

System Development Guidelines

Deanship of Information and Communication Technology

Systems and Applications Development Dept.

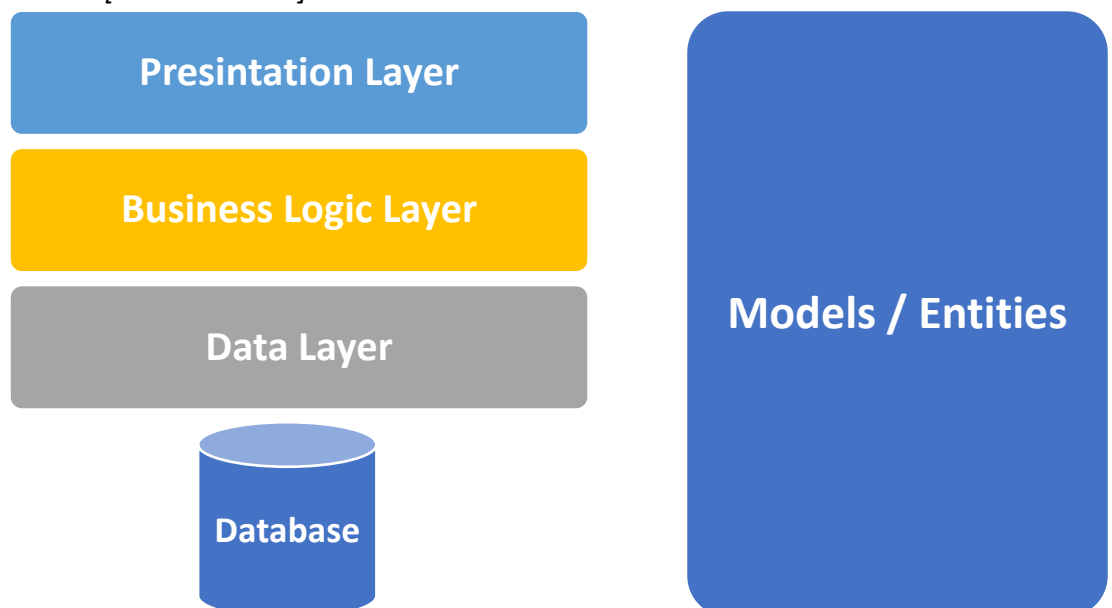
The application must be **Web based application**

Platform and Programming languages:

- Visual Studio 2017 or later
ASP.NET MVC Web application with C#
.Net Framework not less than 4.6
Web form will not be accepted
- **Oracle** Database

Implementation requirements:

- You should follow the N-layer architecture at implementation phase:
 - Data Layer (C# Project): Separate layer for database connections and CRUD operations
 - *[SolutionName].DataAccess*
 - Use [Dapper](#) in this layer
 - Business Logic Layer (C# Project): contains core functionality of the application
 - *[SolutionName].Logic*
 - Presentation layer (**MVC** application)
 - *[SolutionName].Web*
 - The design should be responsive and look good on both computers and mobile devices (use [Bootstrap](#))
 - Models layer
 - *[SolutionName].Model*



- The application should give the ability to manage digital content, So No STATIC PAGES OR CONTENT
- Follow DRY principle (https://en.wikipedia.org/wiki/Don%27t_repeat_yourself)
- Follow Secure Coding Practices
 - Authentication
 - Authorization
 - Do not expose sensitive data at URL as query string
 - Use POST actions
 - Avoid query injection (use parametrized queries)
- Validate Data
- Logging for errors and data changes (Log4Net is great tool for that)
- Follow the Coding Guideline (naming, formatting, indentation...)
- Explain how your application works with code COMMENTING
- Testing
- Use client-side scripting when possible.

Links to learn:

- MVC
<https://youtu.be/E7Voso411Vs>
- Dapper
<https://youtu.be/mK7xczvpbG4>
- ReSharper
<https://youtu.be/pZmj27kK4B8>
- C# Programming Guide
<https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/inside-a-program/coding-conventions>
<https://github.com/StyleCop/StyleCop>