PROJET 2021-2022

## **Specifications :**

* Use at least .Net core 5 (can be .net 6 also)
* Respect standard :
  + Verbs
  + Status Code
  + Description
  + …
* Use MVC for WEBSITE
  + Can be Angular
  + Can be React
* Use MVC for API
* Make difference between :
  + Authentication
  + Authorization
* Use FluentValidation for Request validation.
* Use the CQRS architecture for both project : -> 09/05 (presential)
  + API
  + WEBSITE
  + Exemple : // a pokemon API (https://pokeapi.co/)
* Use HTTPClient or HTTPClientFactory
* Use a RetryPolicies -> 02/05
* Use a logging system for all events -> 02/05
* Create a MiddleWare -> 02/05
* Create and consume nuget
* Consume an external nuget
* Don’t allow social provider for Authentication
* Use versioning in API
* You can use InMemory DB if it’s more easier for you

## **Technical part :**

* Secure an API using Auth0
  + Flow : Client Credential
* Secure a WEBSITE using Auth0
  + Flow : Authorization Code + PKCE
* Use token delivered from WEBSITE to use Backend API
* All requests coming from WEBSITE should use Backend API
* Use Role
  + Roles :
    - Owner
    - Admin
    - User
    - Agent
* Use Permission :
  + Permissions :
    - “read:messages”
      * Owner
      * Admin
      * User
      * Agent
    - “write:messages”
      * Owner
      * Admin
      * User
    - “read:users”
      * Owner
      * Admin
    - “write:users”
      * Owner
* A “end user” must have one and only one role.
* Create and use a Middleware to manage Permissions/Roles (02/05)
  + Meaning : I don’t want to see verification on Permission and/or Role on each controller
* Create a custom Middleware to manage exception (02/05)
* Consume an external API
  + Don’t forget retryPolicies (02/05)
* Make AJAX Call on Website level to call an external API
  + Call is done on View level
* Use Client Side validation (10/05)AND Server Side validation for Website
* Use pagination for Grid having more than 50 results
* Create some script on WEBSITE level
* Create a dedicated nuget and use it in the project (02/05)
* Consume a nuget and explain your choice
* Consume and use some script on WEBSITE level
* Use Versioning API
  + Give versioning in a header with date format like DD-MM-YYYY

## Functionality :

* Have a Single Sign On page with some customization
* Sending an email for activate account for new user created
* Sending an email for reset password
* Create an user
* Update an user
* Delete an user
* List users
* Assign a role to a user
* Create a message
* Update a message
* Deleted a message
* List message
* Base on role
  + Hidden some functionality
  + Restrict access base on permission associated to the role
* Having a dropdown depending from another dropdown
  + Example :
    - Dropdown1 :
      * Value : “1- Yes”
      * Value : “2- No”
      * Value : “3- Other”
    - If Other
      * Show a required textbox
      * Hide second dropdown
    - If Yes
      * Show a list of cars in a second dropdown
    - If No
      * Show a list of bike in a second dropdown
* Use Chart from google to use google API – WON’T DO
* Show a list coming from an external API and use pagination
* Show different layout based on user role
* Use Toastr for notification after save for example
  + Example : “new user created”
* CRUD on a dedicate object