

Project milestone 2

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1 Notes

I am facing issues with serial variables. It shows that I do not have required permission from the server side. So i first set all the indexes and set variables and then took dump and uploaded it to the server

```
BEGIN
ERROR: permission denied for sequence account_account_id_seq
ERROR: current transaction is aborted, commands ignored until end of transaction block
ERROR: current transaction is aborted, commands ignored until end of transaction block
ERROR: current transaction is aborted, commands ignored until end of transaction block
ERROR: current transaction is aborted, commands ignored until end of transaction block
ERROR: current transaction is aborted, commands ignored until end of transaction block
ERROR: current transaction is aborted, commands ignored until end of transaction block
ROLLBACK
group_23=> |
```

2 Queries

All the queries for development of the application are written in Queries.sql file

Query	Descriptio
0	setting of serial variables
1	This query retrieves all the loans taken by a specific client, along with their account ID, loan ID, amount, duration, monthly payments, and status
2	This query retrieves all the credit cards issued to a specific client, along with their card ID, type, and issue date
3	This query will give the total balance available to the client with ID as client_id in all their bank accounts
4	This query calculates a credit score for a given client based on their transaction history and loan status. The credit score is based on the client's total credit, total debit, transaction count, loan count, and defaulted loans. The resulting credit score is one of "High Risk", "Very High Risk", "Low Activity", or "Good".
5	This query add new loan taken by the client_id on his account_id
6	This query add new a client in the client table
7	This query add new a order in the Permanent Order table
8	This query add new a card issued in the Credit Card table
9	This query gives the latest five transaction for a particular account
10	This query gives the latest five transaction for a client id
11	This query gives the default loan rate of particular client_id
12	This query gives average balance for a client_id in all his accounts
13	This query query list all the accounts of a client_id
14	This query insert into the disposition table
15	This query creates a new account for a client_id and insert it into Disposition and Account table
16	This query will list all the account linked with a particular bank
17	This will list all the loans linked with a particular account_id
18	This query will list the information about a particular loan
19	this query gives the current balance of the partcular account_id
20	This query inserts the transaction of given ammount
21	This query will delete a tuple in loan table
22	This query will delete a tuple in Account table
23	This query will delete a tuple in Credit.Card table
24	This query will delete a tuple in Disposition table
25	This query will delete a tuple in Permanent_order table
26	This query will delete a tuple in Trasancation table
27	This query list all the defaulted loans
28	This query calculates total credit card withdrawal for a card_id
29	This query gives all details abput client district_id

3 Optimization

1. INDEX ON Loan(account_id);
2. INDEX ON Loan(loan_id);
3. INDEX ON Disposition(account_id);

4. INDEX ON Disposition(client_id);
5. INDEX ON Transaction(account_id);
6. INDEX ON Demography(district_id);

4 Database Size

Relation	Number of rows	Number of Coloumns	Size
Account	4500	4	392 KB
Client	5369	4	744KB
Loan	682	7	216KB
Transaction	1056320	10	121MB
Credit_card	892	4	120KB
Disposition	5369	4	856KB
Permanent_Order	6471	6	568KB
Demography	77	16	72KB

5 Run time for each query

I have set the variables and ran all the queries(apart from Insertion) and noted their times

Query	Time (ms)
1	19.774
2	7.870
3	130.727
4	15.148ms
9	15.330ms
10	10.681ms
11	26.059ms
12	7.973ms
13	9.966ms
16	123.488ms
17	7.246ms
18	12.104
19	100.001
27	8.205
28	21.167
29	14.121

6 Repository

Tag Released : Milestone2

<https://github.com/Samrev/Archives.git>