SEQUENCE DIAGRAMS :

Sequence diagram purpose is to represent the way different part of the system will interact together over time in order to fulfill a specific user's request : what are they sending to each other, in which order and in which situation ?

Four sequence diagrams where asked to anticipate 4 scenarios :
- User registration
- Place creation
- Review submission
- List of places query

- **User registration :**
    The goal is to see the different messages transmitted beetween each layers, and their orders when a user register.

    1. User request a user creation.
    2. The request is turned into a JSON and is received by the API which controls it. If the format of the request is good, if permissions are good to, API send it to the right method of the business logic layer.
    3. Business logic create the user and calls for a method to build a request that will save the object into the database.
    4. Database proceeds to save the object and send back a confirmation.
    5. Confirmation is received by BusinessLogic layer which send a confirmation to API.
    6. API send the confirmation from BusinessLogic to the UI.

    NB : this sequence could be completed with more interaction such as : checking if the email the user gave already exists or not, for example.

- **Place creation :**
    The goal is to see the the goal is to see the different messages transmitted beetween each layers, and their orders when a place is created.

    The sequence is pretty similar to user creation, even though methods, messages, error codes... are different.

- **Review submission :**
    The goal is to see the the goal is to see the different messages transmitted beetween each layers, and their orders when a review is created.

    The sequence is pretty similar to user creation and place creation, even though methods, messages, error codes... are different.

- **List of places query :**
    The goal is to see the the goal is to see the different messages transmitted beetween each layers, and their orders when user ask to see to see some places based on some specific criterias.

    1. User send a place to see some places based on some criterias : location, price, availability dates...

2. Request is send to API which controls if the request format is good, and if user have permissions.
3. BusinessLogic receives the request and call the right method to build the database request for the list a places matching the criterias the user asked.
4. Database returns a table containing the request result and send it to the BusinessLogic layer.
5. BusinessLogic rebuild the places and add them in a list. Returns the list to the API.
6. API send the list to the user in order to the display the places on the frontend