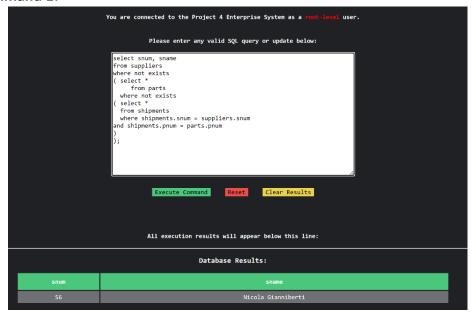
Command Test Cases

Root Commands:

Command 1:



Command 2A:

snum	sname	status	city
S1	Michael Schumacher	1	Berlin
S10	David Coulthard		London
511	Bernard Hinault	7	Paris
512	Eddy Merckx		Brussels
S13	Candice Swanepoel	3	Cape Town
514	Adriana Lima		Sao Paulo
515	Jennifer Lawrence	6	Owensboro
516	Fernando Alonso		Madrid
517	Rubens Barichello	3	Sao Paulo
S18	Tom Boonen		Brussels
S19	Johan Messeuw	1	Eekloo
52	Juan Pablo Montoya		Interlagos
S20	Danilo Rossi	2	Milan
521	Lizzie Armistead		Hempstead
522	Jan Ullrich	5	Bonn
S 3	Dietrich Thurau		Berlin
532	Bernd Schnieder	2	Berlin
S33	Rolf Aldag		Berlin
S4	Mark Webber	5	Melbourne
S44	Beryl Burton		London
S5	Jenson Button	4	London
S56	Marianne Vos		Zandvoort
56	Nicola Gianniberti	2	Milan
S7	Christian Albers		Orlando
58	Giancarlo Fisichella	3	Milan
59	Kimi Rikonnen		Helsinki

Command 2B:



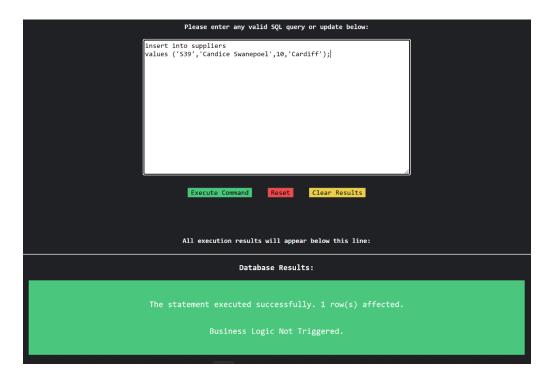
Command 2C:

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

Command 3A:

snum	sname	status	city
51	Michael Schumacher	1	Berlin
510	David Coulthard		London
S11	Bernard Hinault	7	Paris
S12	Eddy Merckx		Brussels
513	Candice Swanepoel	3	Cape Town
S14	Adriana Lima		Sao Paulo
S15	Jennifer Lawrence	6	Owensboro
S16	Fernando Alonso		Madrid
S17	Rubens Barichello	3	Sao Paulo
518	Tom Boonen		Brussels
S19	Johan Messeuw	1	Eekloo
52	Juan Pablo Montoya		Interlagos
520	Danilo Rossi	2	Milan
521	Lizzie Armistead		Hempstead
522	Jan Ullrich	5	Bonn
S3	Dietrich Thurau		Berlin
S32	Bernd Schnieder	2	Berlin
533	Rolf Aldag		Berlin
54	Mark Webber	5	Melbourne
S44	Beryl Burton		London
S5	Jenson Button	9	London
S56	Marianne Vos		Zandvoort
56	Nicola Gianniberti	2	Milan
S7	Christian Albers		Orlando
58	Giancarlo Fisichella	3	Milan
59	Kimi Rikonnen		Helsinki

Command 3B:



Command 3C:

Database Results:				
snum	sname	status	city	
S1		1	Berlin	
S10	David Coulthard		London	
S11	Bernard Hinault	7	Paris	
	Eddy Merckx		Brussels	
513	Candice Swanepoel	3	Cape Town	
	Adriana Lima		Sao Paulo	
\$15	Jennifer Lawrence	6	Owensboro	
	Fernando Alonso		Madrid	
S17	Rubens Barichello	3	Sao Paulo	
	Tom Boonen		Brussels	
S19	Johan Messeuw	1	Eekloo	
	Juan Pablo Montoya		Interlagos	
520	Danilo Rossi	2	Milan	
	Lizzie Armistead		Hempstead	
S22		5	Bonn	
S32	Bernd Schnieder	2	Berlin	
	Rolf Aldag		Berlin	
539	Candice Swanepoel	10	Cardiff	
	Mark Webber		Melbourne	
S44	Beryl Burton	4	London	
	Jenson Button			
S56	Marianne Vos	8	Zandvoort	
	Nicola Gianniberti			
S7	Christian Albers	3	Orlando	
	Giancarlo Fisichella			
59	Kimi Rikonnen	2	Helsinki	

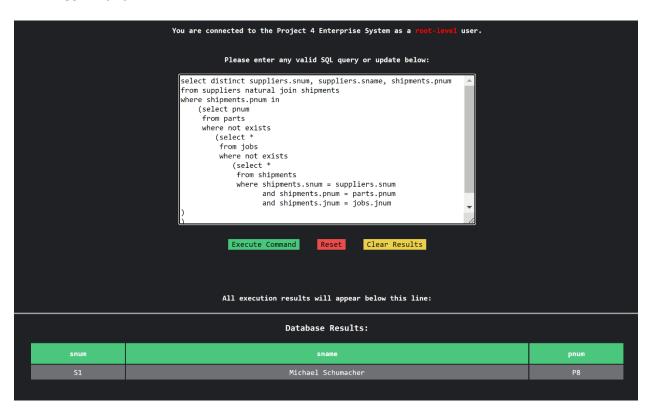
Command 3D:



Command 3E:

Database Results:				
snum	sname	status	city	
S1	Michael Schumacher	1	Berlin	
510	David Coulthard		London	
511	Bernard Hinault	7	Paris	
	Eddy Merckx		Brussels	
S13	Candice Swanepoel	3	Cape Town	
	Adriana Lima		Sao Paulo	
S15	Jennifer Lawrence	6	Owensboro	
	Fernando Alonso		Madrid	
S17	Rubens Barichello	3	Sao Paulo	
	Tom Boonen		Brussels	
S19	Johan Messeuw	1	Eekloo	
	Juan Pablo Montoya		Interlagos	
520	Danilo Rossi	2	Milan	
	Lizzie Armistead		Hempstead	
S22	Jan Ullrich	5	Bonn	
532	Bernd Schnieder	2	Berlin	
	Rolf Aldag		Berlin	
539	Candice Swanepoel	10	Cardiff	
	Mark Webber		Melbourne	
S44	Beryl Burton	4	London	
	Jenson Button			
S56	Marianne Vos	8	Zandvoort	
	Nicola Gianniberti			
57	Christian Albers	3	Orlando	
	Giancarlo Fisichella			
59	Kimi Rikonnen	2	Helsinki	

Command 4:



Command 5A:

Database Results:				
snum	sname	status	city	
S1	Michael Schumacher	1	Berlin	
S10	David Coulthard		London	
S11	Bernard Hinault	7	Paris	
S12	Eddy Merckx		Brussels	
513	Candice Swanepoel	3	Cape Town	
S14	Adriana Lima		Sao Paulo	
S15	Jennifer Lawrence	6	Owensboro	
S16	Fernando Alonso		Madrid	
S17	Rubens Barichello	3	Sao Paulo	
S18	Tom Boonen		Brussels	
S19	Johan Messeuw	1	Eekloo	
52	Juan Pablo Montoya		Interlagos	
S20	Danilo Rossi	2	Milan	
S21	Lizzie Armistead		Hempstead	
S22	Jan Ullrich	5	Bonn	
53				
532	Bernd Schnieder	2	Berlin	
S33	Rolf Aldag		Berlin	
S39	Candice Swanepoel	10	Cardiff	
54	Mark Webber		Melbourne	
S44	Beryl Burton	4	London	
55	Jenson Button			
S56	Marianne Vos	8	Zandvoort	
56	Nicola Gianniberti			
57	Christian Albers	3	Orlando	
58	Giancarlo Fisichella			
59	Kimi Rikonnen	2	Helsinki	

Command 5B (two Screenshots stitched together):

Database Results:				
		20100000		
snum	pnum	jnum	quantity	
S1	P1	J1	40	
S1	P1		200	
S1	P19	J13	200	
S1	P22			
S1	P3	J13	95	
S1	P8			
S1	P8	313	200	
S1	P8		100	
S1	P8	J22	340	
S1	P8		200	
S1	P8	34	100	
S1	P8			
S1	P8	J6	230	
S12				
S17	P3	32	800	
52	P3			
52	P3	32	15	
52	P3	322	50	
S2	P3	33	20	
52	P3	34	50	
S2	P3	35	91	
S2	P4	J1	50	
S21	P2	34	200	
S22	P1	33	120	
53	P10	34	200	
S3	P24	32	200	
53	P3	31	99	
53	P3	36	75	
S3	P4	36	80	
53	P5	36	120	
S3	P9	J1	110	
539	P3	31	20	
S4	P6	J2	50	
S44	P44	32	100	
544	P48	35	40	
S5	P6	37	400	
	P1	37	40	
S6		33	100	
	P10			
S6	P11	J2	40	
S6	P12	34	75	
S6	P13	J5	100	
S6 	P19	J5 	50	
56	P2	J2	69	
S6	P24	32	20	
S6	P3	34	500	
S6	P33	34	40	
S6	P4	J2	120	
S6	P44	34	20	
S6	P48	J2	100	
S6	P5	J22	200	
56	P53	31	25	
S6	P6	322	120	
S6	P7	31	300	
S6	P8			
S6	P9	34	180	
S7				
S7	P12	J2	40	
S7	P6	J2	40	

Command 5C:



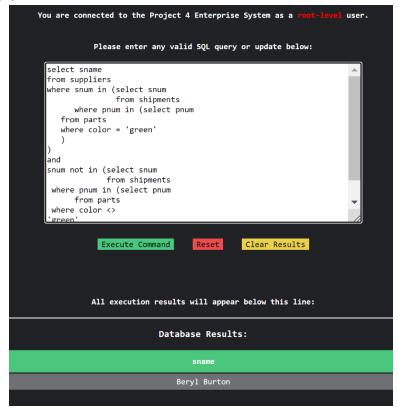
Command 5D:

Database Results:				
snum	pnum	jnum	quantity	
S1	P1	31	40	
51	P1	34	200	
S1	P19	J13	200	
S1	P22	35	40	
S1	P3	J13	105	
S1	P8	J1	80	
S1	P8	J13	200	
51	P8	J2	100	
S1	P8	J22	340	
51	P8	J3	200	
S1	P8	34	100	
51	P8	35	225	
S1	P8	J6	230	
512	P3	J22 	760	
S17	P3	32	810	
52	P3	31	50	
52	P3	J2	25	
S2	P3	J22	60	
S2	P3	J3	30	
S2	P3	34	60	
52	P3	35	101	
S2	P4	31 34	50	
S21 S22	P2 P1	33	200 120	
S22 S3		34		
S3	P10 P24	32	200	
S3	P24	31	109	
S3	P3	36	85	
S3	P4	36	80	
S3	P5	36	120	
S3	P9	31	110	
S39	P3	31	30	
S4	P6	32	50	
S44	P44	32	100	
S44	P48	35	40	
S5	P6	37	400	
S6	P1	32	40	
S6	P10	33	100	
S6	P11	32	40	
S6	P12	34	75	
S6	P13	35	100	
S6	P19	35	50	
S6	P2	32	60	
	P24	32	20	
S6	P3	34	510	
S6	P33	34	40	
S6	P4	32	120	
S6	P44	34	20	
S6	P48	32	100	
	P5	J22	200	
S6	P53	31	25	
S6	P6	J22	120	
S6	P7	31	300	
S6	P8	33	110	
	P9	34	180	
S7	P1	32	40	
S7	P12	J2	40	
S7	P6	32	40	

Command 5E:

snum sname status city 51 Michael Schumacher 6 Berlin 510 David Coulthard 2 London 511 Bernard Hinault 7 Paris 512 Eddy Merckx 6 Brussels 513 Candice Swanepoel 3 Cape Town 514 Adriana Lima 4 Sao Paulo 515 Jennifer Lawrence 6 Owensboro 516 Fernando Alonso 4 Madrid 517 Rubens Barichello 8 Sao Paulo 518 Tom Boonen 2 Brussels 519 Johan Messeuw 1 Eekloo 52 Juan Pablo Montoya 9 Interlagos 528 Danilo Rossi 2 Milan 521 Lizzie Armistead 1 Henpstead 522 Jan Ullrich 5 Borni 53 Dietrich Thurau 6 Berlin 532 Bernd Schnieder	Database Results:				
S18 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	snum	sname	status	city	
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 S33 Candice Swanepoel 10 Cardiff S4 Mark Webber <	51	Michael Schumacher	6	Berlin	
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	S10	David Coulthard		London	
\$13 Candice Swanepoel 3 Cape Town \$14 Adriana Lima 4 Sao Paulo \$15 Jennifer Lawrence 6 Owensboro \$16 Fernando Alonso 4 Madrid \$17 Rubens Barichello 8 Sao Paulo \$18 Tom Boonen 2 Brussels \$19 Johan Messeuw 1 Eekloo \$2 Juan Pablo Montoya 9 Interlagos \$20 Danilo Rossi 2 Milan \$21 Lizzie Armistead 1 Hempstead \$22 Jan Ullrich 5 Bonn \$3 Dietrich Thurau 6 Berlin \$32 Bernd Schnieder 2 Berlin \$33 Rolf Aldag 3 Berlin \$33 Candice Swanepoel 10 Cardiff \$4 Mark Webber 5 Melbourne \$44 Beryl Burton 4 London	511	Bernard Hinault	7	Paris	
\$14 Adriana Lima 4 \$ao Paulo \$15 Jennifer Lawrence 6 Owensboro \$16 Fernando Alonso 4 Madrid \$17 Rubens Barichello 8 \$ao Paulo \$18 Tom Boonen 2 Brussels \$19 Johan Messeuw 1 Eekloo \$2 Jun Pablo Montoya 9 Interlagos \$20 Denilo Rossi 2 Milan \$21 Lizzie Armistead 1 Hempstead \$22 Jan Ullrich 5 Bonn \$3 Dietrich Thurau 6 Berlin \$32 Bernd Schnieder 2 Berlin \$33 Rolf Aldag 3 Berlin \$39 Candice Swanepoel 10 Cardiff \$4 Mark Webber 5 Melbourne \$44 Beryl Burton 4 London \$5 Jenson Button 9 London		Eddy Merckx		Brussels	
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 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	S13	Candice Swanepoel		Cape Town	
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	S14	Adriana Lima		Sao Paulo	
\$17 Rubens Barichello 8 Sao Paulo \$18 Tom Boonen 2 Brussels \$19 Johan Messeuw 1 Eekloo \$2 Juan Pablo Montoya 9 Interlagos \$28 Danilo Rossi 2 Milan \$21 Lizzie Armistead 1 Hempstead \$22 Jan Ullrich 5 Bonn \$3 Dietrich Thurau 6 Berlin \$32 Bernd Schnieder 2 Berlin \$33 Rolf Aldag 3 Berlin \$39 Candice Swanepoel 10 Cardiff \$4 Mark Webber 5 Melbourne \$44 Beryl Burton 4 London \$5 Jenson Button 9 London	S15	Jennifer Lawrence		Owensboro	
518 Tom Boonen 2 Brussels 519 Johan Messeuw 1 Eekloo 52 Juan Pablo Montoya 9 Interlagos 520 Danilo Rossi 2 Milan 521 Lizzie Armistead 1 Hempstead 522 Jan Ullrich 5 Bonn 53 Dietrich Thurau 6 Berlin 532 Bernd Schnieder 2 Berlin 533 Rolf Aldag 3 Berlin 539 Candice Swanepoel 10 Cardiff 54 Mark Webber 5 Melbourne 544 Beryl Burton 4 London 55 Jenson Button 9 London		Fernando Alonso		Madrid	
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	S17	Rubens Barichello		Sao Paulo	
\$2 Juan Pablo Montoya 9 Interlagos \$20 Danilo Rossi 2 Milan \$21 Lizzie Armistead 1 Hempstead \$22 Jan Ullrich 5 Bonn \$3 Dietrich Thurau 6 Berlin \$32 Bernd Schnieder 2 Berlin \$33 Rolf Aldag 3 Berlin \$39 Candice Swanepoel 10 Cardiff \$4 Mark Webber 5 Melbourne \$44 Beryl Burton 4 London \$5 Jenson Button 9 London		Tom Boonen		Brussels	
\$20 Danilo Rossi 2 Milan \$21 Lizzie Armistead 1 Hempstead \$22 Jan Ullrich 5 Bonn \$3 Dietrich Thurau 6 Berlin \$32 Bernd Schnieder 2 Berlin \$33 Rolf Aldag 3 Berlin \$39 Candice Swanepoel 10 Cardiff \$4 Mark Nebber 5 Melbourne \$44 Beryl Burton 4 London \$5 Jenson Button 9 London	S19	Johan Messeuw	1	Eekloo	
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 Nebber 5 Melbourne S44 Beryl Burton 4 London S5 Jenson Button 9 London		Juan Pablo Montoya		Interlagos	
\$22 Jan Ullrich 5 Bonn \$3 Dietrich Thurau 6 Berlin \$32 Bernd Schnieder 2 Berlin \$33 Rolf Aldag 3 Berlin \$39 Candice Swanepoel 10 Cardiff \$4 Mark Webber 5 Melbourne \$44 Beryl Burton 4 London \$5 Jenson Button 9 London	S20	Danilo Rossi		Milan	
53 Dietrich Thurau 6 Berlin 532 Bernd Schnieder 2 Berlin 533 Rolf Aldag 3 Berlin 539 Candice Swanepoel 10 Cardiff 54 Mark Webber 5 Melbourne 544 Beryl Burton 4 London 55 Jenson Button 9 London		Lizzie Armistead		Hempstead	
532 Bernd Schnieder 2 Berlin 533 Rolf Aldag 3 Berlin 539 Candice Swanepoel 10 Cardiff 54 Mark Webber 5 Melbourne 544 Beryl Burton 4 London 55 Jenson Button 9 London	522	Jan Ullrich		Bonn	
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		Dietrich Thurau		Berlin	
539 Candice Swanepoel 10 Cardiff S4 Mark Webber 5 Melbourne S44 Beryl Burton 4 London S5 Jenson Button 9 London	S32	Bernd Schnieder		Berlin	
S4 Mark Webber 5 Melbourne S44 Beryl Burton 4 London S5 Jenson Button 9 London		Rolf Aldag		Berlin	
S44 Beryl Burton 4 London S5 Jenson Button 9 London	S39	Candice Swanepoel	10	Cardiff	
SS Jenson Button 9 London		Mark Webber		Melbourne	
	S44	Beryl Burton		London	
		Jenson Button		London	
S56 Marianne Vos 8 Zandvoort	S56	Marianne Vos	8	Zandvoort	
S6 Nicola Gianniberti 7 Milan		Nicola Gianniberti		Milan	
S7 Christian Albers 3 Orlando	57	Christian Albers	3	Orlando	
S8 Giancarlo Fisichella 3 Milan		Giancarlo Fisichella		Milan	
S9 Kimi Rikonnen 2 Helsinki	59	Kimi Rikonnen	2	Helsinki	

Command 6:



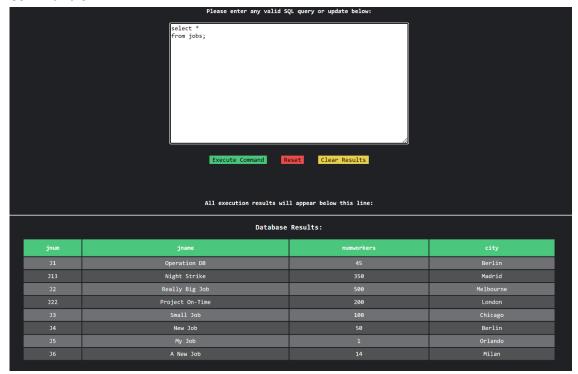
Command 7:

Command 8:

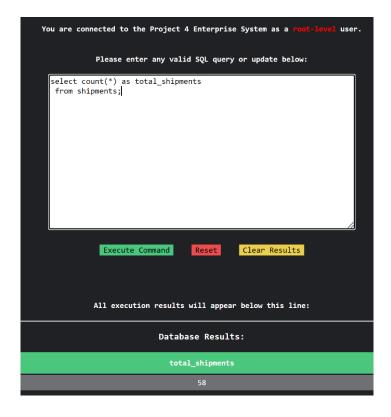


Zachary Russell CNT4714 Section: 0001

Command 9:

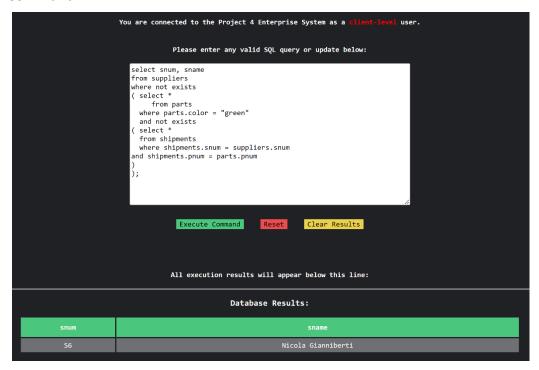


Command 10:

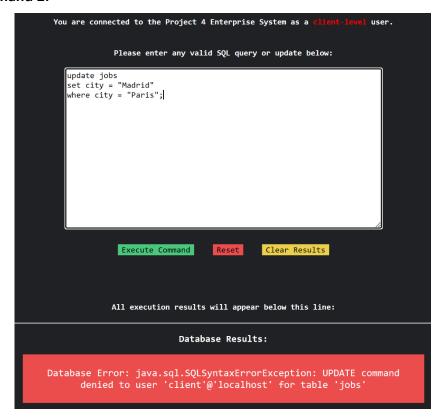


Client Commands:

Command 1:



Command 2:



Command 3:

Command 4:

