**Tutorial 2 Assessment**

**Question 1**

In this tutorial, we will create an entity that helps a **physiotherapy** centre, **LiveEasy**, to keep track of their **appointments.** We have the following scenario that has to be captured:

*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.*

Create **ONE** entity for this scenario. Make a table with column headers (**attribute** names), taking care that all of the attributes are APPOINTMENT-specific. Show the **data** in the table.

A screenshot of a phone

Description automatically generated

**Question 2**

Give a definition of the **data types** of your attributes. You can list the attributes one on each line and define the data types, e.g. phone - CHAR(16)

A white table with black text

Description automatically generated

Definition of data types and attributes:

* The PatientFirst attribute is the name of the patient. The patient's first names vary in length, so VARCHAR(10) will be the data type used for this table since the patients name is a variable length string of up to 10 characters.
* The PatientLast attribute is the name of the patient. The patient's last names vary in length, so VARCHAR(10) will be the data type used for this table since the patients name is a variable length string of up to 10 characters.
* The Physiotherapist attribute is the name of the physiotherapist. In this table, physiotherapists names are less than 10 characters, so CHAR(10) will be the data type used for this table to store the physiotherapists names.
* The Date attribute specifies the date of the appointment. DATE is the data type being used to store the calendar date.
* The Time attribute specifies the time of the appointment. The data type TIME is used to store the time in hours and minutes.
* The Duration attribute specifies the duration of the appointment in minutes. The duration is a whole number, so the data type INTEGER is used to store the appointment duration.

**Question 3**

Make an appropriate **natural primary key** for this table. Justify your choice. For example: "We have to use attributes x, y and z as a composite key. If we use x and y, appointments with ... (feature) cannot repeat. If we use x and z, appointments with ... (feature) cannot repeat..."

* An appropriate natural primary key would be a key using the PatientFirst, PatientLast, Date, and Time attributes. Using these attributes means a patient can schedule multiple appointments on the same date, but at different times.