

Marc Romero

HW2

1.

7	6	1	1	2/4/2024	
	A	B	C	D	E
1	id	homework_name	posted_date	due_date	homework_duration
2	1	Homework Assignment 1	1/31/2024	02/05/2024 6:00	80 minutes

-no errors

2.

<qcmath290> Script-3

<qcmath290> Script-4

public

postgres

qcmath 1/2

create table homework (
"id" bigint,
"homework_name" varchar,
"posted_date" timestamp,
"due_date" timestamp,
"homework_duration_minutes" bigint,
constraint "pk_homework" primary key ("id")
);

Explain Execution Plan (Ctrl+Shift+E)

Statistics 1

Name	Value
Updated Rows	0
Query	create table homework ("id" bigint, "homework_name" varchar, "posted_date" timestamp, "due_date" timestamp, "homework_duration_minutes" bigint, constraint "pk_homework" primary key ("id"))
Start time	Wed Feb 21 11:08:41 EST 2024
Finish time	Wed Feb 21 11:08:41 EST 2024

```
);  
create table homework_submission(  
  "id" bigint,  
  student_id bigint,  
  homework_id bigint,  
  primary key ("id"),  
  constraint  
  "fk homework" foreign key (homework_id) references homework(id)  
);
```

Name	Value
Updated Rows	0
Query	<pre>create table homework_submission("id" bigint, student_id bigint, homework_id bigint, primary key ("id"), constraint "fk_homework" foreign key (homework_id) references homework(id))</pre>
Start time	Wed Feb 21 12:14:00 EST 2024
Finish time	Wed Feb 21 12:14:00 EST 2024

```

create table class_roster(
  "id" bigint,
  student_id bigint,
  homework_id bigint,
  primary key ("id"),
  constraint
  "id" foreign key (id) references homework_submission(id)
);

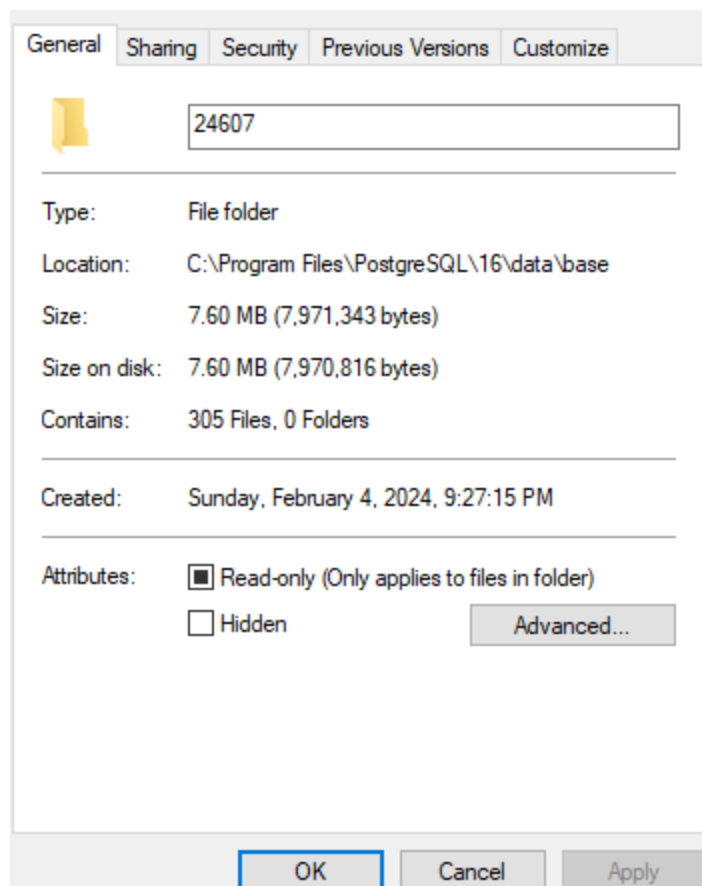
```

Name	Value
Updated Rows	0
Query	create table class_roster("id" bigint, student_id bigint, homework_id bigint, primary key ("id"), constraint "id" foreign key (id) references homework_submission(id))
Start time	Wed Feb 21 12:15:13 EST 2024
Finish time	Wed Feb 21 12:15:13 EST 2024

3.error, no size shown on base folder

base		2/4/2024 9:27 PM	File folder	
24,607	qcmath172	0	0	
24607		2/14/2024 11:43 AM	File folder	

Solution: went to properties on folder which instantly displayed size

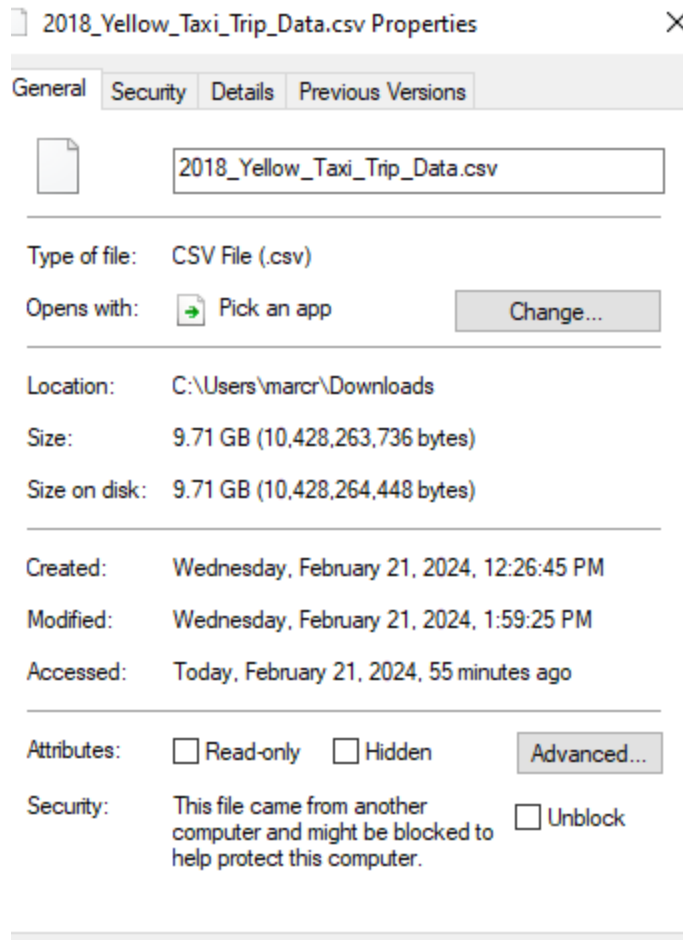


4.

The screenshot shows a database management interface with the 'Properties' tab selected for a table named 'yellow_taxi'. The table is located in the 'pg_default' tablespace, owned by 'postgres', and has an Object ID of 24725. The interface also displays a list of columns for the table, including 'VendorID', 'tpep_pickup_datetime', 'tpep_dropoff_datetime', 'passenger_count', 'trip_distance', 'RatecodeID', 'store_and_fwd_flag', 'PULocationID', 'DOLocationID', 'payment_type', 'fare_amount', 'extra', 'mta_tax', 'tip_amount', 'tolls_amount', 'improvement_surcharge', and 'total_amount'.

Column Name	#	Data type	Identity	Collation
123 VendorID	1	int4		
ABC tpep_pickup_dateti...	2	varchar(50)		default
ABC tpep_dropoff_datet...	3	varchar(50)		default
123 passenger_count	4	int4		
123 trip_distance	5	float4		
123 RatecodeID	6	int4		
ABC store_and_fwd_flag	7	varchar(50)		default
123 PULocationID	8	int4		
123 DOLocationID	9	int4		
123 payment_type	10	int4		
123 fare_amount	11	int4		
123 extra	12	int4		
123 mta_tax	13	float4		
123 tip_amount	14	int4		
123 tolls_amount	15	int4		
123 improvement_surc...	16	float4		
123 total_amount	17	float4		

5. The data we downloaded had a storage of 9.71 GB compared to our table which only was 7.6 MB. The reason for such a difference is because our data only had about 25 rows of information while the taxi data has 112M rows.



6. 1 ZB= 1 billion TB which means 120 Billion TB.

A 22TB hard drive is around \$575.

$120 \text{B TB} / 22 \text{ TB} = \sim 5,454,545$ of such a hard drive.

$5,454,545 \times 575 = 3,136,360,000,000$ or 3.1 trillion dollars.

To put into perspective, Microsoft's market cap is 2.988 Trillion, thus if one person were to have this much money, they could buy all of Microsoft's shares and still have roughly 100 billion

dollars left. With the remaining money, someone can buy the worth of each Premier League club, the highest valued soccer league in the world 9 times.