Command Test Cases

Root Commands:

Command 1:

```
You are connected to the Project 4 Enterprise System as a root-level user.

Please enter any valid SQL query or update below:

select snum, sname
from suppliers
where not exists
( select *
      from parts
   where not exists
( select *
   from shipments
   where shipments.snum = suppliers.snum
and shipments.pnum = parts.pnum
)
);
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

snum	sname
S6	Nicola Gianniberti

Command 2A:

snum	sname	status	city
S1	Michael Schumacher	1	Berlin
S10	David Coulthard	2	London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx	1	Brussels
S13	Candice Swanepoel	3	Cape Town
S14	Adriana Lima	4	Sao Paulo
S15	Jennifer Lawrence	6	Owensboro
S16	Fernando Alonso	4	Madrid
S17	Rubens Barichello	3	Sao Paulo
S18	Tom Boonen	2	Brussels
S19	Johan Messeuw	1	Eekloo
S2	Juan Pablo Montoya	4	Interlagos
S20	Danilo Rossi	2	Milan
S21	Lizzie Armistead	1	Hempstead
S22	Jan Ullrich	5	Bonn
S3	Dietrich Thurau	1	Berlin
S32	Bernd Schnieder	2	Berlin
S33	Rolf Aldag	3	Berlin
S4	Mark Webber	5	Melbourne
S44	Beryl Burton	4	London
S5	Jenson Button	4	London
S56	Marianne Vos	8	Zandvoort
S6	Nicola Gianniberti	2	Milan
S7	Christian Albers	3	Orlando
S8	Giancarlo Fisichella	3	Milan
S9	Kimi Rikonnen	2	Helsinki

Command 2B:

Please enter any valid SQL query or update below:

```
insert into shipments
values ('S5', 'P6', 'J7', 400);
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

The statement executed successfully. 1 row(s) affected.

Business Logic Detected! - Updating Supplier Status

Business logic updated 1 supplier status mark.

Command 2C:

snum	sname	status	city
S1	Michael Schumacher	1	Berlin
S10	David Coulthard	2	London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx	1	Brussels
S13	Candice Swanepoel	3	Cape Town
S14	Adriana Lima	4	Sao Paulo
S15	Jennifer Lawrence	6	Owensboro
S16	Fernando Alonso	4	Madrid
S17	Rubens Barichello	3	Sao Paulo
S18	Tom Boonen	2	Brussels
S19	Johan Messeuw	1	Eekloo
S2	Juan Pablo Montoya	4	Interlagos
S20	Danilo Rossi	2	Milan
S21	Lizzie Armistead	1	Hempstead
S22	Jan Ullrich	5	Bonn
S3	Dietrich Thurau	1	Berlin
S32	Bernd Schnieder	2	Berlin
S33	Rolf Aldag	3	Berlin
S4	Mark Webber	5	Melbourne
S44	Beryl Burton	4	London
S5	Jenson Button	9	London
S56	Marianne Vos	8	Zandvoort
S6	Nicola Gianniberti	2	Milan
S7	Christian Albers	3	Orlando
S8	Giancarlo Fisichella	3	Milan
S9	Kimi Rikonnen	2	Helsinki

Command 3A:

snum	sname	status	city
S1	Michael Schumacher	1	Berlin
S10	David Coulthard	2	London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx	1	Brussels
S13	Candice Swanepoel	3	Cape Town
S14	Adriana Lima	4	Sao Paulo
S15	Jennifer Lawrence	6	Owensboro
S16	Fernando Alonso	4	Madrid
S17	Rubens Barichello	3	Sao Paulo
S18	Tom Boonen	2	Brussels
S19	Johan Messeuw	1	Eekloo
S2	Juan Pablo Montoya	4	Interlagos
S20	Danilo Rossi	2	Milan
S21	Lizzie Armistead	1	Hempstead
S22	Jan Ullrich	5	Bonn
S3	Dietrich Thurau	1	Berlin
S32	Bernd Schnieder	2	Berlin
S33	Rolf Aldag	3	Berlin
S4	Mark Webber	5	Melbourne
S44	Beryl Burton	4	London
S5	Jenson Button	9	London
S56	Marianne Vos	8	Zandvoort
S6	Nicola Gianniberti	2	Milan
S7	Christian Albers	3	Orlando
S8	Giancarlo Fisichella	3	Milan
S9	Kimi Rikonnen	2	Helsinki

Command 3B:

Please enter any valid SQL query or update below:

```
insert into suppliers
values ('S39','Candice Swanepoel',10,'Cardiff');
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

The statement executed successfully. 1 row(s) affected.

Business Logic Not Triggered.

Command 3C:

snum	sname	status	city
S1	Michael Schumacher	1	Berlin
S10	David Coulthard	2	London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx	1	Brussels
S13	Candice Swanepoel	3	Cape Town
S14	Adriana Lima	4	Sao Paulo
S15	Jennifer Lawrence	6	Owensboro
S16	Fernando Alonso	4	Madrid
S17	Rubens Barichello	3	Sao Paulo
S18	Tom Boonen	2	Brussels
S19	Johan Messeuw	1	Eekloo
S2	Juan Pablo Montoya	4	Interlagos
S20	Danilo Rossi	2	Milan
S21	Lizzie Armistead	1	Hempstead
S22	Jan Ullrich	5	Bonn
S3	Dietrich Thurau	1	Berlin
S32	Bernd Schnieder	2	Berlin
S33	Rolf Aldag	3	Berlin
S39	Candice Swanepoel	10	Cardiff
S4	Mark Webber	5	Melbourne
S44	Beryl Burton	4	London
S5	Jenson Button	9	London
S56	Marianne Vos	8	Zandvoort
S6	Nicola Gianniberti	2	Milan
S7	Christian Albers	3	Orlando
S8	Giancarlo Fisichella	3	Milan
S9	Kimi Rikonnen	2	Helsinki

Command 3D:

You are connected to the Project 4 Enterprise System as a root-level user.

Please enter any valid SQL query or update below:

```
insert into shipments
values ('S39','P3','J1', 20);
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

The statement executed successfully. 1 row(s) affected.

Business Logic Triggered! No status marks updated though.

Command 3E:

snum	sname	status	city
S1	Michael Schumacher	1	Berlin
S10	David Coulthard	2	London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx	1	Brussels
S13	Candice Swanepoel	3	Cape Town
S14	Adriana Lima	4	Sao Paulo
S15	Jennifer Lawrence	6	Owensboro
S16	Fernando Alonso	4	Madrid
S17	Rubens Barichello	3	Sao Paulo
S18	Tom Boonen	2	Brussels
S19	Johan Messeuw	1	Eekloo
S2	Juan Pablo Montoya	4	Interlagos
S20	Danilo Rossi	2	Milan
S21	Lizzie Armistead	1	Hempstead
S22	Jan Ullrich	5	Bonn
S3	Dietrich Thurau	1	Berlin
S32	Bernd Schnieder	2	Berlin
S33	Rolf Aldag	3	Berlin
S39	Candice Swanepoel	10	Cardiff
S4	Mark Webber	5	Melbourne
S44	Beryl Burton	4	London
S5	Jenson Button	9	London
S56	Marianne Vos	8	Zandvoort
S6	Nicola Gianniberti	2	Milan
S7	Christian Albers	3	Orlando
S8	Giancarlo Fisichella	3	Milan
S9	Kimi Rikonnen	2	Helsinki

Command 4:

You are connected to the Project 4 Enterprise System as a root-level user.

Please enter any valid SQL query or update below:

```
select distinct suppliers.snum, suppliers.sname, shipments.pnum
from suppliers natural join shipments
where shipments.pnum in
    (select pnum
     from parts
     where not exists
        (select *
         from jobs
         where not exists
            (select *
             from shipments
             where shipments.snum = suppliers.snum
                  and shipments.pnum = parts.pnum
                  and shipments.jnum = jobs.jnum
)
)
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

snum	sname	pnum
S1	Michael Schumacher	P8

Command 5A:

snum	sname	status	city
S1	Michael Schumacher	1	Berlin
S10	David Coulthard	2	London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx	1	Brussels
S13	Candice Swanepoel	3	Cape Town
S14	Adriana Lima	4	Sao Paulo
S15	Jennifer Lawrence	6	Owensboro
S16	Fernando Alonso	4	Madrid
S17	Rubens Barichello	3	Sao Paulo
S18	Tom Boonen	2	Brussels
S19	Johan Messeuw	1	Eekloo
S2	Juan Pablo Montoya	4	Interlagos
S20	Danilo Rossi	2	Milan
S21	Lizzie Armistead	1	Hempstead
S22	Jan Ullrich	5	Bonn
S3	Dietrich Thurau	1	Berlin
S32	Bernd Schnieder	2	Berlin
S33	Rolf Aldag	3	Berlin
S39	Candice Swanepoel	10	Cardiff
S4	Mark Webber	5	Melbourne
S44	Beryl Burton	4	London
S5	Jenson Button	9	London
S56	Marianne Vos	8	Zandvoort
S6	Nicola Gianniberti	2	Milan
S7	Christian Albers	3	Orlando
S8	Giancarlo Fisichella	3	Milan
S9	Kimi Rikonnen	2	Helsinki

Database Results:

Command 5B (*two Screenshots stitched together*):

snum	pnum	jnum	quantity
		Database Results:	
S1	P1	J1	40
S1	P1	J4	200
S1	P19	J13	200
S1	P22	J5	40
S1	P3	J13	95
S1	P8	J1	80
S1	P8	J13	200
S1	P8	J2	100
S1	P8	J22	340
S1	P8	J3	200
S1	P8	J4	100
S1	P8	J5	225
S1	P8	J6	230
S12	P3	J22	750
S17	P3	J2	800
S2	P3	J1	40
S2	P3	J2	15
S2	P3	J22	50
S2	P3	J3	20
S2	P3	J4	50
S2	P3	J5	91
S2	P4	J1	50
S21	P2	J4	200
S22	P1	J3	120
S3	P10	J4	200
S3	P24	J2	200
S3	P3	J1	99
S3	P3	J6	75
S3	P4	J6	80
S3	P5	J6	120
S3	P9	J1	110
S39	P3	J1	20
S4	P6	J2	50
S44	P44	J2	100
S44	P48	J5	40
S5	P6	J7	400
S6	P1	J2	40
S6	P10	J3	100
S6	P11	J2	40
S6	P12	J4	75
S6	P13	J5	100
S6	P19	J5	50
S6	P2	J2	60
S6	P24	J2	20
S6	P3	J4	500
S6	P33	J4	40
S6	P4	J2	120
S6	P44	J4	20
S6	P48	J2	100
S6	P5	J22	200
S6	P53	J1	25
S6	P6	J22	120
S6	P7	J1	300
S6	P8	J3	110
S6	P9	J4	180
S7	P1	J2	40
S7	P12	J2	40
S7	P6	J2	40

Command 5C:

You are connected to the Project 4 Enterprise System as a root-level user.

Please enter any valid SQL query or update below:

```
update shipments
set quantity = quantity + 10
where pnum = 'P3';
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

The statement executed successfully. 13 row(s) affected.

Business Logic Detected! - Updating Supplier Status

Business Logic update 6 supplier status marks.

Command 5D:

snum	pnum	jnum	quantity
Database Results:			
snum	pnum	jnum	quantity
S1	P1	J1	40
S1	P1	J4	200
S1	P19	J13	200
S1	P22	J5	40
S1	P3	J13	105
S1	P8	J1	80
S1	P8	J13	200
S1	P8	J2	100
S1	P8	J22	340
S1	P8	J3	200
S1	P8	J4	100
S1	P8	J5	225
S1	P8	J6	230
S12	P3	J22	760
S17	P3	J2	810
S2	P3	J1	50
S2	P3	J2	25
S2	P3	J22	60
S2	P3	J3	30
S2	P3	J4	60
S2	P3	J5	101
S2	P4	J1	50
S21	P2	J4	200
S22	P1	J3	120
S3	P10	J4	200
S3	P24	J2	200
S3	P3	J1	109
S3	P3	J6	85
S3	P4	J6	80
S3	P5	J6	120
S3	P9	J1	110
S39	P3	J1	30
S4	P6	J2	50
S44	P44	J2	100
S44	P48	J5	40
S5	P6	J7	400
S6	P1	J2	40
S6	P10	J3	100
S6	P11	J2	40
S6	P12	J4	75
S6	P13	J5	100
S6	P19	J5	50
S6	P2	J2	60
S6	P24	J2	20
S6	P3	J4	510
S6	P33	J4	40
S6	P4	J2	120
S6	P44	J4	20
S6	P48	J2	100
S6	P5	J22	200
S6	P53	J1	25
S6	P6	J22	120
S6	P7	J1	300
S6	P8	J3	110
S6	P9	J4	180
S7	P1	J2	40
S7	P12	J2	40
S7	P6	J2	40

Command 5E:

snum	sname	status	city
	Database Results:		
S1	Michael Schumacher	6	Berlin
S10	David Coulthard	2	London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx	6	Brussels
S13	Candice Swanepoel	3	Cape Town
S14	Adriana Lima	4	Sao Paulo
S15	Jennifer Lawrence	6	Owensboro
S16	Fernando Alonso	4	Madrid
S17	Rubens Barichello	8	Sao Paulo
S18	Tom Boonen	2	Brussels
S19	Johan Messeuw	1	Eekloo
S2	Juan Pablo Montoya	9	Interlagos
S20	Danilo Rossi	2	Milan
S21	Lizzie Armistead	1	Hempstead
S22	Jan Ullrich	5	Bonn
S3	Dietrich Thurau	6	Berlin
S32	Bernd Schnieder	2	Berlin
S33	Rolf Aldag	3	Berlin
S39	Candice Swanepoel	10	Cardiff
S4	Mark Webber	5	Melbourne
S44	Beryl Burton	4	London
S5	Jenson Button	9	London
S56	Marianne Vos	8	Zandvoort
S6	Nicola Gianniberti	7	Milan
S7	Christian Albers	3	Orlando
S8	Giancarlo Fisichella	3	Milan
S9	Kimi Rikonnen	2	Helsinki

Command 6:

You are connected to the Project 4 Enterprise System as a root-level user.

Please enter any valid SQL query or update below:

```
select sname
from suppliers
where snum in (select snum
              from shipments
      where pnum in (select pnum
    from parts
    where color = 'green'
    )
)
and
snum not in (select snum
              from shipments
 where pnum in (select pnum
      from parts
where color <>
'green'
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

sname
Beryl Burton

Command 7:

You are connected to the Project 4 Enterprise System as a root-level user.

Please enter any valid SQL query or update below:

```
select alpha
from jobs;
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

Database Error: java.sql.SQLSyntaxErrorException: Unknown column 'alpha' in 'field list'

Command 8:

You are connected to the Project 4 Enterprise System as a root-level user.

Please enter any valid SQL query or update below:

```
update jobs
set city = "Madrid"
where city = "Paris";
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

The statement executed successfully. 1 row(s) affected.

Business Logic Not Triggered

Command 9:

Please enter any valid SQL query or update below:

```
select *
from jobs;
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

jnum	jname	numworkers	city
J1	Operation DB	45	Berlin
J13	Night Strike	350	Madrid
J2	Really Big Job	500	Melbourne
J22	Project On-Time	200	London
J3	Small Job	100	Chicago
J4	New Job	50	Berlin
J5	My Job	1	Orlando
J6	A New Job	14	Milan

Command 10:

You are connected to the Project 4 Enterprise System as a root-level user.

Please enter any valid SQL query or update below:

```
select count(*) as total_shipments
 from shipments;
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

total_shipments
58

Client Commands:

Command 1:


```
You are connected to the Project 4 Enterprise System as a client-level user.

Please enter any valid SQL query or update below:

select snum, sname
from suppliers
where not exists
( select *
      from parts
  where parts.color = "green"
  and not exists
( select *
  from shipments
  where shipments.snum = suppliers.snum
and shipments.pnum = parts.pnum
)
);
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

snum	sname
S6	Nicola Gianniberti

Command 2:


```
You are connected to the Project 4 Enterprise System as a client-level user.

Please enter any valid SQL query or update below:

update jobs
set city = "Madrid"
where city = "Paris";
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

Database Error: java.sql.SQLSyntaxErrorException: UPDATE command
denied to user 'client'@'localhost' for table 'jobs'

Command 3:

You are connected to the Project 4 Enterprise System as a client-level user.

Please enter any valid SQL query or update below:

```
select count(*) as total_shipments_with_quantity_over_100
from shipments
where quantity > 100;
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

total_shipments_with_quantity_over_100
26

Command 4:

You are connected to the Project 4 Enterprise System as a client-level user.

Please enter any valid SQL query or update below:

```
replace into suppliers values ("S1", "Michael
Schumacher",4,"Frankfurt")
```

Execute Command   Reset   Clear Results

All execution results will appear below this line:

Database Results:

Database Error: java.sql.SQLSyntaxErrorException: INSERT, DELETE command denied to user 'client'@'localhost' for table 'suppliers'