**Tutorial 8 Assessment**

**Question 1**

EasyLife have been considering the use of a non-relational database, like MongoDB. We therefore have to propose a semi-structured solution. You can propose an XML or JSON solution according to your preference. There are tools to convert between them, so it is not an impediment for using MongoDB.

You are already familiar with the data:

*Sam Huynh has an appointment with physiotherapist Bruno on Monday 17 April 2023 at 9am for 30 minutes. He is rehabilitating after a broken wrist.*

*Andrea Kostyanska has an appointment with physiotherapist Sylvia on Tuesday 18 April 2023 at 3:30pm for 30 minutes. She has a problem with her lumbar spine.*

*Philip Chen has an appointment with physiotherapist Bruno on Tuesday 18 April 2023 at 10:30pm for 40 minutes. He has a problem with his neck.*

There are at least two ways to model this.

Option 1: You create two entities and connect them using a key, as we do in relational.

<appointments>

<appointment>

<client>

<first\_name>Sam</first\_name>

<last\_name>Huynh</last\_name>

</client>

<physiotherapist>Bruno</physiotherapist>

<datetime>2023-04-17T09:00:00</datetime>

<duration\_minutes>30</duration\_minutes>

<health\_issue>Rehabilitating after a broken wrist</health\_issue>

</appointment>

<appointment>

<client>

<first\_name>Andrea</first\_name>

<last\_name>Kostyanska</last\_name>

</client>

<physiotherapist>Sylvia</physiotherapist>

<datetime>2023-04-18T15:30:00</datetime>

<duration\_minutes>30</duration\_minutes>

<health\_issue>Problem with lumbar spine</health\_issue>

</appointment>

<appointment>

<client>

<first\_name>Philip</first\_name>

<last\_name>Chen</last\_name>

</client>

<physiotherapist>Bruno</physiotherapist>

<datetime>2023-04-18T22:30:00</datetime>

<duration\_minutes>40</duration\_minutes>

<health\_issue>Problem with neck</health\_issue>

</appointment>

</appointments>

Option 2: You embed the appointment objects in the client object.

<appointments>

<client>

<first\_name>Sam</first\_name>

<last\_name>Huynh</last\_name>

<appointments>

<appointment>

<physiotherapist>Bruno</physiotherapist>

<datetime>2023-04-17T09:00:00</datetime>

<duration\_minutes>30</duration\_minutes>

<health\_issue>Rehabilitating after a broken wrist</health\_issue>

</appointment>

</appointments>

</client>

<client>

<first\_name>Andrea</first\_name>

<last\_name>Kostyanska</last\_name>

<appointments>

<appointment>

<physiotherapist>Sylvia</physiotherapist>

<datetime>2023-04-18T15:30:00</datetime>

<duration\_minutes>30</duration\_minutes>

<health\_issue>Problem with lumbar spine</health\_issue>

</appointment>

</appointments>

</client>

<client>

<first\_name>Philip</first\_name>

<last\_name>Chen</last\_name>

<appointments>

<appointment>

<physiotherapist>Bruno</physiotherapist>

<datetime>2023-04-18T22:30:00</datetime>

<duration\_minutes>40</duration\_minutes>

<health\_issue>Problem with neck</health\_issue>

</appointment>

</appointments>

</client>

</appointments>

Unless you are confident, choose the second option.

Write your XML or JSON code in the space provided.

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