Assessment Overview: Building a User's and Tasks API

Part 1: API Development

1. Create a new ASP.NET Core Web API project.

2. Define the following models:
   - User: ID, Username, Email, Password
   - Task: ID, Title, Description, Assignee (UserID), DueDate

3. Implement controllers and endpoints for CRUD operations for both users and tasks.

Part 2: Authentication

1. Implement authentication for the API using either API key or bearer token.

2. For API key authentication:
   - Generate a unique API key for each user.
   - Require API key for accessing API endpoints.

3. For bearer token authentication:
   - Implement JWT (JSON Web Tokens) authentication.
   - Generate and validate JWT tokens for users.

Part 3: Database Interaction

1. Choose either Entity Framework Core or Dapper for database interaction.

2. Set up a local database (SQL Server, SQLite, etc.) for storing users and tasks information.

3. Implement repository patterns to interact with the database for CRUD operations.

Part 4: Testing

1. Write unit tests for the API controllers and repository methods.

2. Use an appropriate testing framework (e.g., MSTest, NUnit, xUnit) for writing tests.

Part 5: Swagger Documentation

1. Integrate Swagger to generate API documentation.

2. Ensure that all API endpoints are documented and properly described.