

Software Challenge, Task management system, BEMIT

You need to develop microservice for very simple Task Management System (TMS).

Requirements:

1. TMS contains information about tasks. Task can contain one or more subtasks.
2. For every task following attributes are stored in TMS:
 - a. Name
 - b. Description
 - c. Start date
 - d. Finish date
 - e. State
3. If task doesn't have subtasks, then state of task is set when task is updated and can be one of the following values: Planned, inProgress, Completed
4. If task has subtasks, then its state is calculated by the following rules:
 - a. Completed, if all subtasks have state Completed
 - b. inProgress, if there is at least one subtask with state inProgress
 - c. Planned in all other cases

The microservice must contain:

1. Database for storing information about tasks, use MS SQL Server 2012+
2. Web API for CRUD operations, use ASP.NET MVC 5 or ASP.NET Core
3. Web API for retrieving report with list of all tasks with state inProgress for some date in .csv format, use ASP.NET MVC 5 or ASP.NET Core

You should prepare the code, unit tests and documentation as you would any piece of professionally written software. The purpose of this exercise is to demonstrate your programming skills in an exercise that should not take more than a few hours of your time. When you feel it is appropriate to use a library outside of the standard libraries, then please notate that library declaration with a comment explaining motivation for use.

As we are also interested in your thought process and work method, when you submit the challenge, please zip together the source control repository that you used so that we may inspect the commit history.