psychologyCLOUD

2021-002

Database Design

Issue 1 Draft A

6 OCTOBER 2021

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1   Introduction

This document describes the design of the SQL database subserving the MY-TESTS and psychologyTESTS applications.

2   SCOPE OF THIS DOCUMENT

This document is writen at the time of it was decided to move development of psychologyCLOUD from Google Firestore to a sql database.

The reasons for this change are documents elsewhere […].

The decision to move from one service provider to another has an impact on the database design and advantage of this was taken to modify some of the tables.

This document describes the SQL database (i.e.the "To Be" database).

3   THE TO BE DATABASE

3.1   OVERVIEW OF CHANGES

1)   The key change made to the database to transform it from a noSQL to SQL is around relationships between tables.

2)   The change has been implemented in the following ways:

   a)   Relationships between tables was introduced

   b)   Fields made superfluous by the intoduction of relationships were deleted

   c)   Advantage was taken of the database re-design to enforce a naming convention for fields

   d)   Some fields considered redundant were removed and some fields considered useful were introduced. However the removal and introducrion of fields was kept to a minimum since it was considered important to attempt to support as much of the existing code whether in development or deployed as possible.

   e)   The table USERS has been split into two tables, table CLIENTS holding client details and THERAPISTS holding therapist details. A main driver for the change was the fact that records relating to Clients have a shorter life span than records relating to Therapists. Separating out the client records from the therapists records will lead to faster deletion and re-indexing of records and I assume will also lead to less disk fragmentation.

Object Relationships between collections are:

   A therapist may have one or many clients

   A client may have one or many appointments

   An appointment will be for only one client

   An appointment may have one or many tests

   Each test on in an Appointment will have one record in the RESULTS table

   A client will have one or many test results in the Tests collection

3.2   DIAGRAM OF TABLES IN THE PSYCHOLOGYTESTS DATABASE

3.3   THE TABLES

3.3.1   TABLE: CLIENTS

TABLE: CLIENTS			
LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
clientID	varchar	16	PRIMARY KEY Unique identification – consider using UID REQUIRED
therapistID	varchar	16	FOREIGN KEY from THERAPISTS table REQUIRED
clientName	varchar	30	Unique and generally used in UI instead of clientID REQUIRED
Dob	varchar	10	Date of birth in format "DD/MM/YYYY" REQUIRED

Gender	Boolean		"Male" or "Female" REQUIRED
Classification	Varchar	50	i.e. the name of the disorder to be treated
emailAddressForAppointments	varchar	30	
showResults	Boolean		
consentToStore	Boolean		
consentDocument	Varchar	50	url of where document is to be found
LIST OF INDICES			

3.3.2 TABLE: THERAPISTS

TABLE: THERAPISTS			
LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
therapistID	varchar	16	PRIMARY KEY REQUIRED
therapistName	varchar	30	Unique and generally used in UI instead of clientID REQUIRED??
country	varchar	10	

timezone	varchar	10	
profession	varchar	50	Eg 'clinical psychologist', 'mental health nurse'
emailAddress	varchar	30	REQUIRED
practiceName	varchar	50	
phoneNumber	varchar	50	
subscription	Varchar	30	Probably 'None', 'Standard', 'Enhanced', 'Practice / Group', 'Trial' REQUIRED
LIST OF INDICES			

3.3.3   TABLE: TESTS

All the "filter" fields need to be added to the table definition below.

TABLE: TESTS			
LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
code	varchar	10	FOREIGN KEY from CLIENTS table REQUIRED

name	varchar	40	FOREIGN KEY from THERAPISTS table REQUIRED
anxiety	boolean		
	boolean		

3.3.4   TABLE: APPOINTMENTS

TABLE: APPOINTMENTS			
LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
clientID	varchar	16	FOREIGN KEY from CLIENTS table REQUIRED
therapistID	varchar	16	FOREIGN KEY from THERAPISTS table REQUIRED
appointmentDate			REQUIRED
status	varchar	16	Or could be a boolean. Indicates whether all the tests for the appointment have been completed. If not completed and client logs in again before midnight of the appointmentDate field on this record, this appointment's tests uncompleted are to be re-presented to client. NOTE: we need to consider how to report on partially completed

			tests and on 'missed appointments' ie no tests completed. REQUIRED
test1	varchar	10	REQUIRED
Test2	varchar	10	
Test3	varchar	50	Eg 'clinical psychologist', 'mental health nurse'
Test4	varchar	30	
test1_RESULTS_recordID	varchar	50	If the client has completed this test then this field will be filled in.
Test2_RESULTS_recordID	varchar	50	If the client has completed this test then this field will be filled in.
Test3_RESULTS_recordID	varchar	50	If the client has completed this test then this field will be filled in.
Test4_RESULTS_recordID	varchar	50	If the client has completed this test then this field will be filled in.
emailReportTo1	varchar	50	For example to the therapist
emailReportTo2	varchar	50	For example to a referring agent like GP, lawyer, etc
showTestResultsToClient	boolean		
LIST OF INDICES			

3.3.5 TABLE: RESULTS

TABLE: RESULTS			
LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
resultsID			PRIMARY KEY
clientID	varchar	16	FOREIGN KEY from THERAPISTS table
therapistID	varchar	16	FOREIGN KEY from THERAPISTS table
testName	varchar	10	
testDate	varchar	10	
testScore	varchar	50	Eg 'clinical psychologist', 'mental health nurse'
testAnswers	varchar	50	Construct this string – each answer separated by a character e.g. '0-0-1-3-0'
testSubscales	varchar	100	Need to think about this
testLapsedTimeInSecs	varchar	20	
evaluation	varchar	50	
caseness	Varchar	30	Probably 'None', 'Standard', 'Enhanced', 'Practice / Group', 'Trial'

change	varchar	5	
LIST OF INDICES			

3.3.6   TABLE: DETAILS

This table contains metadata of tests available for use by therapists. A therapist will select at least one of these tests for each APPOINTMENT. Once a test has been presented to a client and completed, the outcome of the test is recorded in the RESULTS table.

TABLE: DETAILS			
LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
detailsID	varchar	10	PRIMARY KEY
code	varchar	10	FOREIGN KEY from TESTS table
about	varchar	10	

description	varchar	10	
LIST OF INDICES			

3.3.7   TABLE: REFERENCES

TABLE: REFERENCES			
LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
referencesID	varchar	10	PRIMARY KEY
code	varchar	10	FOREIGN KEY from TESTS table
Reference	varchar	100	These 4 fields should probaly be in a separate table called REFERENCES
LIST OF INDICES			

3.3.8   TABLE: REPORTS

TABLE:REPORTS			
LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
reportID	varchar	10	PRIMARY KEY
resultsID	varchar	10	FOREIGN KEY from RESULTS table
clientID??			
therapistID??			
templateID	varchar	10	FOREIGN KEY from TEMPLATES table
generatedDate	varchar	10	
sentDate	varchar	10	
recipientEmail	varchar	30	
LIST OF INDICES			

3.3.9   TABLE: PREFERENCES

TABLE: PREFERENCES

LIST OF FIELDS			
NAME	TYPE	SIZE	NOTES
tknClient	boolean		If true, they are called 'client' else 'patient'
tknClient's	boolean		If true, they are called 'client's' else 'patient's'
tknClients	boolean		If true, they are called 'clients' else 'patients'
tknDate	string		This field holds date mask.
tknTime	boolean		If true, time is 24hr else time is 12hr

4   References

Ref.	Doc No.	Document Title	Version No.

5   Glossary of Terms

Term	Notes
Patient or Client	The term used to identify the "customers" of practitioners. These are the users of the Client Portal. Practitioners should be able to select the appropriate term to refer to their "customers" in the software
Practitioner or Therapist	A practitioner refers to a psychologist, clinical psychologist, psychiatrists, mental health nurse, occupational therapist. "Therapist" users of psychologyTESTS will belong to one of these groups, but the application will not check this.
User	Someone who uses either part of psychologyCLOUD.

End of Document.