**Requirements**

## 1). Domain Project

1. Update the Employee class and add the following properties:

○ Id; it's a required key property, and must be unique

○ First Name ; it's a required property

○ Last Name ; it's a required property

○ Age; it's a required property

○ Gender; it's a required property

○ Full Name ; this should be First Name and Last Name combined, and should not be stored in the database

## 2). Repository Project

2. Update the EmployeeRepository class and implement the following methods (using Entity Framework):

○ Insert; this should store new employee into the database

○ Update; this should update an existing employee in the database

○ Delete; this should delete an existing employee from the database

3. Create a new DBContext class, which will allow access to the Employees database table via the EmployeeRepository

## 3). Service Project

4. Update the EmployeeService class and implement the following methods:

○ Save; this should upsert an Employee, depending on whether it already exists in the database or not

○ GetAll; this should return a collection of all employees in the system, and allow filtering via first name, last name and gender

## 4). Tests.Unit.Sample.Services Project

5. Update the EmployeeServiceTest class and add some unit tests for the following methods:

○ EmployeeService.Save

○ EmployeeService.GetAll

○ Please feel free to implement mocking using any framework that you know; the Sample.Infrastructure.UnitTest.MockDbSetHelper class may help get you started.

## 5). Tests.Unit.Sample.Repositories Project

6. Update the EmployeeRepositoryTest class and add some unit tests for the following methods:

○ EmployeeRepository.Delete

## 6). Web API Project.

Update the EmployeeController class and implement the following API endpoints:

○ Save; this should call the service to add or update an Employee, and then return a useful response to the front-end

○ GetAll; this should call the service to retrieve a list of Employees in the system, allowing any relevant filter arguments to be passed in from the front-end

○ Please ensure that all: i. Inputs are validated and sanitized ii. Requests are authenticated