**Project Management**

**1. Open "SQL Server Management Studio"**

**2. Connect to the database.**

**3. In the “ProjectManagement.SQLScripts” folder, execute the following in order.**

**1. CreateDB.sql (This will create the "ProjectManagement" database)**

**2. ParentTask**

**3. Tasks**

**4. Projects**

**5. Users**

**Steps to build Web API project**

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**1. Open Visual Studio in Administrator mode.**

**2. Browse to the solution file i.e. "ProjectManagement.sln"**

**3. If there is any change in the database server, you need to change in the connection string in 4 projects**

**a. ProjectManagement.API - Web.config**

**b. ProjectManagement.DAL - App.config (not necessary unless you are adding an Entity migration from Package Manager Console)**

**c. ProjectManagement.PerformanceTest (ProjectManagement.NBench) - App.config**

**d. ProjectManagement.NUnitTests - App.config**

**e. ProjectManagement.Tests - App.config**

**Connection String:**

**------------------**

**<add name="ProjectManagementContext" connectionString="Data Source=<Add\_Your\_Server\_Here>; Initial Catalog=ProjectManagement;Integrated Security=True" providerName="System.Data.SqlClient" />**

**4. Right-click on the solution and click "Build Solution". The necessary packages would be downloaded.**

**5. The Web API project is configured with the local IIS. Make sure you open the solution in Visual Studio Administrator mode.**

**6. If you want to run the project on IISExpress, then follow the steps given below:**

**a. Double-click on the "Properties" of "ProjectManagement" project.**

**b. Click on the "Web" tab on the left-pane.**

**c. Select "IISExpress" under "Servers" section.**

**d. Uncheck "Enable Edit and Continue" in the "Debuggers" section.**

**7. Right-click on "ProjectManagement" project and select "Set as Startup project"**

**8. Click on "Run" to launch the API application.**

**9. You can access the API configured in IIS via http://localhost/ProjectManagement/api/<apiname>**

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**Steps to build Angular SPA project**

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**11. Open Visual Studio Code (VSCode) and browse to the "ProjectManagement.SPA" folder.**

**12. In VSCode menu, click on View -> Integrated Terminal. Integrated Terminal will be displayed.**

**13. Type the command "npm install" and click "Enter" key. The node packages will be downloaded.**

**14. Type the command "ng serve". The project will be built successfully.**

**15. Open "Google Chrome" browser and type in "http://localhost:4200" in the address bar.**

**16. The "Project Management" application would be launched.**

**Note: For the Web API project, if you have changed from localhost to IISExpress, you need to change the**

**"ApiUrl" key in all the "service.ts" files of the Angular project as follows**

**ApiUrl: 'http://localhost:57022/api/'**

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**Miscellaneous Information:**

**Load Testing: (Using Jmeter Tool)**

**a. The "ProjectManagement.LoadTest" folder has a "Readme.txt" file which includes details on how to run the process.**

**b. I have generated an actual Report and Test Plan in the "Reports" and "TestPlan" folders respectively.**

**PerformanceTest Testing: using NBENCh**

**a. The "ProjectManagement.NBench" folder has a "Readme.txt" file which includes details on how to run the process.**

**b. I have generated an actual Performance Test Report which is available in the "PerformanceReport" folder.**

**Continuous Integration :( Using Jenkins)**

1. **Open browser in VM and enter** [**http://172.18.2.188:8080**](http://172.18.2.188:8080)**.**
2. **User name: admin**
3. **Password: pass@word1**

**Code Coverage: (using AxoCover Tool)**

**The ProjectManagement.AxoCover folder has Readme.txt file which includes details to run axoCover code coverage tool.**