

Data Visualization

Q1. Create a sample table in postgres/mysql with following columns (15 Marks)

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, including a server named 'demo' with a database 'demo' containing a table 'cdac_power_bi'. The main pane shows the SQL query editor with the following query:

```
1 create TABLE cdac_power_bi(name varchar, id integer, age integer, DOB date);
2
3 select * from cdac_power_bi;
4
5 INSERT INTO cdac_power_bi VALUES ('kalpesh',1,24,'1998-08-18');
6 INSERT INTO cdac_power_bi VALUES ('ansa',2,25,'1997-07-11');
7 INSERT INTO cdac_power_bi VALUES ('sam',3,27,'1995-04-21');
8 INSERT INTO cdac_power_bi VALUES ('tom',4,22,'2000-08-30');
9 INSERT INTO cdac_power_bi VALUES ('dom',5,26,'1996-11-15');
```

The 'Data output' tab shows the results of the query:

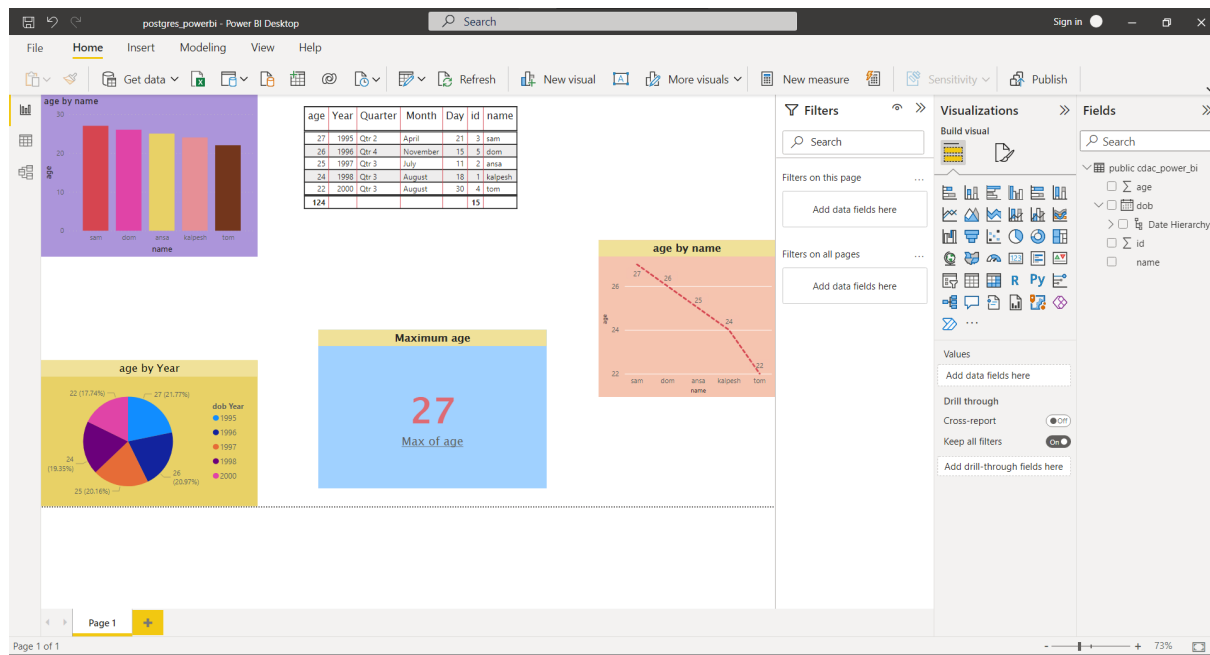
	name	id	age	dob
1	kalpesh	1	24	1998-08-18
2	ansa	2	25	1997-07-11
3	sam	3	27	1995-04-21
4	tom	4	22	2000-08-30
5	dom	5	26	1996-11-15

Total rows: 5 of 5 Query complete 00:00:00.058 Ln 3, Col 29

The screenshot shows the Power BI Desktop interface. The 'Navigator' pane on the left lists the data sources, including 'localhost: postgres [2]' and 'public.cdac_power_bi'. The main canvas displays a table view of the data loaded from the PostgreSQL table:

name	id	age	dob
kalpesh	1	24	8/18/1998
ansa	2	25	7/11/1997
sam	3	27	4/21/1995
tom	4	22	8/30/2000
dom	5	26	11/15/1996

The interface also shows the 'Filters' pane on the right, which is currently empty. The status bar at the bottom indicates 'Page 1 of 1'.



Q2. On product_table data set do the following (25 Marks)

- Create table chart with title, vendor, customer name, quantity, price, city
- Add new calculated column naming total_sales which is derived from quantity * price
- Add new measure naming max_price to get max of price column and then display every vendor max price in table chart
- Create pie chart showing the value and percentage of quantity by vendors
- Create one more column naming total_sales_2022 which is derived from quantity * price * 1.16
- Create clustered column chart showing both total_sales and total_sales_2022
- Create a slicer chart of price
- Calculate avg sales and show in tile
- Create gauge chart with
 - value as total_sales
 - Maximum value as max of total_sales_2022
 - Target Value as average of total_sales

