We want to create a WhatsApp broadcast portal, the purpose of this portal is to send bulk messages to predefined contacts to inform them about business news, offers, events and others occasions & greetings

**The Web portal will include the following pages**

* Login page = to secure the web portal, we need to have a login page to let authorize user access it. the login page contains
  + Fancy background Image
  + Login form
    - Logo
    - Username (textbox)
    - Password (hashed textbox)
    - Login button
* Portal Main page = main page will include
  + Header menu (Settings, Contacts, Broadcast, Logout)
  + Body section (that will load pages content on navigation)
  + Footer section
* Settings page = contains the settings needed to validate & process the WhatsApp message sending action, it will contain the settings form
  + Sender Name (textbox)
  + Sender Email (textbox)
  + Sender Address (textbox)
  + Save button
* Contacts page = it will handle the add/edit/delete for the Contacts, it will contain
  + Add button + Import button
  + List/table = show all existing contacts info, list should be sortable, filterable & pagination support
  + Edit & Delete icons/button on each row in the table
  + Contact popup modal that will show-up on add or edit the contact
* Broadcast page = this page will handle the WhatsApp message sending, it will contain the following
  + List/Table that contains all existing contacts, the list should contain a checkbox to include all contact or selected contacts
  + List should include action column (send button)
  + Message section
    - Message (textbox)
    - Send button

**Technologies that will be used in this project**

* Frontend
  + Reactjs & Redux
  + Bootstrap
* Backend
  + .Net 8 API
  + C#
  + Entity Framework

**Code Design**

* Models
  + UserRole (Id,Name)
  + User (Id, Name, Username, Password, UserRoleId, Active, LastLoggedInDate)
  + Contact (Id, Name, Phone, Address)
  + Settings (Id, Key, Name)
* API Controllers
  + Account (Login Method)
  + Contacts (GetList, Get, Add, update & delete methods)
  + Settings (Get & update methods)
  + MessageBroadCast (Send & validate methods)
* DB Context
  + Add entityframerowrk support
  + Migrate Models to database
  + On model creating override the function to add UserRole (1, ”Admin”) and User(Id,”User1”,”User1”,”123456789”,1,1,datenow)
* Functionalities
  + API methods should send & received DTO objects and not the actual models, so you need to have a DTO objects and a mapper for those DTOs
  + User Password should be encrypted(hashed) while saving in database, so you need to hash the user password before saving into database (using .net passwordhasher) and validate password when loading user from the database
  + Currently we didn’t used or try the WhatsApp broadcast & message sending action, you need to do some research on how to implement this feature in the project

**UI Design**

* Use what you have learned in terms of design and page rendering using reactjs & redux
* Make sure that the design is responsive and user-friendly
* Use all needed reactjs libraries and tool to finalize the requested features

API Endpoints:

Account/register: POST

Account/login: POST

Contacts/AllContacts: GET

Contacts: GET (With Pagination)

Contacts: POST

Contacts/{id}: GET

Contacts/{id}: PUT

Contacts/{id}: DELETE

Contacts/import: POST

MessageBroadcast/send: POST (Using Maytapi)

MessageBroadcast/validate: POST (Validates Settings)

Settings/{id}: GET

Settings/{id}: PUT