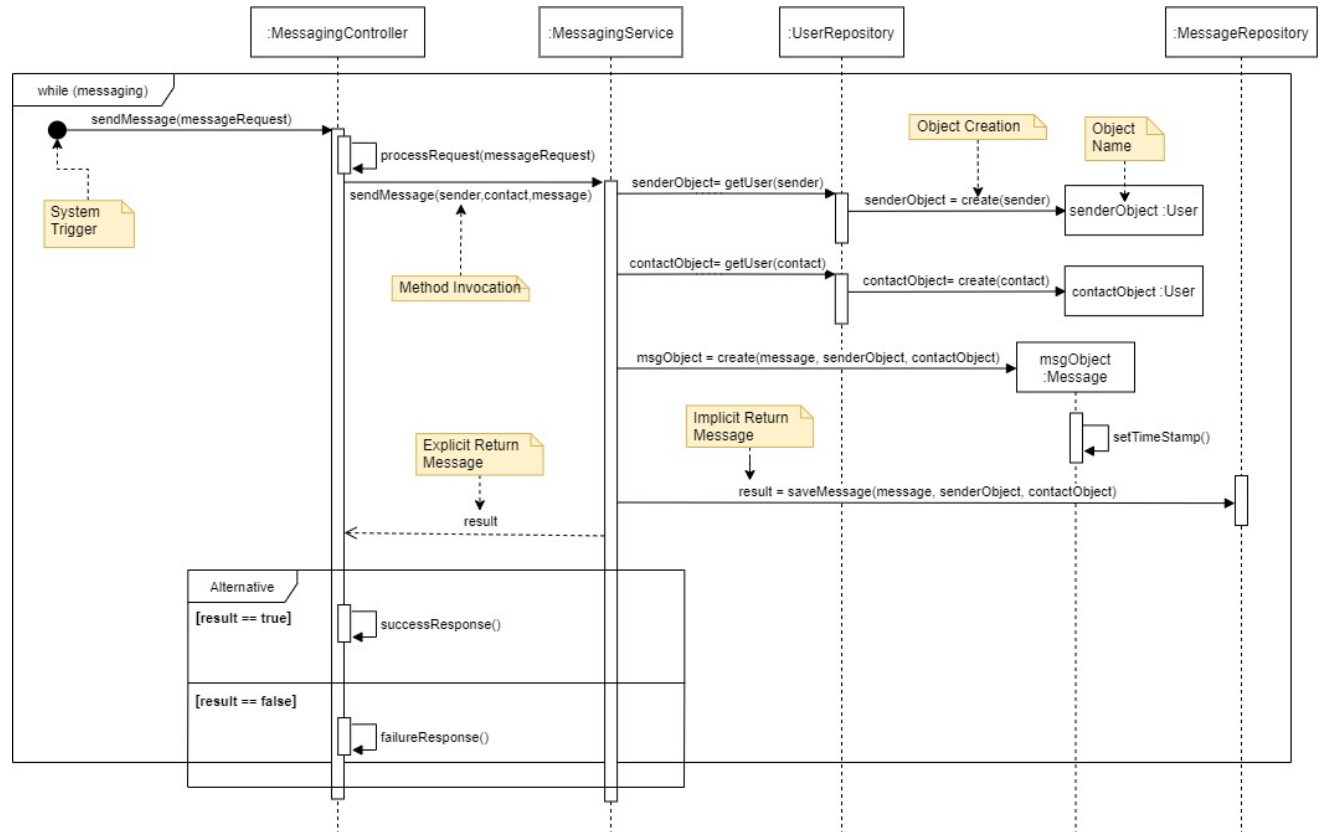


## Notation Reference for a Design Sequence Diagram

### Example: Back-end System for a Messaging Application



**Note:** Notation labels that have already been covered in the “Notation Reference for a System Sequence Diagram” have been omitted from this diagram.

### Description:

1. The back-end system is responsible for processing incoming requests from a mobile messaging application.
2. While a user is messaging someone, the front-end application will make a series of message requests to the back end.
3. The **MessagingController** is the primary point of contact for incoming messages and will process the incoming requests to obtain the sender, their contact and their message.
4. The controller will then forward this data to the **MessagingService** class.
5. In order to obtain details about the sender and contact, the **MessagingService** will contact the **UserRepository**, a class the directly interfaces with the database.
6. Finally, the **MessagingService** will create a **Message** and use the **MessageRepository** to store all captured data in the database.
7. Based on the outcome of the operation, the **MessagingService** will return a success or failure response to the controller.