PE\_PRN231\_FA24\_TrialTest  
FALL 2024  
Subject: PRN231  
Duration: 90 minutes

**INSTRUCTIONS**

**Please read the instructions carefully before doing the questions.**

* You are **NOT allowed** to use any device to share data with others.
* You must use **Visual Studio 2019 or above, MSSQL Server 2012 or above** for your development tools.

**IMPORTANT – before you start doing your solution, MUST do the following steps:**

1. Create Solution/Project in Visual Studio named **{ExamCode}\_{ExamPaperCode}\_{StudentCode} \_BE**
2. *You are not allowed to connect directly to a database from ASP.NET Core Web API, every database connection must be used with Repository and Data Access Objects.*
3. *The database connection string must get from the appsettings.json file. The conection code must be in program.cs.* ***In the case your code connects direct to the database from ASP.NET Core Web API or hard coded the connection string, you will get 0 point.***
4. *Please check before you submit your work, no syntax error(s) in the submitted PE.* ***If there are syntax errors or compilation errors in your PE program, you will not pass the PE requirements, the point will be 0.***

Implement a part of **EnglishPremierLeague** Application. The below Figure is a part of **EnglishPremierLeague2024DB**database.

A screenshot of a computer

Description automatically generated

Note that: *Member role: System Admin = 1; Staff = 2; Manager = 3; Member = 4 .* A patient can have many types of viruses. Each virus will have different treatment drugs and drug resistance rates in each patient's body.

**Part 01 (7.0 points)**. Create an API using **ASP.NET Core Web API** with Entity Framework Core. A MS SQL Server database will be created to persist the data and it will be used for reading and managing data.

Question: {Question content} ({question score} point)

Endpoint: {question endpoint}

HTTP Method: {question method}

Role Allowed: {role allow}

Function: {Description}

Request Type: {PayloadType}

Request Body

{Payload}

Validations:

{Validation}

Success Response:

{Success response}

Error Response:

{error response}

Question: You must use RESTful API to implement the ASP.NET Core Web API. CORS is using in this case. (2 point)

Endpoint: /api/create

HTTP Method: POST

Role Allowed: Staff

Function: Authenticates the user using their email and password. On successful authentication, the API returns a token (JWT or session token) that can be used for further authenticated requests.

Request Type : JSON

Request Body

{

“footballPlayerID”: “PL00968”,

"fullName": "John Doe",

"birthDay": "1990-05-15",

"achievements": "John Doe is a Chelsea legend, winning multiple Premier League titles, FA Cups, a UEFA Champions League, and other trophies during his distinguished career with the club.",

"playerExperiences": “With over a decade of service to Chelsea, Lampard is celebrated for his exceptional goal-scoring ability, remarkable work ethic, and influential leadership both on and off the pitch.”,

“nomination” : “Lampard received numerous accolades, including being named Chelsea Player of the Year and earning a place in the Premier League Hall of Fame”,

“footballClubID” : “CL004466”

}

Validations:

• All fields are required.

• Value for Fullname includes a-z, A-Z, space, @, # and digit 0-9. Each word of the Fullname must begin with the capital letter.

• Value for Birthday < 01-01-2007.

• Achievements, Player Experiences and Nomination can’t empty.

• Football Club just between CL004466 and CL004467.

Success Response:

Response Code: 201

{

" footballPlayerID ": “PL00968”,

"message": " Football player added successfully"

}

Error Response:

Response Code: 400 Bad Request

{"error": "Can’t create football player"}

Question: **Retrieve football player details** (2 point)

Endpoint: /api/footballPlayer/{id}

HTTP Method: GET

Role Allowed: Staff

Function: Retrieves details of a football player.

Request Type: URL Parameter

Request Param: id (ID of the football player to retrieve)

Validations:

• All fields are required.

• Value for Fullname includes a-z, A-Z, space, @, # and digit 0-9. Each word of the Fullname must begin with the capital letter.

• Value for Birthday < 01-01-2007.

• Achievements, Player Experiences and Nomination can’t empty.

• Football Club just between CL004466 and CL004467.

Success Response:

Response Code: 201

{

" footballPlayerID ": “PL00968”,

"message": " Football player added successfully"

}

Error Response:

Response Code: 400 Bad Request

{"error": "Can’t create football player"}