

Project Description

A multi-threaded Socket server program is created that provide connection to a Customer Database stored on MYSQL database server through the use of JDBC (Java Database Connectivity) to allow multiple client sockets (users) to access and retrieve information. The Customer Database contain a Customer Table with Customer Data.

Cust_ID	Name	Class	Address	CreditLimit	Balance	Comment
1	John Doe	Premier MasterCard	Marco Polo Mansion, Causeway Bay, Hong Kong	1000000	3000000	Good benefits and rewards program.
2	Katherine lu	Advance Platinum	Marco Polo Mansion, Causeway Bay, Hong Kong	200000	400000	Great rewards program.
3	Nora Cheung	Premier MasterCard	Haywood Mansion, Causeway Bay, Hong Kong	1000000	8000000	Good rewards program.
4	Echo Doe	Visa SignatureCard	Haywood Mansion, Causeway Bay, Hong Kong	480000	600000	N/A

Another Socket program is created to allow the creation of multiple users to establish connection to the server socket. Then users can retrieve the entire Customer data table and the desire row information base on customer id from the socket. The Customer data table will be provided to each user after successful connection to the server socket, then users can input the row number to retrieve the desire customer information from the table in a GUI designed window. The result will be retrieved through the server socket across the network which connects to the Customer Database. The content retrieved will be displayed on the text area in the users window.

Client

Enter quote no. 3

Retrieve data table from Customer database.

Cust_ID	Name	Class	Address	CreditLimit	Balance	Comment
1	John Doe	Premier MasterCard	Marco Polo Mansion, Causeway Bay, Hong Kong	1000000	3000000	Good benefits and rewards program.
2	Katherine lu	Advance Platinum	Marco Polo Mansion, Causeway Bay, Hong Kong	200000	400000	Great rewards program.
3	Nora Cheung	Premier MasterCard	Haywood Mansion, Causeway Bay, Hong Kong	1000000	8000000	Good rewards program.
4	Echo Doe	Visa SignatureCard	Haywood Mansion, Causeway Bay, Hong Kong	480000	600000	N/A

Enter row number to retrieve row information...

Retrieve row 3 from Customer table

Row 3 : Nora Cheung, Premier MasterCard, Haywood Mansion, Causeway Bay, Hong Kong, \$1000000, \$8000000, Good rewards program.

Client

Enter quote no. 2

Retrieve data table from Customer database.

Cust_ID	Name	Class	Address	CreditLimit	Balance	Comment
1	John Doe	Premier MasterCard	Marco Polo Mansion, Causeway Bay, Hong Kong	1000000	3000000	Good benefits and rewards program.
2	Katherine lu	Advance Platinum	Marco Polo Mansion, Causeway Bay, Hong Kong	200000	400000	Great rewards program.
3	Nora Cheung	Premier MasterCard	Haywood Mansion, Causeway Bay, Hong Kong	1000000	8000000	Good rewards program.
4	Echo Doe	Visa SignatureCard	Haywood Mansion, Causeway Bay, Hong Kong	480000	600000	N/A

Enter row number to retrieve row information...]

Retrieve row 2 from Customer table

Row 2 : Katherine lu, Advance Platinum, Marco Polo Mansion, Causeway Bay, Hong Kong, \$200000, \$400000, Great rewards program.

Client

Enter quote no. 1

Retrieve data table from Customer database.

Cust_ID	Name	Class	Address	CreditLimit	Balance	Comment
1	John Doe	Premier MasterCard	Marco Polo Mansion, Causeway Bay, Hong Kong	1000000	3000000	Good benefits and rewards program.
2	Katherine lu	Advance Platinum	Marco Polo Mansion, Causeway Bay, Hong Kong	200000	400000	Great rewards program.
3	Nora Cheung	Premier MasterCard	Haywood Mansion, Causeway Bay, Hong Kong	1000000	8000000	Good rewards program.
4	Echo Doe	Visa SignatureCard	Haywood Mansion, Causeway Bay, Hong Kong	480000	600000	N/A

Enter row number to retrieve row information...

Retrieve row 1 from Customer table

Row 1 : John Doe, Premier MasterCard, Marco Polo Mansion, Causeway Bay, Hong Kong, \$1000000, \$3000000, Good benefits and rewards program.

The Server window will also display the process which multiple users connects to it to accessed the Customer database and retrieved the necessary customer's information.

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MultiThreadServer started at Sun Jan 07 01:02:55 HKT 2018

Starting thread for client 1 at Sun Jan 07 01:02:56 HKT 2018
Client 1's host name is localhost
Client 1's IP Address is 127.0.0.1

Retrieve data table from Customer database for client 1
Cust_ID  Name      Class      Address      CreditLimit  Balance      Comment
1         John Doe   Premier MasterCard  Marco Polo Mansion, Causeway Bay, Hong Kong  1000000  3000000  Good benefits and rewards program.
2         Katherine Iu  Advance Platinum  Marco Polo Mansion, Causeway Bay, Hong Kong  200000  400000  Great rewards program.
3         Nora Cheung  Premier MasterCard  Haywood Mansion, Causeway Bay, Hong Kong  1000000  8000000  Good rewards program.
4         Echo Doe    Visa SignatureCard  Haywood Mansion, Causeway Bay, Hong Kong  480000  600000  N/A

Row data requested from client 1 is Row 1
Row 1 : John Doe, Premier MasterCard, Marco Polo Mansion, Causeway Bay, Hong Kong, $1000000, $3000000, Good benefits and rewards program.

Starting thread for client 2 at Sun Jan 07 01:03:05 HKT 2018
Client 2's host name is localhost
Client 2's IP Address is 127.0.0.1

Retrieve data table from Customer database for client 2
Cust_ID  Name      Class      Address      CreditLimit  Balance      Comment
1         John Doe   Premier MasterCard  Marco Polo Mansion, Causeway Bay, Hong Kong  1000000  3000000  Good benefits and rewards program.
2         Katherine Iu  Advance Platinum  Marco Polo Mansion, Causeway Bay, Hong Kong  200000  400000  Great rewards program.
3         Nora Cheung  Premier MasterCard  Haywood Mansion, Causeway Bay, Hong Kong  1000000  8000000  Good rewards program.
4         Echo Doe    Visa SignatureCard  Haywood Mansion, Causeway Bay, Hong Kong  480000  600000  N/A

Row data requested from client 2 is Row 2
Row 2 : Katherine Iu, Advance Platinum, Marco Polo Mansion, Causeway Bay, Hong Kong, $200000, $400000, Great rewards program.

Starting thread for client 3 at Sun Jan 07 01:03:13 HKT 2018
Client 3's host name is localhost
Client 3's IP Address is 127.0.0.1

Retrieve data table from Customer database for client 3
Cust_ID  Name      Class      Address      CreditLimit  Balance      Comment
1         John Doe   Premier MasterCard  Marco Polo Mansion, Causeway Bay, Hong Kong  1000000  3000000  Good benefits and rewards program.
2         Katherine Iu  Advance Platinum  Marco Polo Mansion, Causeway Bay, Hong Kong  200000  400000  Great rewards program.
3         Nora Cheung  Premier MasterCard  Haywood Mansion, Causeway Bay, Hong Kong  1000000  8000000  Good rewards program.
4         Echo Doe    Visa SignatureCard  Haywood Mansion, Causeway Bay, Hong Kong  480000  600000  N/A

Row data requested from client 3 is Row 3
Row 3 : Nora Cheung, Premier MasterCard, Haywood Mansion, Causeway Bay, Hong Kong, $1000000, $8000000, Good rewards program.
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