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*COURSE TITLE: DATA ACQUISITION(D205)*

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1. Question

Are customers with one child likely to use a phone line?

A1. Identifying data

The work is going to be done in PostgreSQL.

pgAdmin is a popular SQL editor for Postgres. It comes installed with Postgres and works on both Windows and Mac(Database Star n.d.)

The data is going to be taken from the customer table and customer\_service table. In the customer table, I will use the customer\_id column and the children column.

From the customer\_service table, I will use the customer\_id column and the phone column. The PRIMARY KEY is customer\_id from the customer table and all data types in the column are a TEXT.

1. Entity relationship diagram

This should be a one-to-many relationship here.

|  |  |
| --- | --- |
| **TABLE** | **COLUMN** |
| customer | customer\_id |
| children |
| customer\_service | customer\_id |
| phone |

A screenshot of a computer

Description automatically generated

This shows a one-to-many relationship. Each customer can place many orders but a product(phone) may be delivered within a single order. The PRIMARY KEY is customer\_id in the customer table and the FOREIGN KEY is customer\_id in the customer\_service table.

B1. Code for the ERD

CREATE TABLE public.customer\_service

(customer\_id text, phone text);

ALTER TABLE public.customer\_service

ADD FOREIGN KEY (customer\_id)

REFERENCES public.”customer” (customer\_id)

NOT VALID;

B2. Code for loading csv file

Since the purpose of the foreign key is to identify a particular row of referenced table, it is generally required that the foreign key is equal to the candidate key in some row of the primary table, or else have no value (the **NULL** value) Elmasri, Ramez (2011).

The code to load the Service.csv file is as follows:

--command “ ” \\copy public.customer\_service(customer\_id, phone)

FROM ‘C:/LabFiles/Services.csv’ DELIMETER”, CSV HEADER QUOTE ‘\”

ESCAPE ‘’’’;’’’’

1. SQL query

INNER join returns rows when there is at least one match in both tables. With INNER joins, there is no ambiguity as it qualifies the column name with the table name(Dave, P. 4th slide, scenario 2).

SELECT cus.customer\_id, cus.children, cs.phone

From customer cus

LEFT JOIN public. “customer\_service” cs on cus.customer\_id = cs.customer\_id

WHERE cus.children = 1

C1. Files used for the Query.

The files used are from the customer\_service and customer tables.

1. Refresh of add-on files

There should be monthly updates of data.

D1. Explanation of D.

This is because the data in the tables is used to create monthly reports. Updating the data right before the month makes sense if there are either promotion or discounts going on during that period. Daily updates would waste utilities, manpower and computer power.

E. Panopto Video

<https://wgu.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=3dcc224d-b667-4361-8c27-b0c901633f3f>

F. Dave, P. PostgreSQL: Getting started, PostgreSQL: Database joins retrieving data from multiple tables. Pluralsight.

Data Star (n.d.). Retrieved November 11, 2023, from <https://www.youtube.com/watch?v=WFT5MaZN6g4>

G. Elmasri, Ramez (2011). Fundamentals of Database Systems. Addison-Wesley. pp. 73-74. ISBN 978-0-13-608620-8.