Project Devs – Web API / MVC / C# / .Net 4.6.0 tool to manage projects and sprints for a small web development team. The back-end will be SQL Server, and this needs to be a Web API project and will use Dapper for SQL calls. For the UI you can use whatever you want from a presentation layer perspective (Angular, React etc). I will do the SQL development, you will build the .Net solution.

1. Create pages to create and modify the entities below:
   1. Projects
   2. ProjectRoleAssignment (users can have one role on a project, but can have different roles in other projects so this will be a compound key that factors in the user, the project, and the role)
   3. ProjectStories (child of Projects)
   4. ProjectStoryTasks (child of ProjectStories, grandchild of Projects)
   5. ProjectMeetings (child of Projects)
   6. Sprints – dynamic list made up of ProjectStories and their child ProjectStoryTasks. ProjectSprintMapping table is used to map ProjectStories to Sprints. (for consistency this table is named ‘ProjectSprints’ but a sprint is independent of a project)
2. I will provide static data for these tables:
   1. ProjectUsers
   2. ProjectRoles
   3. ProjectStatusLists
3. Create controls to be used in multiple pages above for:
   1. File Upload and storing data in the ProjectFiles table
   2. Note taking and storing in the ProjectNotes table.

--ProjectDEVS Tool SQL for Tables

/\*\*\*\*\*\*\*\*\*\* Project table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[Projects]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[Projects]

(

[ProjectId] int IDENTITY(1,1) NOT NULL,

[ProjectName] varchar(100) NOT NULL,

[ProjectType] varchar(100) NOT NULL,

--[ProjectDescription] varchar(max) NULL, capture in ProjectNotes

[ProjectStatus] int NOT NULL,

[MeetingSchedule] varchar(100) NULL,

[RequestDate] date NULL,

[RequestedByDate] date NULL,

[CompletedDate] date NULL,

[PriorityRanking] int NULL

PRIMARY KEY CLUSTERED

(

[ProjectId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

/\*\*\*\*\*\*\*\*\*\* ProjectUsers table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectUsers]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectUsers]

(

[UserId] varchar(10) NOT NULL,

[FirstName] varchar(50) NOT NULL,

[LastName] varchar(100) NOT NULL,

[ManagerId] varchar(10) NULL,

[IsActive] tinyint NOT NULL

PRIMARY KEY CLUSTERED

(

[UserId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

/\*\*\*\*\*\*\*\*\*\* ProjectRoles table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectRoles]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectRoles]

(

[RoleId] int IDENTITY(1,1) NOT NULL,

[RoleName] varchar(50) NOT NULL

PRIMARY KEY CLUSTERED

(

[RoleId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

/\*\*\*\*\*\*\*\*\*\* ProjectRoleAssignment table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectRoleAssignment]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectRoleAssignment]

(

[RoleId] int NOT NULL,

[UserId] varchar(10) NOT NULL,

[ProjectId] int NOT NULL

PRIMARY KEY CLUSTERED

(

[RoleId] ASC,[UserId] ASC, [ProjectId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

/\*\*\*\*\*\*\*\*\*\* ProjectStories table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectStories]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectStories]

(

[StoryId] int IDENTITY(1,1) NOT NULL,

[ProjectId] int NOT NULL,

[StoryStatus] int NOT NULL,

[F1] varchar(50) NOT NULL,

[F2] varchar(300) NOT NULL,

[F3] varchar(300) NOT NULL,

[AcceptanceCriteria] varchar(1000) NOT NULL,

[RequesterID] varchar(10) NOT NULL,

[RequestDate] date NULL,

[StartDate] date NULL,

[EndDate] date NULL,

[AssignedToUserID] varchar(10),

[Environment] varchar(3) NULL,

[PriorityRanking] int NULL

PRIMARY KEY CLUSTERED

(

[StoryId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

IF EXISTS (SELECT 1 FROM sys.objects WHERE name = 'ProjectStories\_Project' AND parent\_object\_id = Object\_id('ProjectStories') AND Objectproperty(object\_id, N'IsForeignKey') = 1)

BEGIN

ALTER TABLE [dbo].[ProjectStories]

DROP CONSTRAINT ProjectStories\_Project

END

GO

ALTER TABLE [dbo].[ProjectStories] WITH CHECK ADD CONSTRAINT [ProjectStories\_Project] FOREIGN KEY([StoryId])

REFERENCES [dbo].[Projects] ([ProjectId])

ON DELETE CASCADE

GO

/\*\*\*\*\*\*\*\*\*\* ProjectStoryTasks table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectStoryTasks]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectStoryTasks]

(

[TaskId] int IDENTITY(1,1) NOT NULL,

[StoryId] int NOT NULL,

[TaskStatus] int NOT NULL,

[TaskName] varchar(100) NOT NULL,

[TaskDescription] varchar(1000),

[TaskType] varchar(10) NULL,

[ProjectedHours] float NULL,

[ActualHours] float NULL

PRIMARY KEY CLUSTERED

(

[TaskId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

IF EXISTS (SELECT 1 FROM sys.objects WHERE name = 'ProjectStoryTasks\_Story' AND parent\_object\_id = Object\_id('ProjectStoryTasks') AND Objectproperty(object\_id, N'IsForeignKey') = 1)

BEGIN

ALTER TABLE [dbo].[ProjectStoryTasks]

DROP CONSTRAINT ProjectStoryTasks\_Story

END

GO

ALTER TABLE [dbo].[ProjectStoryTasks] WITH CHECK ADD CONSTRAINT [ProjectStoryTasks\_Story] FOREIGN KEY([StoryId])

REFERENCES [dbo].[ProjectStories] ([StoryId])

ON DELETE CASCADE

GO

/\*\*\*\*\*\*\*\*\*\* ProjectNotes table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectNotes]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectNotes]

(

[NoteId] int IDENTITY(1,1) NOT NULL,

[NoteTypeId] int NOT NULL,

[ParentId] int NOT NULL,

[Note] varchar(max) NOT NULL,

[UserId] varchar(10) NOT NULL,

[CreatedOn] datetime NOT NULL,

[ModifiedOn] datetime NULL

PRIMARY KEY CLUSTERED

(

[NoteId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

/\*\*\*\*\*\*\*\*\*\* ProjectFiles table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectFiles]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectFiles]

(

[FileId] int IDENTITY(1,1) NOT NULL,

[FileTypeId] int NOT NULL,

[AssociatedRecordId] int NOT NULL,

[FileName] varchar(500) NOT NULL,

[FileLocation] varchar(500) NOT NULL,

[UserId] varchar(10) NOT NULL,

[CreatedOn] datetime NOT NULL

PRIMARY KEY CLUSTERED

(

[FileId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

/\*\*\*\*\*\*\*\*\*\* ProjectMeetings table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectMeetings]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectMeetings]

(

[MeetingId] int IDENTITY(1,1) NOT NULL,

[ProjectId] int NOT NULL,

[Attendees] varchar(1000) NULL,

[Purpose] varchar(200) NULL,

[MeetingDate] date NULL,

[MeetingTime] varchar(20) NULL

PRIMARY KEY CLUSTERED

(

[MeetingId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

IF EXISTS (SELECT 1 FROM sys.objects WHERE name = 'ProjectMeetings\_Project' AND parent\_object\_id = Object\_id('ProjectMeetings') AND Objectproperty(object\_id, N'IsForeignKey') = 1)

BEGIN

ALTER TABLE [dbo].[ProjectMeetings]

DROP CONSTRAINT ProjectMeetings\_Project

END

GO

ALTER TABLE [dbo].[ProjectMeetings] WITH CHECK ADD CONSTRAINT [ProjectMeetings\_Project] FOREIGN KEY([ProjectId])

REFERENCES [dbo].[Projects] ([ProjectId])

ON DELETE CASCADE

GO

/\*\*\*\*\*\*\*\*\*\* ProjectSprints table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectSprints]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectSprints]

(

[SprintId] int IDENTITY(1,1) NOT NULL,

[SprintName] varchar(50) NOT NULL,

[StartDate] date NOT NULL,

[EndDate] date NOT NULL,

PRIMARY KEY CLUSTERED

(

[SprintId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO

/\*\*\*\*\*\*\*\*\*\* ProjectSprintMapping table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectSprintMapping]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectRoles]

(

[SprintId] int NOT NULL,

[ProjectStoryId] int NOT NULL

)

END

GO

/\*\*\*\*\*\*\*\*\*\* ProjectStatusLists table \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

IF NOT EXISTS (SELECT 1 FROM sys.objects WHERE object\_id = OBJECT\_ID(N'[dbo].[ProjectStatusLists]') and OBJECTPROPERTY(object\_id, N'IsUserTable') = 1)

BEGIN

CREATE TABLE [dbo].[ProjectStatusLists]

(

[StatusId] int IDENTITY(1,1) NOT NULL,

[StatusName] varchar(50) NOT NULL,

[ListID] tinyint NOT NULL,

[ListValue] varchar(50) NOT NULL,

[OrderBy] tinyint NOT NULL,

[IsActive] tinyint NOT NULL

PRIMARY KEY CLUSTERED

(

[StatusId] ASC

) WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON)

)

END

GO