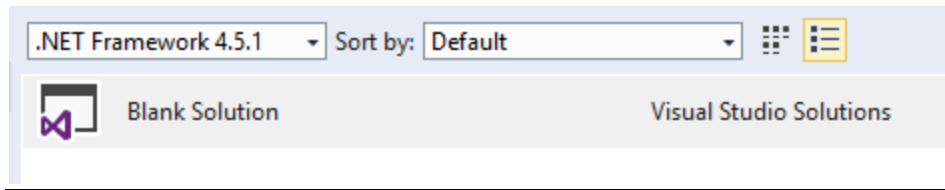
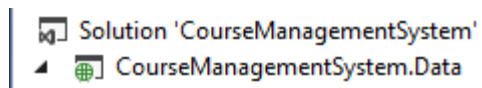


## **Playbook for 3-Tier Architecture – C# WEB API GENERATION**

### **1. Create a Blank C# Solution**

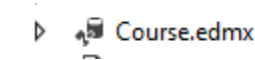


### **2. Create a C# Class Library (.DLL) : Data Layer (within the same solution)**

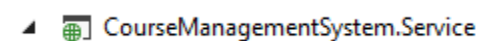


### **3. Add EF 6.x Reference using NUGET Packages**

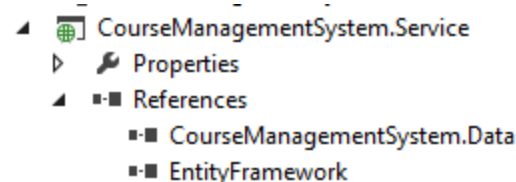
### **4. Create an EDMX file with DB first Approach**



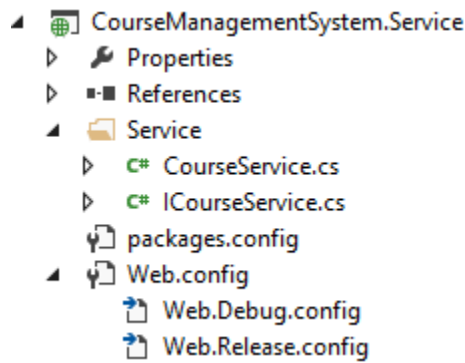
### **5. Create a C# Class Library(.DLL): Service Layer (within the same solution)**



### **6. Add EF 6.x Reference using NUGET Packages and Add DataLayer (.DLL) reference to Service Layer**



### **7. Create Service Repository and Interface to fetch the records from the data layer**



## 8. CourseService.cs

```
public class CourseService:ICourseService
{
    private CourseContext cc= new CourseContext();

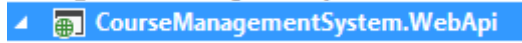
    public List<Data.Course> GetCourses()
    {
        return cc.Courses.ToList();
    }

    public Data.Course GetCourse(string code)
    {
        throw new NotImplementedException();
    }
}
```

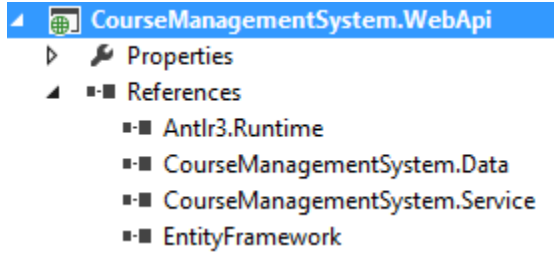
## 9. ICourseService.cs

```
-references
public interface ICourseService
{
    -references
    List<Course> GetCourses();
    -references
    Course GetCourse(string code);
}
```

**10. Create a WEB API (within the same solution)**



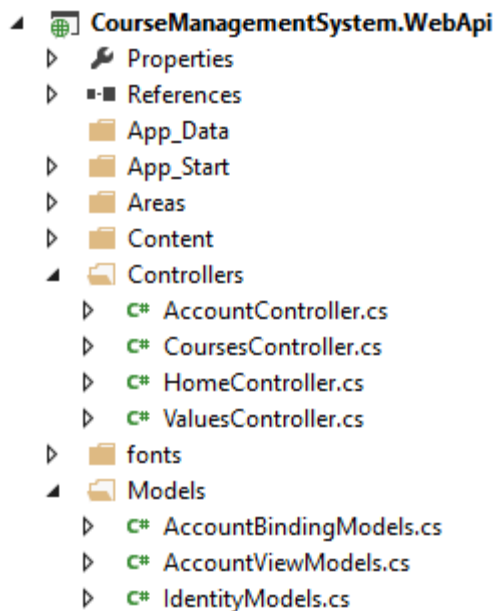
**11. Add EF 6.x Reference using NUGET Packages and Add DataLayer(.DLL) reference and Service Layer(.DLL)**



**12. Copy the Connection Strings from WEB.CONFIG file from the Data Layer and add to the WEB.CONFIG System.web**

```
<connectionStrings>
  <add name="CourseContext" connectionString="metadata=res://*/Course.csd1
</connectionStrings>
```

**13. Generate a ApiController corresponding to the context name**



**14. Generate a ApiController corresponding to the context name and define corresponding controller action method**

```
0 references
public class CoursesController : ApiController
{
    private CourseContext db = new CourseContext();

    // GET: api/Courses
    0 references
    public IQueryable<Course> GetCourses()
    {
        return db.Courses;
    }
}
```

---

**15. Build and Publish the web api. Access the Web API resource using <http://localhost:port/api/courses/>**

