewsAppWeb.Models.FullArticle

@{
 ViewBag.Title = "Aticle";
}

<br />
<div class="panel panel-default">
 <div class="panel-heading"><a style="font-size:20px;" href="/"><i   class="glyphicon
glyphicon-chevron-left"></i> <i class="glyphicon glyphicon-home"></i>      </a></div>
 <div class="panel-heading"><h1 class="h2">@Model.Title.ToUpper()</h1></div>
 <div class="panel-body">@Html.Raw(@Model.Body)</div>
</div>
```

.

: https://riptutorial.com/ko/sharepoint/topic/6301/---

8: (CSOM)

- MSDN .
- .NET DLL Microsoft.SharePoint.Client.dll Microsoft.SharePoint.Client.Runtime.dll . % ProgramFiles % \ Common Files \ Microsoft Shared \ web \ 16 \ ISAPI SharePoint .
- Microsoft.SharePointOnline.CSOM NuGet Package . SP O365 "on prem" .
- clientContext.Load () clientContext.ExecuteQuery () . : Call Load ExecuteQuery

Examples

Hello world ( )

SharePoint (SPSite (SSOM) (CSOM)) (SPWeb (SSOM) (CSOM)) . UI . UI . / . `sites` `MyServer` .

```
using System;
using Microsoft.SharePoint.Client;

namespace Microsoft.SDK.SharePointServices.Samples
{
    class RetrieveWebsite
    {
        static void Main()
        {
            // This is the URL of the target web we are interested in.
            string siteUrl = "http://MyServer/sites/MySiteCollection";
            // The client context is allows us to queue up requests for the server
            // Note that the context can only ask questions about the site it is created for
            using (ClientContext clientContext = new ClientContext(siteUrl))
            {
                // To make it easier to read the code, pull the target web
                // context off of the client context and store in a variable
                Web oWebsite = clientContext.Web;
                // Tell the client context we want to request information about the
                // Web from the server
                clientContext.Load(oWebsite);
                // After we are done creating the batch of information we need from the sever,
                // request the data from SharePoint
                clientContext.ExecuteQuery();
                // Print the results of the query
                Console.WriteLine("Title: {0} Description: {1}", oWebsite.Title,
oWebsite.Description);
            }
        }
    }
}
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;
clientContext.Load(oWebsite);
```

```
clientContext.ExecuteQuery();
Console.WriteLine("Title: {0} Description: {1}", oWebsite.Title, oWebsite.Description);
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;
clientContext.Load(
                oWebsite,
                website => website.Title,
                website => website.Created);
clientContext.ExecuteQuery();
Console.WriteLine("Title: {0} Created: {1}", oWebsite.Title, oWebsite.Created);
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = context.Web;
oWebsite.Title = "Updated Web Site";
oWebsite.Description = "This is an updated Web site.";
oWebsite.Update();
clientContext.ExecuteQuery();
```

.

```
string siteUrl = "http://MyServer/sites/MySiteCollection";
string blogDescription = "A new blog Web site.";
int blogLanguage = 1033;
string blogTitle = "Blog Web Site";
string blogUrl = "blogwebsite";
bool blogPermissions = false;
string webTemplate = "BLOG#0";

ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;

WebCreationInformation webCreateInfo = new WebCreationInformation();
webCreateInfo.Description = blogDescription;
webCreateInfo.Language = blogLanguage;
webCreateInfo.Title = blogTitle;
webCreateInfo.Url = blogUrl;
webCreateInfo.UseSamePermissionsAsParentSite = blogPermissions;
webCreateInfo.WebTemplate = webTemplate;

Web oNewWebsite = oWebsite.Webs.Add(webCreateInfo);

clientContext.Load(
    oNewWebsite,
    website => website.ServerRelativeUrl,
    website => website.Created);

clientContext.ExecuteQuery();

Console.WriteLine("Server-relative Url: {0} Created: {1}", oNewWebsite.ServerRelativeUrl,
oNewWebsite.Created);
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;
ListCollection collList = oWebsite.Lists;

clientContext.Load(collList);

clientContext.ExecuteQuery();

foreach (List oList in collList)
{
    Console.WriteLine("Title: {0} Created: {1}", oList.Title, oList.Created.ToString());
}
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;
ListCollection collList = oWebsite.Lists;

clientContext.Load(
    collList,
    lists => lists.Include(
        list => list.Title,
        list => list.Id));

clientContext.ExecuteQuery();

foreach (List oList in collList)
{
    Console.WriteLine("Title: {0} ID: {1}", oList.Title, oList.Id.ToString("D"));
}
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;
ListCollection collList = oWebsite.Lists;

IEnumerable<List> resultCollection = clientContext.LoadQuery(
    collList.Include(
        list=>list.Title,
        list=>list.Id));

clientContext.ExecuteQuery();

foreach (List oList in resultCollection)
{
    Console.WriteLine("Title: {0} ID: {1}", oList.Title, oList.Id.ToString("D"));
}
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;
ListCollection collList = oWebsite.Lists;

IEnumerable<SP.List> listInfo = clientContext.LoadQuery(
    collList.Include(
        list => list.Title,
        list => list.Fields.Include(
            field => field.Title,
            field => field.InternalName)));

 clientContext.ExecuteQuery();

foreach (SP.List oList in listInfo)
{
    FieldCollection collField = oList.Fields;

    foreach (SP.Field oField in collField)
    {
        Regex regEx = new Regex("name", RegexOptions.IgnoreCase);

        if (regEx.IsMatch(oField.InternalName))
        {
            Console.WriteLine("List: {0} \n\t Field Title: {1} \n\t Field Internal Name: {2}",

                oList.Title, oField.Title, oField.InternalName);
        }
    }
}
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;

ListCreationInformation listCreationInfo = new ListCreationInformation();
listCreationInfo.Title = "My Announcements List";
listCreationInfo.TemplateType = (int)ListTemplateType.Announcements;

List oList = oWebsite.Lists.Add(listCreationInfo);

clientContext.ExecuteQuery();
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);

SP.List oList = clientContext.Web.Lists.GetByTitle("Announcements");

SP.Field oField = oList.Fields.AddFieldAsXml("<Field DisplayName='MyField' Type='Number' />",

    true, AddFieldOptions.DefaultValue);

SP.FieldNumber fieldNumber = clientContext.CastTo<FieldNumber>(oField);
fieldNumber.MaximumValue = 100;
fieldNumber.MinimumValue = 35;
```

```
fieldNumber.Update();

clientContext.ExecuteQuery();
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
Web oWebsite = clientContext.Web;

List oList = oWebsite.Lists.GetByTitle("My Announcements List");

oList.DeleteObject();

clientContext.ExecuteQuery();
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
SP.List oList = clientContext.Web.Lists.GetByTitle("Announcements");

CamlQuery camlQuery = new CamlQuery();
camlQuery.ViewXml = "<View><Query><Where><Geq><FieldRef Name='ID'/>" +
    "<Value Type='Number'>10</Value></Geq></Where></Query><RowLimit>100</RowLimit></View>";
ListItemCollection collListItem = oList.GetItems(camlQuery);

clientContext.Load(collListItem);

clientContext.ExecuteQuery();

foreach (ListItem oListItem in collListItem)
{
    Console.WriteLine("ID: {0} \nTitle: {1} \nBody: {2}", oListItem.Id, oListItem["Title"],
oListItem["Body"]);
}
```

. (Include)

. . .

```
ClientContext clientContext = new ClientContext(siteUrl);
List oList = clientContext.Web.Lists.GetByTitle("Announcements");

CamlQuery camlQuery = new CamlQuery();
camlQuery.ViewXml = "<View><RowLimit>100</RowLimit></View>";

ListItemCollection collListItem = oList.GetItems(camlQuery);

// The first line of this request indicates the list item collection to load from the server
// The second line uses a lambda to request that from the server
// also include additional properties in the response
// The third though fifth lines are the properties being requested from the server
clientContext.Load(collListItem,
     items => items.Include(
        item => item.Id,
        item => item.DisplayName,
```

```
        item => item.HasUniqueRoleAssignments));

clientContext.ExecuteQuery();

foreach (ListItem oListItem in collListItem)
{
    Console.WriteLine("ID: {0} \nDisplay name: {1} \nUnique role assignments: {2}",
        oListItem.Id, oListItem.DisplayName, oListItem.HasUniqueRoleAssignments);
}
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
SP.List oList = clientContext.Web.Lists.GetByTitle("Announcements");

CamlQuery camlQuery = new CamlQuery();
ListItemCollection collListItem = oList.GetItems(camlQuery);

clientContext.Load(
    collListItem,
    items => items.Take(5).Include(
    item => item["Title"],
    item => item["Body"]));

clientContext.ExecuteQuery();

foreach (ListItem oListItem in collListItem)
{
    Console.WriteLine("Title: {0} \nBody: {1}\n", oListItem["Title"], oListItem["Body"]);
}
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
ListCollection collList = clientContext.Web.Lists;

clientContext.Load(
    collList,
    lists => lists.Where(
        list => list.Hidden == false).Include(
        list => list.Title,
        list => list.Items.Take(10)));

clientContext.ExecuteQuery();

foreach (SP.List oList in clientContext.Web.Lists)
{
    string listTitle = oList.Title;
    int itemCount = oList.Items.Count;

    Console.WriteLine("List {0} returned with {1} items", listTitle, itemCount);
}
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
```

```
SP.List oList = clientContext.Web.Lists.GetByTitle("Announcements");

ListItemCollectionPosition itemPosition = null;

while (true)
{
    CamlQuery camlQuery = new CamlQuery();

    camlQuery.ListItemCollectionPosition = itemPosition;

    camlQuery.ViewXml = "<View><ViewFields><FieldRef Name='ID'/>" +
        "<FieldRef Name='Title'/><FieldRef Name='Body'/>" +
        "</ViewFields><RowLimit>5</RowLimit></View>";

    ListItemCollection collListItem = oList.GetItems(camlQuery);

    clientContext.Load(collListItem);

    clientContext.ExecuteQuery();

    itemPosition = collListItem.ListItemCollectionPosition;

    foreach (ListItem oListItem in collListItem)
    {
        Console.WriteLine("Title: {0}: \nBody: {1}", oListItem["Title"], oListItem["Body"]);
    }

    if (itemPosition == null)
    {
        break;
    }

    Console.WriteLine("\n" + itemPosition.PagingInfo + "\n");
}
```

.

. . ( ) . create . . .

. .

```
ClientContext clientContext = new ClientContext(siteUrl);
List oList = clientContext.Web.Lists.GetByTitle("Announcements");

ListItemCreationInformation itemCreateInfo = new ListItemCreationInformation();
ListItem oListItem = oList.AddItem(itemCreateInfo);
oListItem["Title"] = "My New Item!";
oListItem["Body"] = "Hello World!";

oListItem.Update();

clientContext.ExecuteQuery();
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
SP.List oList = clientContext.Web.Lists.GetByTitle("Announcements");
```

```
ListItem oListItem = oList.Items.GetById(3);

oListItem["Title"] = "My Updated Title.";

oListItem.Update();

clientContext.ExecuteQuery();
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
SP.List oList = clientContext.Web.Lists.GetByTitle("Announcements");
ListItem oListItem = oList.GetItemById(2);

oListItem.DeleteObject();

clientContext.ExecuteQuery();
```

. SharePoint

```
ClientContext clientContext = new ClientContext("http://MyServer/sites/MySiteCollection");
GroupCollection collGroup = clientContext.Web.SiteGroups;
Group oGroup = collGroup.GetById(7);
UserCollection collUser = oGroup.Users;

clientContext.Load(collUser);

clientContext.ExecuteQuery();

foreach (User oUser in collUser)
{
    Console.WriteLine("User: {0}  ID: {1} Email: {2} Login Name: {3}",
        oUser.Title, oUser.Id, oUser.Email, oUser.LoginName);
}
```

.

```
ClientContext clientContext = new ClientContext("http://MyServer/sites/MySiteCollection");
GroupCollection collGroup = clientContext.Web.SiteGroups;
Group oGroup = collGroup.GetById(7);
UserCollection collUser = oGroup.Users;

clientContext.Load(collUser,
    users => users.Include(
        user => user.Title,
        user => user.LoginName,
        user => user.Email));

clientContext.ExecuteQuery();

foreach (User oUser in collUser)
{
    Console.WriteLine("User: {0} Login name: {1} Email: {2}",
        oUser.Title, oUser.LoginName, oUser.Email);
}
```

.

```
ClientContext clientContext = new ClientContext("http://MyServer/sites/MySiteCollection");
GroupCollection collGroup = clientContext.Web.SiteGroups;

clientContext.Load(collGroup);

clientContext.Load(collGroup,
    groups => groups.Include(
        group => group.Users));

clientContext.ExecuteQuery();

foreach (Group oGroup in collGroup)
{
    UserCollection collUser = oGroup.Users;

    foreach (User oUser in collUser)
    {
        Console.WriteLine("Group ID: {0} Group Title: {1} User: {2} Login Name: {3}",
            oGroup.Id, oGroup.Title, oUser.Title, oUser.LoginName);
    }
}
```

. SharePoint

```
ClientContext clientContext = new ClientContext("http://MyServer/sites/MySiteCollection ");
GroupCollection collGroup = clientContext.Web.SiteGroups;
Group oGroup = collGroup.GetById(6);

UserCreationInformation userCreationInfo = new UserCreationInformation();
userCreationInfo.Email = "alias@somewhere.com";
userCreationInfo.LoginName = @"DOMAIN\alias";
userCreationInfo.Title = "John";

User oUser = oGroup.Users.Add(userCreationInfo);

clientContext.ExecuteQuery();
```

.

```
ClientContext oClientContext = new ClientContext("http://MyServer/sites/MySiteCollection");

Web oWebsite = clientContext.Web;

BasePermissions permissions = new BasePermissions();
permissions.Set(PermissionKind.CreateAlerts);
permissions.Set(PermissionKind.ManageAlerts);

RoleDefinitionCreationInformation roleCreationInfo = new RoleDefinitionCreationInformation();

roleCreationInfo.BasePermissions = permissions;
roleCreationInfo.Description = "A new role with create and manage alerts permission";
roleCreationInfo.Name = "Create and Manage Alerts";
roleCreationInfo.Order = 4;
```

```
RoleDefinition oRoleDefinition = oWebsite.RoleDefinitions.Add(roleCreationInfo);

clientContext.ExecuteQuery();

Console.WriteLine("{0} role created.", oRoleDefinition.Name);
```

.

```
ClientContext oClientContext = new
ClientContext("http://MyServer/sites/MySiteCollection/MyWebSite");
Web oWebsite = clientContext.Web;

Principal oUser = oWebsite.SiteUsers.GetByLoginName(@"DOMAIN\alias");

RoleDefinition oRoleDefinition = oWebsite.RoleDefinitions.GetByName("Create and Manage
Alerts");
RoleDefinitionBindingCollection collRoleDefinitionBinding = new
RoleDefinitionBindingCollection(clientContext);
collRoleDefinitionBinding.Add(oRoleDefinition);

RoleAssignment oRoleAssignment = oWebsite.RoleAssignments.Add(oUser,
collRoleDefinitionBinding);

clientContext.Load(oUser,
    user => user.Title);

clientContext.Load(oRoleDefinition,
    role => role.Name);

clientContext.ExecuteQuery();

Console.WriteLine("{0} added with {1} role.", oUser.Title, oRoleDefinition.Name);
```

. SharePoint

```
ClientContext oClientContext = new
ClientContext("http://MyServer/sites/MySiteCollection/MyWebSite");
Web oWebsite = clientContext.Web;

GroupCreationInformation groupCreationInfo = new GroupCreationInformation();
groupCreationInfo.Title = "My New Group";
groupCreationInfo.Description = "Description of new group.";
Group oGroup = oWebsite.SiteGroups.Add(groupCreationInfo);

RoleDefinitionBindingCollection collRoleDefinitionBinding = new
RoleDefinitionBindingCollection(clientContext);

RoleDefinition oRoleDefinition = oWebsite.RoleDefinitions.GetByType(RoleType.Contributor);

collRoleDefinitionBinding.Add(oRoleDefinition);

oWebsite.RoleAssignments.Add(oGroup, collRoleDefinitionBinding);

clientContext.Load(oGroup,
    group => group.Title);

clientContext.Load(oRoleDefinition,
```

```
    role => role.Name);

clientContext.ExecuteQuery();

Console.WriteLine("{0} created and assigned {1} role.", oGroup.Title, oRoleDefinition.Name);
}
```

.

```
string siteUrl = "http://MyServer/sites/MySiteCollection";
ClientContext oContext = new ClientContext(siteUrl);
SP.List oList = oContext.Web.Lists.GetByTitle("Announcements");

oList.BreakRoleInheritance(true, false);

oContext.ExecuteQuery();
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
SP.List oList = clientContext.Web.Lists.GetByTitle("MyList");

int itemId = 3;
ListItem oListItem = oList.Items.GetById(itemId);

oListItem.BreakRoleInheritance(false);

User oUser = clientContext.Web.SiteUsers.GetByLoginName(@"DOMAIN\alias");

RoleDefinitionBindingCollection collRoleDefinitionBinding = new
RoleDefinitionBindingCollection(clientContext);

collRoleDefinitionBinding.Add(clientContext.Web.RoleDefinitions.GetByType(RoleType.Reader));

oListItem.RoleAssignments.Add(oUser, collRoleDefinitionBinding);

clientContext.ExecuteQuery();
```

.

```
ClientContext clientContext = new ClientContext(siteUrl);
SP.List oList = clientContext.Web.Lists.GetByTitle("MyList");

int itemId = 2;
ListItem oListItem = oList.Items.GetById(itemId);

oListItem.BreakRoleInheritance(true);

User oUser = clientContext.Web.SiteUsers.GetByLoginName(@"DOMAIN\alias");
oListItem.RoleAssignments.GetByPrincipal(oUser).DeleteObject();

RoleDefinitionBindingCollection collRollDefinitionBinding = new
RoleDefinitionBindingCollection(clientContext);

collRollDefinitionBinding.Add(clientContext.Web.RoleDefinitions.GetByType(RoleType.Reader));
```

```
oListItem.RoleAssignments.Add(oUser, collRollDefinitionBinding);

clientContext.ExecuteQuery();
```

.

```
string urlWebsite = "http://MyServer/sites/MySiteCollection";
ClientContext clientContext = new ClientContext(urlWebsite);
Web oWebsite = clientContext.Web;

List oList = oWebsite.Lists.GetByTitle("My List");
UserCustomActionCollection collUserCustomAction = oList.UserCustomActions;

UserCustomAction oUserCustomAction = collUserCustomAction.Add();
oUserCustomAction.Location = "EditControlBlock";
oUserCustomAction.Sequence = 100;
oUserCustomAction.Title = "My First User Custom Action";
oUserCustomAction.Url = urlWebsite + @"/_layouts/MyPage.aspx";
oUserCustomAction.Update();

clientContext.Load(oList,
    list => list.UserCustomActions);

clientContext.ExecuteQuery();
```

.

```
string urlWebsite = "http://MyServer/sites/SiteCollection";
ClientContext clientContext = new ClientContext(urlWebsite);
Web oWebsite = clientContext.Web;

List oList = oWebsite.Lists.GetByTitle("My List");
UserCustomActionCollection collUserCustomAction = oList.UserCustomActions;

clientContext.Load(collUserCustomAction,
    userCustomActions => userCustomActions.Include(
        userCustomAction => userCustomAction.Title));

clientContext.ExecuteQuery();

foreach (UserCustomAction oUserCustomAction in collUserCustomAction)
{
    if (oUserCustomAction.Title == "My First User Custom Action")
    {
        oUserCustomAction.ImageUrl = "http://MyServer/_layouts/images/MyIcon.png";
        oUserCustomAction.Update();

        clientContext.ExecuteQuery();
    }
}
```

.

```
string urlWebsite = "http://MyServer/sites/MySiteCollection";
ClientContext clientContext = new ClientContext(urlWebsite);
```

```
Web oWebsite = clientContext.Web;
UserCustomActionCollection collUserCustomAction = oWebsite.UserCustomActions;

UserCustomAction oUserCustomAction = collUserCustomAction.Add();

oUserCustomAction.Location = "Microsoft.SharePoint.StandardMenu";
oUserCustomAction.Group = "SiteActions";
oUserCustomAction.Sequence = 101;
oUserCustomAction.Title = "Website User Custom Action";
oUserCustomAction.Description = "This description appears on the Site Actions menu.";
oUserCustomAction.Url = urlWebsite + @"/_layouts/MyPage.aspx";

oUserCustomAction.Update();

clientContext.Load(oWebsite,
    webSite => webSite.UserCustomActions);

clientContext.ExecuteQuery();
```

.

```
ClientContext oClientContext = new ClientContext("http://MyServer/sites/MySiteCollection");
File oFile = oClientContext.Web.GetFileByServerRelativeUrl("Default.aspx");
LimitedWebPartManager limitedWebPartManager =
oFile.GetLimitedWebPartManager(PersonalizationScope.Shared);

oClientContext.Load(limitedWebPartManager.WebParts,
    wps => wps.Include(
    wp => wp.WebPart.Title));

oClientContext.ExecuteQuery();

if (limitedWebPartManager.WebParts.Count == 0)
{
    throw new Exception("No Web Parts on this page.");
}

WebPartDefinition oWebPartDefinition = limitedWebPartManager.WebParts[1];
WebPart oWebPart = oWebPartDefinition.WebPart;
oWebPart.Title = "My New Web Part Title";

oWebPartDefinition.SaveWebPartChanges();

oClientContext.ExecuteQuery();
```

.

```
ClientContext oClientContext = new ClientContext("http://MyServer/sites/MySiteCollection");
File oFile = oClientContext.Web.GetFileByServerRelativeUrl("Default.aspx");
LimitedWebPartManager limitedWebPartManager =
oFile.GetLimitedWebPartManager(PersonalizationScope.Shared);

string xmlWebPart = "<?xml version=\"1.0\" encoding=\"utf-8\"?>" +
    "<WebPart xmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\"" +
    " xmlns:xsd=\"http://www.w3.org/2001/XMLSchema\"" +
    " xmlns=\"http://schemas.microsoft.com/WebPart/v2\">" +
    "<Title>My Web Part</Title><FrameType>Default</FrameType>" +
```

```
    "<Description>Use for formatted text, tables, and images.</Description>" +
    "<IsIncluded>true</IsIncluded><ZoneID></ZoneID><PartOrder>0</PartOrder>" +
    "<FrameState>Normal</FrameState><Height /><Width /><AllowRemove>true</AllowRemove>" +
    "<AllowZoneChange>true</AllowZoneChange><AllowMinimize>true</AllowMinimize>" +
    "<AllowConnect>true</AllowConnect><AllowEdit>true</AllowEdit>" +
    "<AllowHide>true</AllowHide><IsVisible>true</IsVisible><DetailLink /><HelpLink />" +
    "<HelpMode>Modeless</HelpMode><Dir>Default</Dir><PartImageSmall />" +
    "<MissingAssembly>Cannot import this Web Part.</MissingAssembly>" +
    "<PartImageLarge>/_layouts/images/mscontl.gif</PartImageLarge><IsIncludedFilter />" +
    "<Assembly>Microsoft.SharePoint, Version=13.0.0.0, Culture=neutral, " +
    "PublicKeyToken=94de0004b6e3fcc5</Assembly>" +
    "<TypeName>Microsoft.SharePoint.WebPartPages.ContentEditorWebPart</TypeName>" +
    "<ContentLink xmlns=\"http://schemas.microsoft.com/WebPart/v2/ContentEditor\" />" +
    "<Content xmlns=\"http://schemas.microsoft.com/WebPart/v2/ContentEditor\">" +
    "<![CDATA[This is a first paragraph!<DIV> </DIV>And this is a second
paragraph.]]></Content>" +
    "<PartStorage xmlns=\"http://schemas.microsoft.com/WebPart/v2/ContentEditor\"
/></WebPart>";

WebPartDefinition oWebPartDefinition = limitedWebPartManager.ImportWebPart(xmlWebPart);

limitedWebPartManager.AddWebPart(oWebPartDefinition.WebPart, "Left", 1);

oClientContext.ExecuteQuery();
```

.

```
ClientContext oClientContext = new ClientContext("http://MyServer/sites/MySiteCollection");
File oFile =
oClientContext.Web.GetFileByServerRelativeUrl("/sites/MySiteCollection/SitePages/Home.aspx ");
LimitedWebPartManager limitedWebPartManager =
oFile.GetLimitedWebPartManager(PersonalizationScope.Shared);

oClientContext.Load(limitedWebPartManager.WebParts);

oClientContext.ExecuteQuery();

if (limitedWebPartManager.WebParts.Count == 0)
{
    throw new Exception("No Web Parts to delete.");
}

WebPartDefinition webPartDefinition = limitedWebPartManager.WebParts[0];

webPartDefinition.DeleteWebPart();

oClientContext.ExecuteQuery();
```

.

( ). .

CredentialCache ClientContext Credentials .

NTLM - SharePoint 2013 .

```
using System.Net;
using Microsoft.SharePoint.Client;

using (ClientContext ctx = new ClientContext("https://onpremises.local/sites/demo/"))
{
    // need the web object
    ctx.Load(ctx.Web);
    ctx.ExecuteQuery();

    // here the default network credentials relate to the identity of the account
    // running the App Pool of your web application.
    CredentialCache credCache = new CredentialCache();
    cc.Add(new Uri(ctx.Web.Url), "NTLM", CredentialCache.DefaultNetworkCredentials);

    ctx.Credentials = credCache;
    ctx.AuthenticationMode = ClientAuthentication.Default;
    ctx.ExecuteQuery();

    // do stuff as elevated app pool account
}
```

SharePoint .

(CSOM) : https://riptutorial.com/ko/sharepoint/topic/2679/------csom--

9: ( )

SharePoint . (`SPSite`) UI (`RootWeb`) . (`SPWeb`) UI / (`SPList`), / (`SPListItem`) .

- Visual Studio SharePoint Framework Assemblies Microsoft.SharePoint .
- ( ) SharePoint Windows Server .
- SharePoint SharePoint .

Examples

Hello World ( )

2013

SharePoint 2013 64 / 64 .

CPU x64 . .

```
using System;
using Microsoft.SharePoint;

namespace StackOverflow
{
    class Samples
    {
        static void Main()
        {
            using (SPSite site = new SPSite("http://server/sites/siteCollection"))
            using (SPWeb web = site.OpenWeb())
            {
                Console.WriteLine("Title: {0} Description: {1}", web.Title, web.Description);
            }
        }
    }
}
```

SharePoint

SharePoint PowerShell :

```
$wacoll = get-spwebapplication
foreach($wa in $wacoll){
    if($wa.IsAdministrationWebApplication -eq $false){
        foreach($site in $wa.Sites){
            foreach($web in $site.AllWebs){
                # your code here
                $web.Dispose()
```

```
            }
            $site.Dispose()
        }
    }
}
```

```
using (SPSite site = new SPSite("http://server/sites/siteCollection"))
using (SPWeb web = site.OpenWeb())
{
    SPList list = web.Lists["Some list"];

    // It is always better and faster to query list items with GetItems method with
    // empty SPQuery object than to use Items property
    SPListItemCollection items = list.GetItems(new SPQuery());
    foreach (SPListItem item in items)
    {
        // Do some operation with item
    }
}
```

```
using (SPSite site = new SPSite("http://server/sites/siteCollection"))
using (SPWeb web = site.OpenWeb())
{
    SPList list = web.Lists["Some list"];
    SPQuery query = new SPQuery()
    {
        RowLimit = 100
    };

    do
    {
        SPListItemCollection items = list.GetItems(query);
        foreach (SPListItem item in items)
        {
            // Do some operation with item
        }

        // Assign current position to SPQuery object
        query.ListItemCollectionPosition = items.ListItemCollectionPosition;
    } while (query.ListItemCollectionPosition != null);
}
```

URL

```
using (SPSite site = new SPSite("http://server/sites/siteCollection"))
using (SPWeb web = site.OpenWeb())
{
    string listUrl = string.Format("{0}{1}", web.ServerRelativeUrl, "Lists/SomeList");
    SPList list = web.GetList(listUrl);
}
```

. . ( ) . create . . .

. .

```
using (SPSite site = new SPSite("http://server/sites/siteCollection"))
using (SPWeb web = site.OpenWeb())
{
    SPList list = web.Lists["Announcements"];

    SPListItem item = list.AddItem();
    item[SPBuiltInFieldId.Title] = "My new item";
    item[SPBuiltInFieldId.Body] = "Hello World!";
    item.Update();
}
```

( ) : https://riptutorial.com/ko/sharepoint/topic/7543/---------

10:

Examples

SharePoint 2016

16.0.4366.1000	2016 4	SharePoint Server 2016
16.0.4336.1000	RTM	SharePoint Server 2016
16.0.4327.1000		SharePoint Server 2016
16.0.4266.1001	16.0.4306.1002 2	SharePoint Server 2016

SharePoint 2013

15.0.4623.1001	2014 6
15.0.4631.1001	2014 7
15.0.4641.1001	2014 8
15.0.4649.1001	2014 9
15.0.4659.1001	2014 10
15.0.4667.1000	2014 11
15.0.4675.1000	2014 12
15.0.4693.1001	2015 2
15.0.4701.1001	2015 3
15.0.4711.1000	2015 4 (SP1 REQ)
15.0.4719.1002	2015 5
15.0.4727.1001	2015 6
15.0.4737.1000	2015 7
15.0.4745.1000	2015 8
15.0.4753.1003	2015 9

15.0.4763.1002	2015 10
15.0.4771.1000	2015 11
15.0.4779.1000	2015 12
15.0.4787.1000	MS16-004
15.0.4787.1000	2016 1
15.0.4797.1001	2016 2
15.0.4805.1000	2016 3
15.0.4815.1000	2016 4
15.0.4823.1003	2016 5
15.0.4833.1000	2016 6

: SharePoint 2013 CU

: https://riptutorial.com/ko/sharepoint/topic/2737/-

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