

## Performing CRUD operations(Jquery) using ASP.NET Web API

- Created a domain model class, i.e. **Student**
- Implemented a **StudentRepository** class that contains actual code for DB interaction
- Added a **StudentController** class implementing **ApiController**

```
<table border='1' id="students">
  <!-- Make a Header Row -->
  <tr>
    <td><b>StudentID</b></td>
    <td><b>FirstName</b></td>
    <td><b>LastName</b></td>
  </tr>
</table>
```

jQuery Ajax call for all CRUD operations :

- **type** is HTTP verb used for the calls, i.e., **GET, POST, PUT, DELETE**, etc.
- **url** is the Web API service URL pointing to **Controller** class.
- **ContentType** is the type of data sending to server, i.e., JSON here.
- **dataType** is the type of data expected back from server, i.e., JSON.

get all students and display on a web page, **GetAllStudents()** function makes jQuery Ajax call with "**GET**" as type and url pointing to our Web API service controller, i.e., **StudentsController**.

// GET ALL

```
function GetAllStudents()
{
    $.ajax({
        type: "GET",
        url: "http://localhost/CRUDWebAPI/api/students/",
        contentType: "json",
        dataType: "json",
        success: function (data) {

            $.each(data, function (key, value) {
                //stringify
                var jsonData = JSON.stringify(value);
                //Parse JSON
                var objData = $.parseJSON(jsonData);
                var id = objData.StudentId;
                var fname = objData.FirstName;
                var lname = objData.LastName;

                $('<tr><td>' + id + '</td><td>' + fname +
                    '</td><td>' + lname + '</td></tr>').appendTo('#students');

            });
        },
        error: function (xhr) {
            alert(xhr.responseText);
        }
    });
}
```

<http://localhost/CRUDWebAPI/api/students/1>

**GetStudentById()** doing almost the same as that of **GetAllStudents()** except that it passes id for fetching the records.

//GET

```
function GetStudentById()
{
    $.ajax({
        type: "GET",
        url: "http://localhost/CRUDWebAPI/api/students/1",
        contentType: "json",
        dataType: "json",
        success: function (data) {
            //stringify
            var jsonData = JSON.stringify(data);
            //Parse JSON
            var objData = $.parseJSON(jsonData);

            var objData = $.parseJSON(jsonData);
            var id = objData.StudentId;
            var fname = objData.FirstName;
            var lname = objData.LastName;

            $('<tr><td>' + id + '</td><td>' + fname +
                '</td><td>' + lname +
                '</td></tr>').appendTo('#students');
        },
        error: function (xhr) {
            alert(xhr.responseText);
        }
    });
}
```

Adding a new student, `AddNewStudent()` function

Prepare a JSON object and pass as a parameter to "`data`" element of jQuery Ajax call.

type is "POST" for create operation.

url is pointing to StudentsController.

//ADD or CREATE

```
function AddNewStudent()
{
    var studentData = {
        "FirstName": "Imran",
        "LastName": "Ghani"
    };

    $.ajax({
        type: "POST",
        url: "http://localhost/CRUDWebAPI/api/students/",
        data: JSON.stringify(studentData),
        contentType: "application/json; charset=utf-8",
        dataType: "json",
        processData: true,
        success: function (data, status, jqXHR) {
            alert("success..." + data);
        },
        error: function (xhr) {
            alert(xhr.responseText);
        }
    });
}
```

Updating an existing student, `UpdateStudent()` function

- Prepare a JSON object and pass as a parameter to "`data`" element of jQuery Ajax call.
- `type` is "`PUT`" for `update` operation.
- `url` is pointing to `StudentsController` with `StudentId`.

//UPDATE

```
function UpdateStudent()
{
    var studentData = {
        "StudentId": 1,
        "FirstName": "Imran",
        "LastName": "Ghani"
    };

    $.ajax({
        type: "PUT",
        url: "http://localhost/CRUDWebAPI/api/students/1",
        data: JSON.stringify(studentData),
        contentType: "application/json; charset=utf-8",
        dataType: "json",
        processData: true,
        success: function (data, status, jqXHR) {
            alert("success..." + data);
        },
        error: function (xhr) {
            alert(xhr.responseText);
        }
    });
}
```

Deleting a record, jQuery Ajax call code in `DeleteStudent()` function

`type` is "DELETE" for `delete` operation.

`url` is pointing to `StudentsController` with `StudentId`.

//DELETE

```
function DeleteStudent()
{
    $.ajax({
        type: "DELETE",
        url: "http://localhost/CRUDWebAPI/api/students/1",
        contentType: "json",
        dataType: "json",
        success: function (data) {
            alert("success.... " + data);
        },
        error: function (xhr) {
            alert(xhr.responseText);
        }
    });
}
```