

Christian D. Rosado Arroyo

CNT 4714 – Project Three – Fall 2021

Title: “Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC”

Screenshots:

Root User Commands:

#Command 1:

Query: Which rider won Paris Roubaix Femmes in 2021?

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER: com.mysql.cj.jdbc.Driver

DATABASE URL: jdbc:mysql://localhost:3306/project3

USERNAME: root

PASSWORD:

select ridername
from racewinners
where racename = 'Paris Roubaix Femmes' and raceyear = 2021;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername
Lizzie Deignan

CLEAR RESULT WINDOW

#Command 2:

Query: List the teams that ride bikes manufactured in Italy.

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

IDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select teamname
from teams
where bikename in (select bikename
from bikes
where country_of_origin = 'Italy');

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

teamname
Brooklyn
Lampre
Landbouwkredit
Molteni
TI-Raleigh
UAE

CLEAR RESULT WINDOW

#Command 3:

Query: List the name of every race won by a rider who has more than

50 professional wins.

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

```
select distinct racename
from racewinners
where ridename in (select ridename
from riders
where num_pro_wins > 50);
```

CONNECTED TO JDBC:MYSQLE://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

racename
Amstel Gold
Fleche Wallone - Feminine
GP-E3
Liege-Bastogne-Liege
Paris-Roubaix
Rund de Flandren
World Championship - Elite Women

CLEAR RESULT WINDOW

#Command 4:

Query: List the names of all the riders on the same team as the winner of the

2010 Paris-Roubaix race.

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select ridername
from riders
where teamname = (select teamname
from riders
where ridername = (select ridername
from racewinners
where racename = 'Paris-Roubaix'
and raceyear = 2010
)
)
);

CONNECTED TO JDBC:MYSQl://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername
Fabian Cancellara
Jens Voigt
Niki Sorensen
Thor Hushovd

CLEAR RESULT WINDOW

#Commands 5A, 5B, and 5C:

Insert the rider Mark Renshaw into the riders table.

* * Do a "before" and "after" selection on the riders table

Command 5A:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND


EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridename	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Andy Schleck	Leopard-Trek	Luxembourg	35	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schekker	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
Frank Schleck	Leopard-Trek	Luxembourg	28	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armistead	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M

CLEAR RESULT WINDOW

Command 5B:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

insert into riders values ('Mark Renshaw','HTC-Columbia','Australia',26, 'M');

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

CLEAR RESULT WINDOW

Command 5C:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

DATABASE URL:

USERNAME:

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Andy Schleck	Leopard-Trek	Luxembourg	35	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schenger	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
Frank Schleck	Leopard-Trek	Luxembourg	28	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armistead	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	26	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M

CLEAR RESULT WINDOW

#Command 6:

List the names of those riders who have won Paris-Roubaix at least two times.

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select ridername
from racewinners
where racename = 'Paris-Roubaix'
group by ridername
having count(ridername) >= 2;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername
Eddy Merckx
Roger de Vlaeminck
Fabian Cancellara

CLEAR RESULT WINDOW

#Commands 7A, 7B, and 7C:

Delete all the riders from Luxembourg from the riders table.

* * * Do a "before" and "after" select * from riders for this command.

Command 7A:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

DATABASE URL:

USERNAME:

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND


EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridename	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Andy Schleck	Leopard-Trek	Luxembourg	35	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schener	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
Frank Schleck	Leopard-Trek	Luxembourg	28	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armstrong	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	26	M
Matt Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M

CLEAR RESULT WINDOW

Command 7B:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

delete from riders where nationality = 'Luxembourg';

CLEAR RESULT WINDOW

Command 7C:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schener	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armstrong	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	26	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M
Phillipe Gilbert	BMC	Belgium	85	M

CLEAR RESULT WINDOW

#Commands 8A, 8B, and 8C:

Update rider Mark Renshaw to show number of wins = 30 in the riders table.

* * Do a "before" and "after" selection on the riders table

Command 8A:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND


EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schenger	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armstrong	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	26	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M
Phillippe Gilbert	BMC	Belgium	85	M

CLEAR RESULT WINDOW

Command 8B:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

update riders set num_pro_wins = 30 where ridername = "Mark Renshaw";

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

CLEAR RESULT WINDOW

Command 8C:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schenger	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armistead	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	30	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M
Phillipe Gilbert	BMC	Belgium	85	M

CLEAR RESULT WINDOW

Client User Commands:

#Command 1:

Query: Which rider won the World Championship - Elite Women in 2021?

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

client

PASSWORD:

select ridername
from racewinners
where racename = 'World Championship - Elite Women' and raceyear = 2021;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername

Elsa Balsamo

CLEAR RESULT WINDOW

#Commands 2A, 2B, and 2C:

Delete all the riders from Norway from the riders table.

* * * Do a "before" and "after" select * from riders for this command.

Note: the before and after select statements will execute, but the delete will not

thus no changes will be reflected in the before and after snapshots.

Command 2A:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:
com.mysql.cj.jdbc.Driver

DATABASE URL:
jdbc:mysql://localhost:3306/project3

USERNAME:
client

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schenger	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armistead	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	30	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M
Phillipe Gilbert	BMC	Belgium	85	M

CLEAR RESULT WINDOW

Command 2B:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

DATABASE URL:

USERNAME:

PASSWORD:

delete from riders where nationality = 'Norway';

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

Database error

DELETED command denied to user 'client'@'localhost' for table 'riders'

OK

CLEAR RESULT WINDOW

Command 2C:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

client

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schenger	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armstrong	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	30	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M
Phillipe Gilbert	BMC	Belgium	85	M

CLEAR RESULT WINDOW

#Commands 3A, 3B, and 3C:

Update rider Marianne Vos to show number of wins = 245 in the riders table.

* * Do a "before" and "after" selection on the riders table

Note: the before and after select statements will execute, but the delete will not

thus no changes will be reflected in the before and after snapshots.

Command 3A:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

DATABASE URL:

USERNAME:

PASSWORD:

SQL COMMAND:

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CORRECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schener	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armistead	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	30	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M
Phillippe Gilbert	BMC	Belgium	85	M

CLEAR RESULT WINDOW

Command 3B:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

DATABASE URL:

USERNAME:

PASSWORD:

update riders set num_pro_wins = 245 where ridername = "Marianne Vos";

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

Database error

UPDATE command denied to user 'client'@'localhost' for table 'riders'

OK

CLEAR RESULT WINDOW

Command 3C:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

client

PASSWORD:

select * from riders;

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alessandro Ballan	Lampre	Italy	21	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schenger	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armistead	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Mark Renshaw	HTC-Columbia	Australia	30	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M
Phillipe Gilbert	BMC	Belgium	85	M

CLEAR RESULT WINDOW

#Command 4:

Query: Which rider won the 2021 Tour de France?

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

DATABASE URL:

USERNAME:

PASSWORD:

CONNECTED TO JDBC:MYSQLE://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

```
select ridername
from racewinners
where racename = "Tour de France" and raceyear = 2021;
```

ridername
Tadej Pogacar

CLEAR RESULT WINDOW

Operations Log Total:

The screenshot displays the MySQL Workbench environment. At the top, the title bar reads 'MySQL Workbench' and the status bar indicates 'Local instance MySQL5.7.32'. The main menu includes File, Edit, View, Query, Database, Server, Tools, Window, and Help. Below the menu is a toolbar with icons for various database operations.

The central workspace is divided into three panes:

- Left Pane (SCHEMAS):** Shows a tree view of databases. The 'information' database is selected, and the 'No object selected' message is displayed.
- Top Center Pane (Query Editor):** Contains a single SQL query: `select * from operationscount;`
- Bottom Center Pane (Result Grid):** Displays the execution results of the query. The grid has two columns: `num_operations` and `num_updates`. There are two rows of data:

num_operations	num_updates
17	2
2	17

At the bottom, the 'Ad-hoc Output' pane shows a table with columns: `Time`, `Action`, `Message`, and `Duration / Refresh`. It lists four rows of execution details, each showing a timestamp, the action performed (e.g., 'select * from operationscount LIMIT 0, 1000'), the message (e.g., 'Rows(s) returned'), and the duration (e.g., '0.000 sec / 0.000 sec').

GUI Areas Defined:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

IDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

PASSWORD:

NO CONNECTION!

CONNECT TO DATABASE


CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

CLEAR RESULT WINDOW

Initial Condition Established:

 Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

CONNECTED TO JDBC:MYSQLE://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

CLEAR RESULT WINDOW

Drivers Available:

🔥 Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

.....

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

CLEAR RESULT WINDOW

URLs Available:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

jdbc:mysql://localhost:3306/project3

jdbc:mysql://localhost:3306/bikedb

root

USERNAME:

PASSWORD:

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

CLEAR RESULT WINDOW

User Issued Select Command:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select * from riders

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

ridername	teamname	nationality	num_pro_wins	gender
Alberto Contador	Astana	Spain	21	M
Alesandro Ballan	Lampre	Italy	21	M
Andy Schleck	Leopard-Trek	Luxembourg	35	M
Bradley Wiggins	Ti-Raleigh	Great Britain	13	M
Chris Froome	Sky	Great Britain	23	M
Dietrich Thurau	Ti-Raleigh	Germany	78	M
Elisa Borghini	Schenger	Italy	34	F
Fabian Cancellara	SaxoBank	Switzerland	58	M
Fedor den Hertog	Acqua & Sapone	Netherlands	20	M
Frank Schleck	Leopard-Trek	Luxembourg	28	M
George Hincapie	BMC	USA	22	M
Jens Voigt	SaxoBank	Germany	38	M
Johan Museeuw	Quick-Step	Belgium	120	M
Lizzie Armistead	Boels-Dolmans	Great Britain	78	F
Marianne Vos	WM3	Holland	230	F
Mario Cipolini	Acqua & Sapone	Italy	130	M
Mark Cavendish	HTC-Columbia	Isle of Man	34	M
Matti Breschel	Cofidis	Denmark	12	M
Miguel Indurain	BMC	Spain	76	M
Nicolas Roche	Cofidis	Ireland	8	M
Niki Sorensen	SaxoBank	Norway	32	M
Pauline Ferrand	Gitane	France	45	F
Peter Post	Ti-Raleigh	Netherlands	150	M
Peter Sagan	Bora-Hansgrohe	Slovakia	101	M

CLEAR RESULT WINDOW

A More Complicated Query:

🔥 Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select distinct racename
from racewinners
where ridename in (select ridename
from riders
where num_pro_wins > 50)

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

EXECUTE SQL COMMAND

SQL EXECUTION RESULT WINDOW:

racename
Amstel Gold
Fleche Wallone - Feminine
GP-E3
Liege-Bastogne-Liege
Paris-Roubaix
Rund de Flandren
World Championship - Elite Women

CLEAR RESULT WINDOW

User Mistake:

Project Three: Two-Tier Client-Server Application Development With MySQL and JDBC

ENTER DATABASE INFORMATION:

JDBC DRIVER:

com.mysql.cj.jdbc.Driver

DATABASE URL:

jdbc:mysql://localhost:3306/project3

USERNAME:

root

PASSWORD:

select distinct racename
from racewinners
where ridename in (select ridename
from riders
where num_pro_winds > 50)

CONNECTED TO JDBC:MYSQL://LOCALHOST:3306/PROJECT3

CONNECT TO DATABASE

CLEAR SQL COMMAND

SQL EXECUTION RESULT WINDOW:

Database error

X

Unknown column 'num_pro_winds' in 'where clause'

OK

CLEAR RESULT WINDOW