



## Intern and Trainee Training Module

Here are defined tasks that Intern and Trainee need to complete so as to be ready for real world applications.

### Movies Application

Simple movies listing application.

Need to be able to add movies with posters and embedded youtube videos.

#### Technical Details Required

1. 1st phase:
  - Initialize git repository
    - Each module or phase can have multiple commits.
  - User authentication (Asp.net IDentity) to upload the Movie info
  - Use of ORM(entityframework) for database connection
  - CRUD operations for the movies using MVC Razor pages.
    - Message should be displayed on the page on success/error in insert/update/delete
    - List of Movies should be paged
    - Services/Repository should be utilized to interact with database and controller.
2. 2nd phase:
  - Add movie ratings to be given by logged in users.
  - Add Movie discussion/comments section
  - Ability to filter the movies by Name, Ratings, and other additional information.
3. 3rd phase
  - Change the 1st and 2nd phase's CRUD operation to use SQL functions and Stored procedures.

It should be done using interface implementations that can switch to ORM code based on configuration.

- Authentication and Authorization
  - Admin
  - Basic user
    - Basic user can see info of movies, rate movies, add comments to movies.
- 4. 4th Phase
  - Convert the Movies MVC application to API. Should be a new VS project.
  - Create an Angular or React app to consume the API.
  - Authentication and Authorization should be done using JWT tokens
- 5. 5th Phase
  - Add sharing functionality through email service.  
Can use sendgrid or gmail  
Email should contain the current information about the movie with ratings and poster.
- 6. 6th Phase
  - Create a Scheduled Service where the notification to the users can be sent according to the release date of the Movies
    - Multiple notification on the same date should not be sent
    - Can use open source scheduling services available for C# .NET

Expected Completion time:

1. Trainee: 1 month
2. Intern: 1.5 month

**Note: It doesn't have to be based on movies, but the listed technical requirement should be fulfilled.**

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## Intended outcome from this practice

- Able to self learn with minimal help.
- Get Good understanding of ASP.NET and its ecosystem.
- Able to work with front-end frameworks
- Able to use git.
- Able to understand how Authentication and Authorization works with cookies and JWT
- Fluency in both LINQ/Lambda and SQL.
- Able to use Object Relational Mappers effectively.
- Understand database migrations
- Able to work with UI changes with HTML/CSS