



# .NET Core Sprint-1 **Learning Management System**



### Document Revision History

Date	Revision No.	Author	Summary of Changes
20-07-2020	1.0	Manish Rajhans	Case study created



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## INTRODUCTION

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This document outlines case study for the .NET Line of Technology (LOT). The project is to develop Learning Management System. This document contains the requirements, work flow of the system and gives guidelines on how to build the functionality gradually in each of the course modules of the .NET LOT.

## SETUP CHECKLIST

### Minimum System Requirements

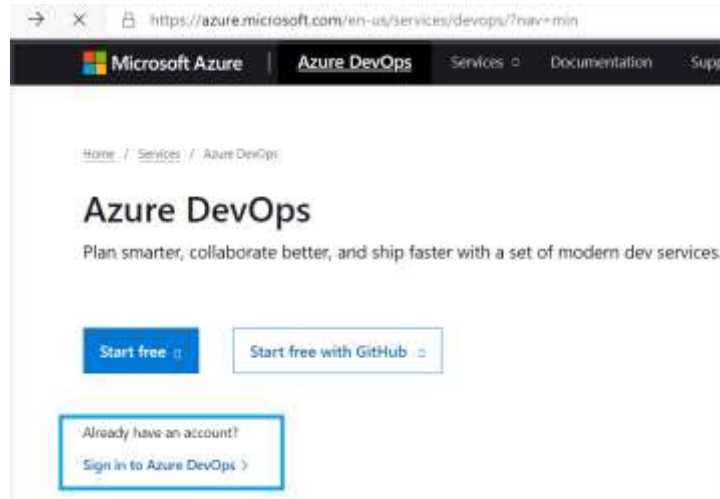
- INTEL PENTIUM 4 AND WINDOWS 2010
- MEMORY 4 GB
- INTERNET EXPLORER 11.0 OR HIGHER / CHROME
- SQL SERVER 2012 CLIENT AND ACCESS TO SQL SERVER 2012 SERVER
- VISUAL STUDIO 2019
- GIT

## INSTRUCTIONS

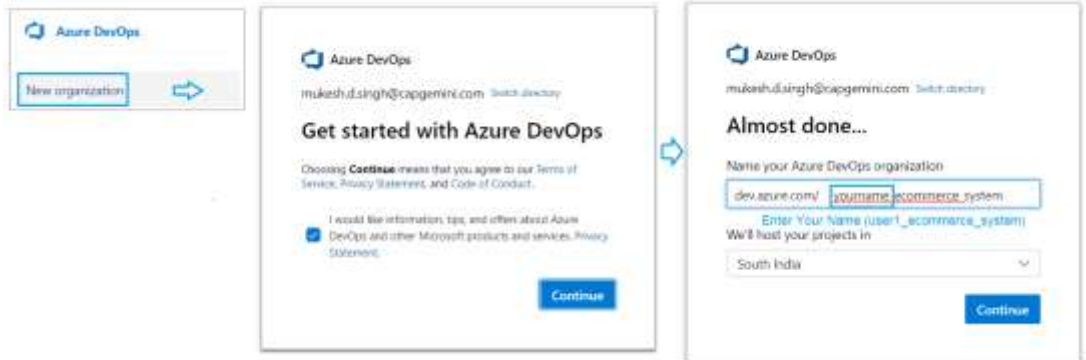
- The code modules in the mini project should follow all the coding standards.
- Sign in to Azure DevOps (link - <https://azure.microsoft.com/en-us/services/devops/?nav=min> )



## .NET CORE SPRINT1 LEARNING MANAGEMENT SYSTEM



- After creating account, login to <https://dev.azure.com/>  
Note: You can select organization name and project name according to your choice and availability.

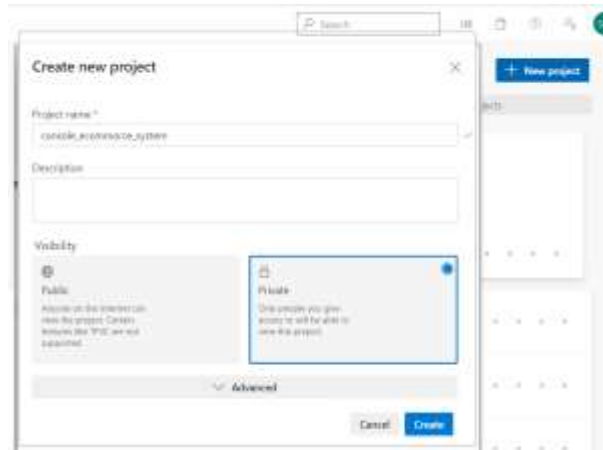


- Create New Project. Give a name according to your project. ( Here, just for the sake of a demo the name - ecommerce is given)

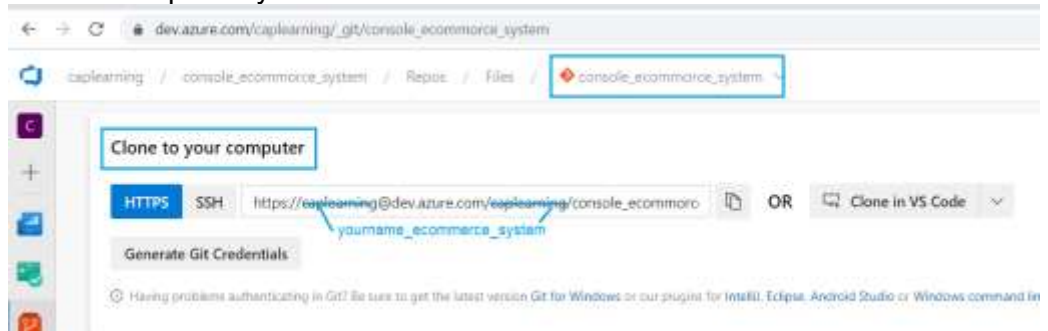


## .NET CORE SPRINT1 LEARNING MANAGEMENT SYSTEM

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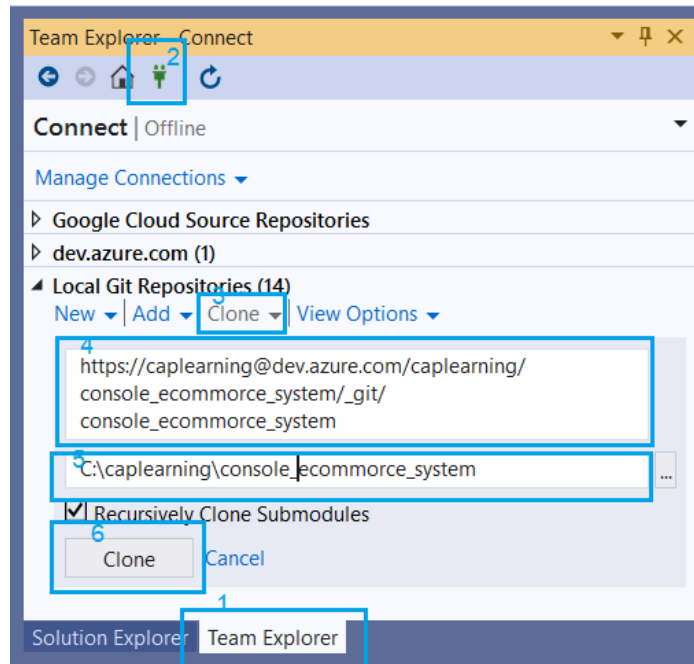
- Clone the repository



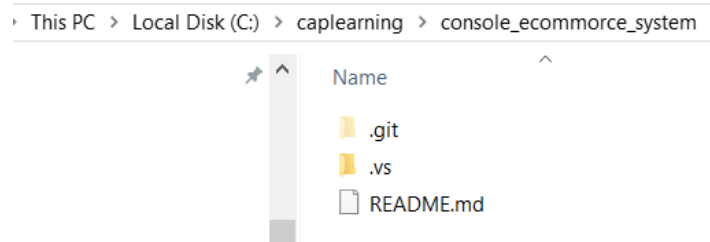
Copy the clone url

Click on Initialize button at the bottom of screen

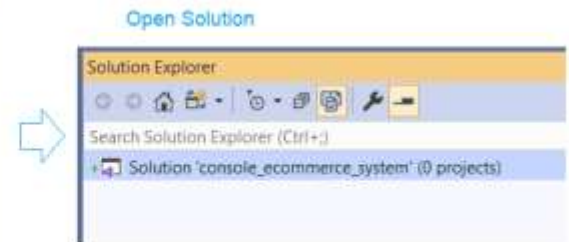
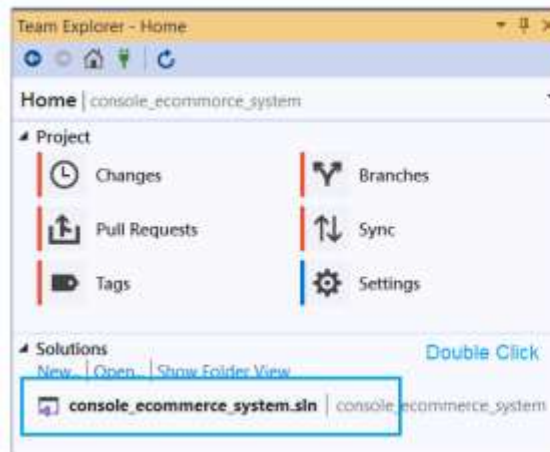
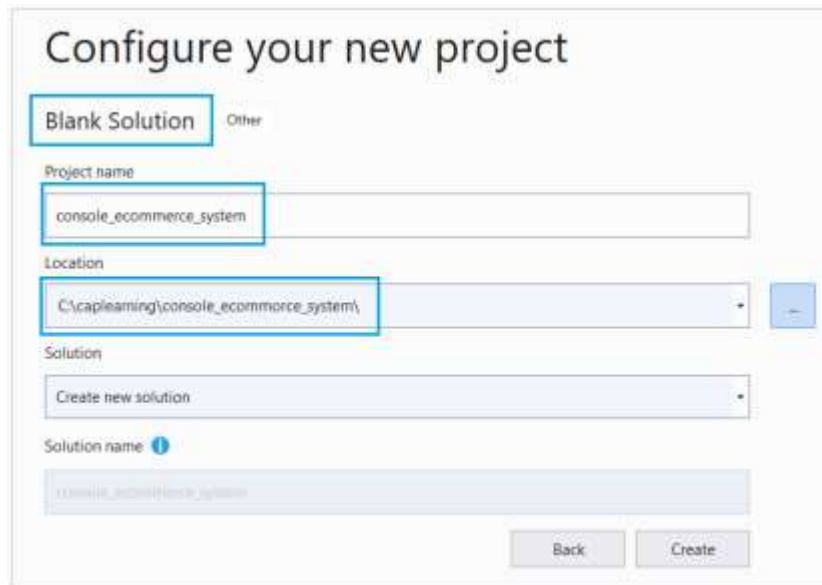
- Clone in Visual Studio 2019



After Clone, below folders get created in your local machine

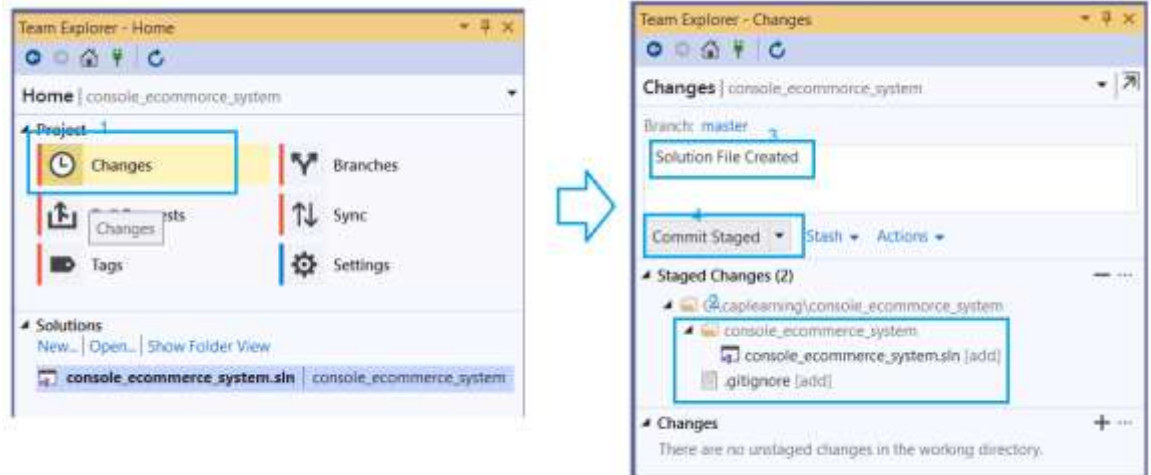


- Create New Blank Solution at your above local machine folder

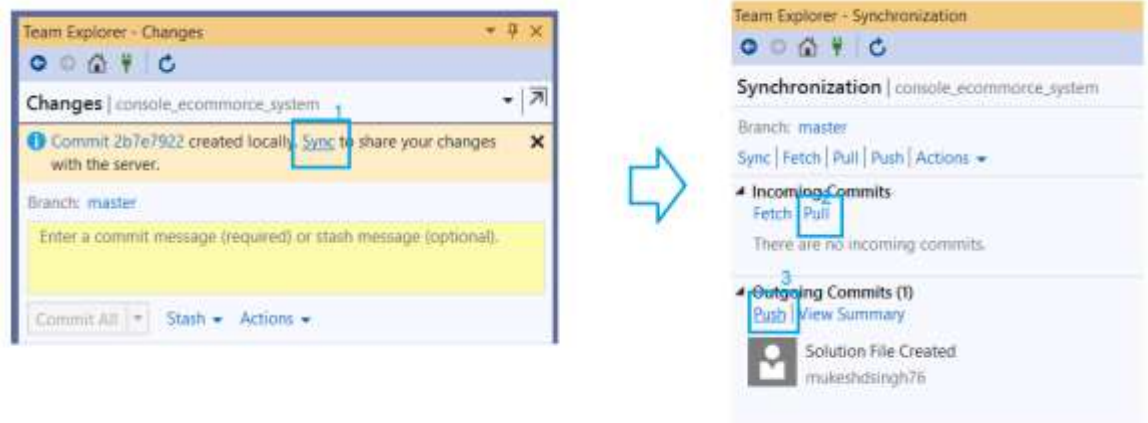


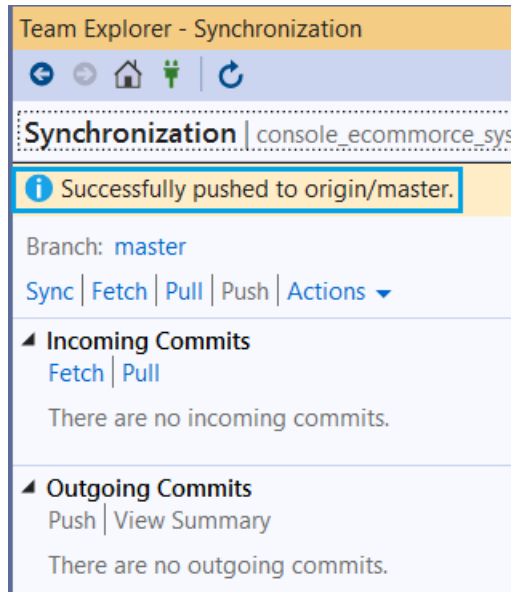
- Commit blank solution changes into repository



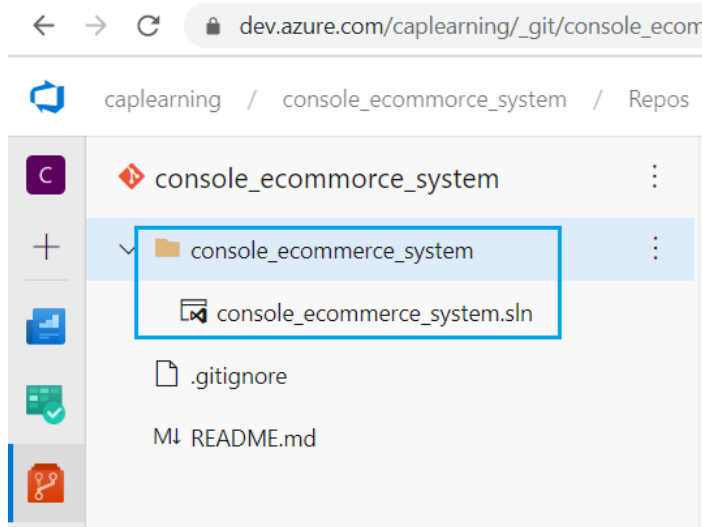


Push changes to devops repository





- Confirm changes are pushed to your DevOps repository



- Create Feature Branch  
Create New Branch from master.  
Feature Branch name: feature/ecommerce-system-console



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## PROBLEM STATEMENT

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### OBJECTIVE

Development of Learning Management System (LMS) is to automate the learning process through the learning paths. The application is mainly used by users (aka learners) and admin can manage the learning content and users(aka learners).

### Abstract of the project

**Learning Management System (LMS)** is an application, which develops a user interface for Learning Management for students to enroll to the courses and track their progress. It provides provision for employees to register themselves, browse through the courses and & take the course and it should also help users to test their knowledge by appearing to the tests.

### Administrator:

- a. Add /Update / Delete Users
- b. Add / Update / Delete Courses
- c. Assign Users to courses (Only incase if users are unable to register for the course.)
- d. View Course completion status
- e. Generate report on the available data – course wise, status of completion wise.



**Users (Participants):**

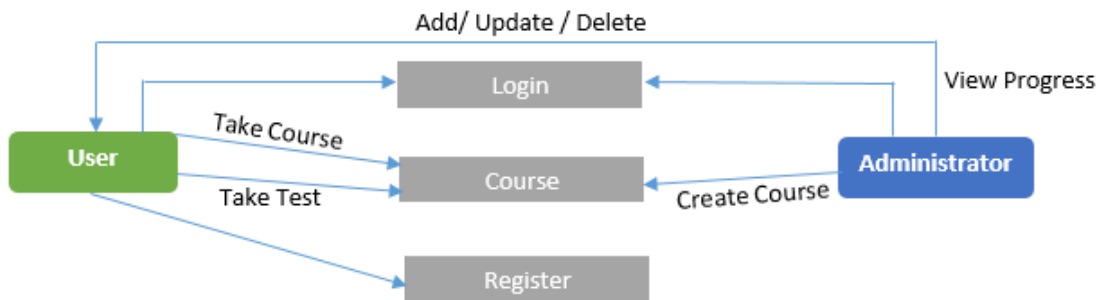
- a. Enroll for the course (Assume all courses are free. No fees for registration)
- b. Complete the course (Mark completion of course)
- c. Attempt test
- d. View Certificate (To be generated dynamically, after successfully completing the test)

**Phase 1:** Create simple basic structure for class object and relation using Class Library and Console Application Project.



**MODULE LIST and MODULE DETAILS:**

- a. User
- b. Admin
- c. Course
- d. Register
- e. Login



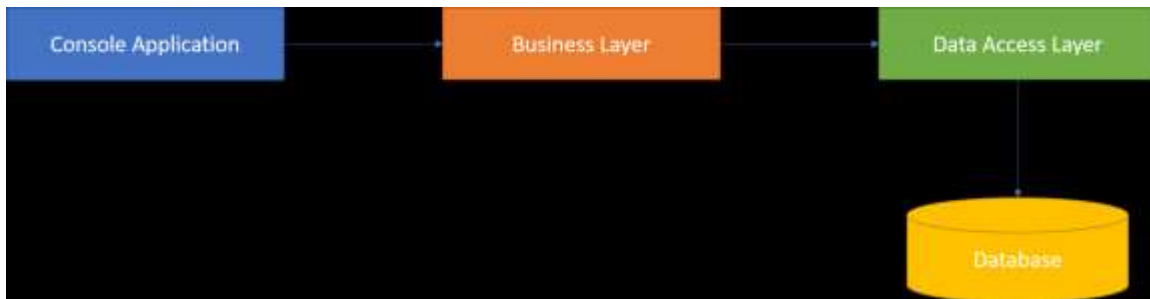


## PROJECT STRUCTURE:

Create below sample reference project structure, which will help to reuse most of module for Web application. You are allowed to bring your own project structure and project to achieve the requirement.

To evaluate, user needs to run Employee and Admin in Console project it will prompt for option to perform business action like, add attendance, add leaves etc.

All project should have minimum target framework to – .Net framework 4.5



### Design guidelines

- All the exceptions/errors to be captured and user friendly message to be displayed on the Common Error page.



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## IMPLEMENTATION

### SUMMARY OF THE FUNCTIONALITY TO BE BUILT:

The participants need to develop the Learning Management System by building the functionality incrementally in each of the course modules of .NET LOT.

Sr. No	Course	Duration	Functionality to be built
		(in PDs)	
1	.NET Framework 4.6 Console Application ADO.NET	5	Developing Presentation components (Console application), Business components (C# classes) and Data access components (ADO.NET)