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Profesor: Jovana Vidaković

## **Projektovanje DW sistema za lanac picerija**

Seminarski rad iz predmeta Softversko inženjerstvo za sisteme bazapodataka

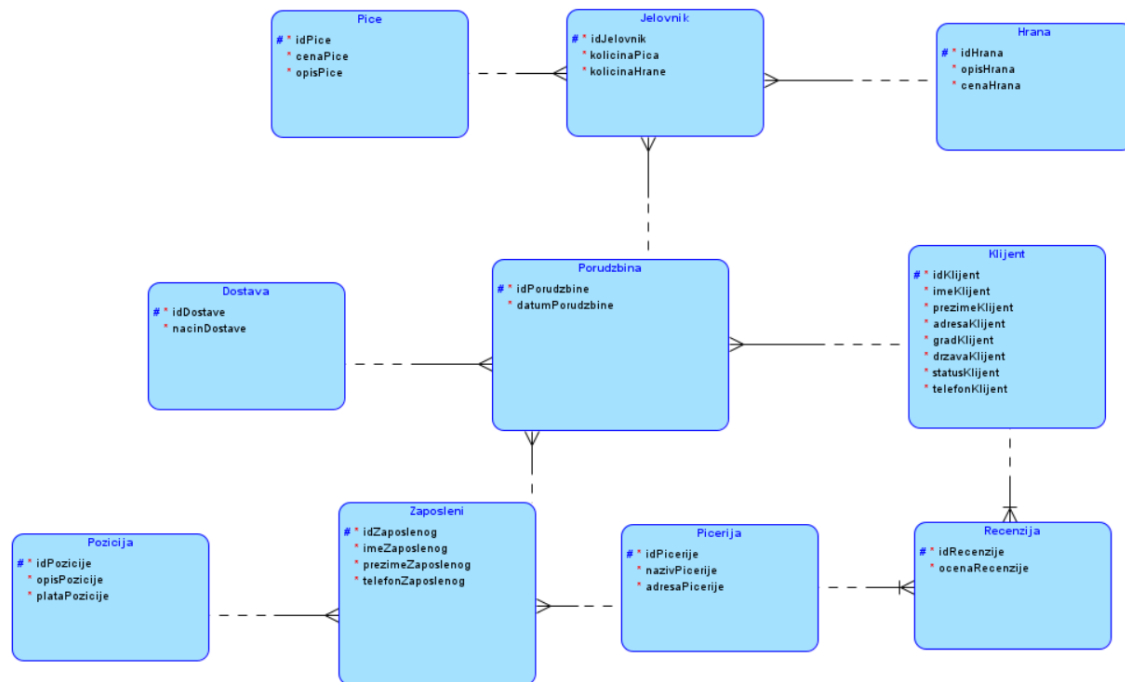
# SISTEM ZA LANAC PICERIJA

Prva stvar koja se radi pri projektovanju DW sistema je specifikacija poslovnih procesa jednog lanca picerija. U pitanju je kombinacija procesa koji su značajniji za poslovanje jedne picerija kao i sa procesima upravljanja lanca odvojenih restorana. Tu spadaju celokupni procesi potrebni za realizaciju porudžbina klijenata, kao i same akcije picerija.

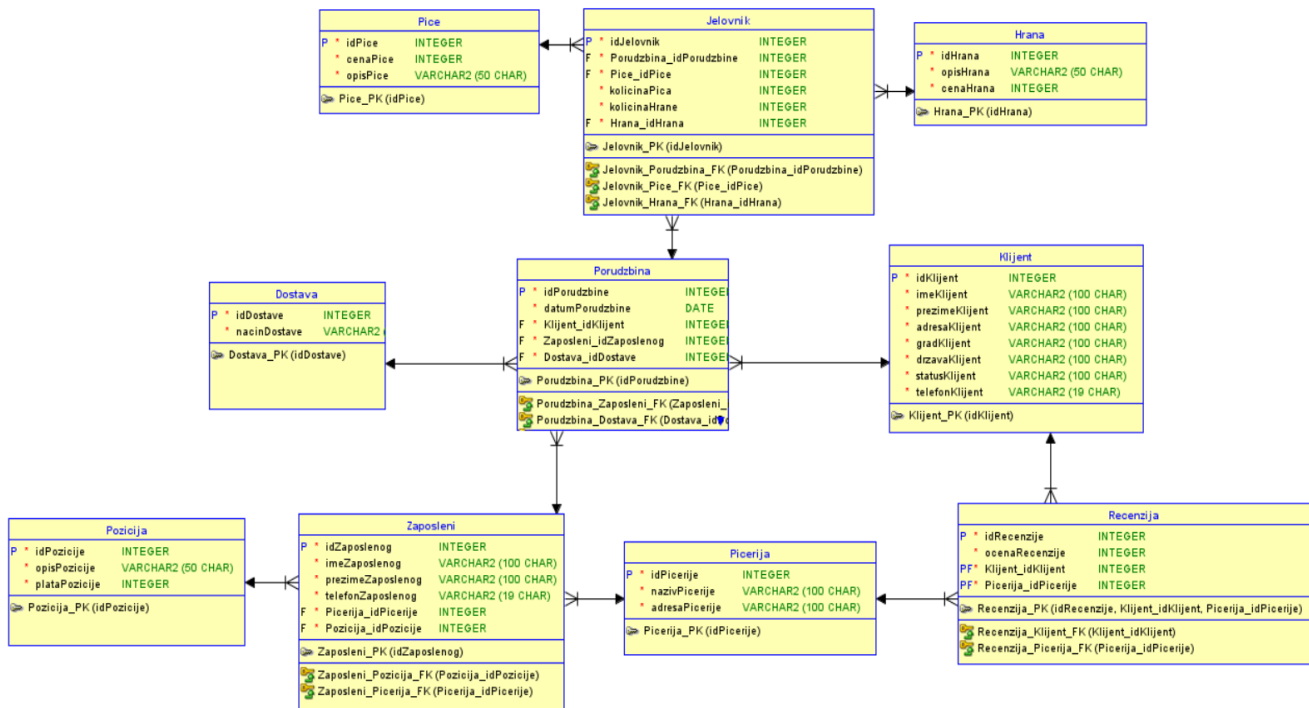
- Dimenzije:
  - Klijent
  - Vreme
  - Zaposleni
  - Dostava
- Pitanja:
  - 10 picerija sa najboljim ocenama?
  - Raspodeljenost pozicija zaposlenih?
  - Broj porudžbina za određenu vrstu porudžbine?
  - 5 gradova sa najviše klijenata?
  - Praćenje količine porudžbina po mesecima?

# OLTP BAZA PODATAKA

Prvo je napravljen ER model.

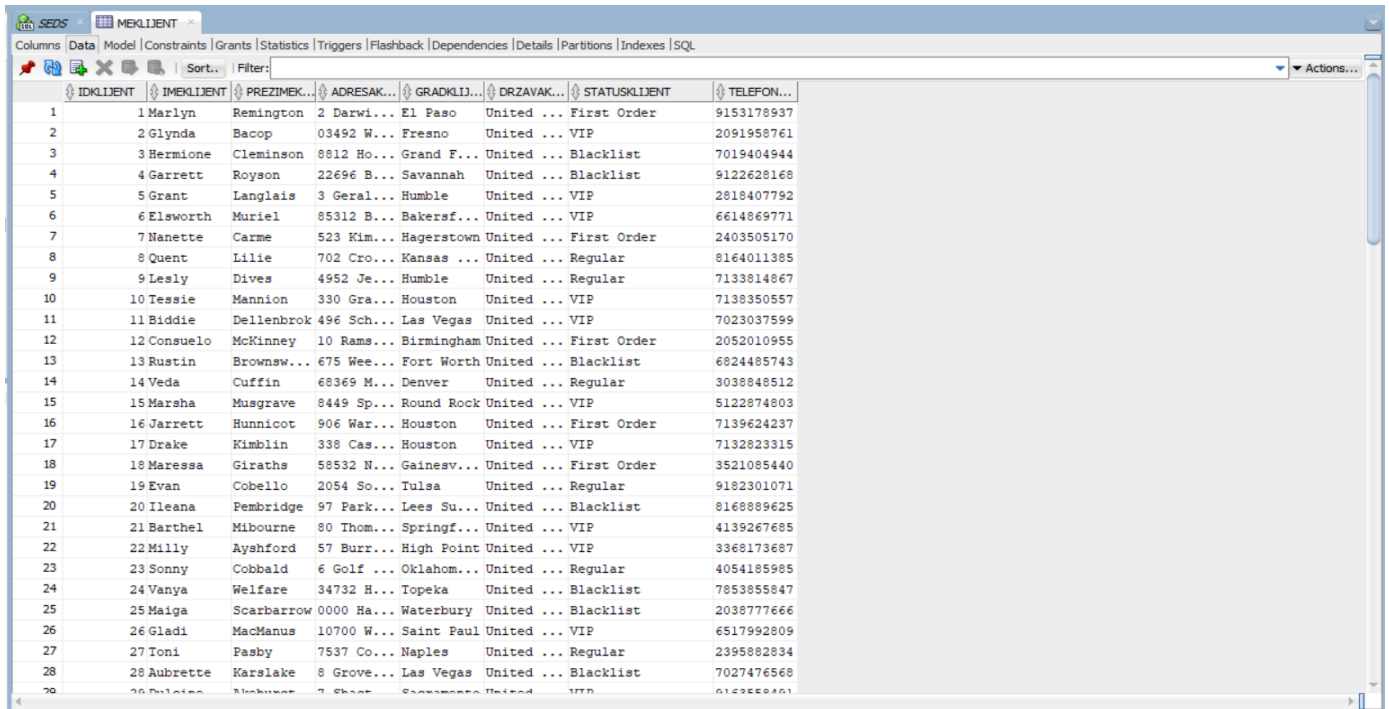


Na osnovu logičke šeme dobijamo relacionu šemu uz čiju pomoć dobijamo DDLskriptu za generisanje tabela.



Na kreativan način uz pomoć sajta mockaroo.com i par jednostavnih programa napisanih u pythonu popunjavaju se tabele.

Tabela KLIJENT sa podacima 5000 klijenata:



IDKLIJENT	IMEKLIJENT	PREZIMEKLIJENT	ADRESAKLIJENT	GRADKLIJENT	DRZAVAKLIJENT	STATUSKLIJENT	TELEFONKLIJENT
1	Marlyn	Remington	2 Darwi...	El Paso	United ...	First Order	9153178937
2	Glynda	Bacop	03492 W...	Fresno	United ...	VIP	2091958761
3	Hermione	Cleminson	8812 Ho...	Grand F...	United ...	Blacklist	7019404944
4	Garrett	Royson	22696 B...	Savannah	United ...	Blacklist	9122628168
5	Grant	Langlais	3 Geral...	Humble	United ...	VIP	2818407792
6	Elsworth	Muriel	85312 B...	Bakersf...	United ...	VIP	6614869771
7	Nanette	Carme	523 Kim...	Hagerstow	United ...	First Order	2403505170
8	Quent	Lillie	702 Cro...	Kansas ...	United ...	Regular	8164011385
9	Lesly	Dives	4952 Je...	Humble	United ...	Regular	7133814867
10	Tessie	Mannion	330 Gra...	Houston	United ...	VIP	7138350557
11	Biddie	Dellenbrok	496 Sch...	Las Vegas	United ...	VIP	7023037599
12	Consuelo	McKinney	10 Rams...	Birmingham	United ...	First Order	2052010955
13	Rustin	Brownsw...	675 Wee...	Fort Worth	United ...	Blacklist	6824485743
14	Veda	Cuffin	68369 M...	Denver	United ...	Regular	3038848512
15	Marsha	Musgrave	8449 Sp...	Round Rock	United ...	VIP	5122874803
16	Jarrett	Hunnicot	906 War...	Houston	United ...	First Order	7139624237
17	Drake	Kimblin	338 Cas...	Houston	United ...	VIP	7132823315
18	Maressa	Giraths	58532 N...	Gainesv...	United ...	First Order	3521085440
19	Evan	Cobello	2054 So...	Tulsa	United ...	Regular	9182301071
20	Ileana	Pembridge	97 Park...	Lees Su...	United ...	Blacklist	8168889625
21	Barthel	Mibourne	80 Thom...	Springf...	United ...	VIP	4139267685
22	Milly	Ayshford	57 Burr...	High Point	United ...	VIP	3368173687
23	Sonny	Cobbald	6 Golf ...	Oklahom...	United ...	Regular	4054185985
24	Vanya	Welfare	34732 H...	Topeka	United ...	Blacklist	7853855847
25	Maiga	Scarbarrow	0000 Ha...	Waterbury	United ...	Blacklist	2038777666
26	Gladi	MacManus	10700 W...	Saint Paul	United ...	VIP	6517992809
27	Toni	Pasby	7537 Co...	Naples	United ...	Regular	2395882834
28	Aubrette	Karslake	8 Grove...	Las Vegas	United ...	Blacklist	7027476568
29	Delia	Alphons	7 Shee...	San Jose	United ...	VIP	6163558461

Tabela PICERIJA sa podacima 1000 picerija:

IDPICIJE	NAZIVPICIJE	ADRESAPICIJE
1	1 Youspan	3 Algoma Court
2	2 Dabvine	22376 Moland Street
3	3 Babblestorm	2 Commercial Avenue
4	4 Cogibox	00 Graedel Plaza
5	5 Yacero	656 Roth Place
6	6 Yacero	8466 Longview Parkway
7	7 Dablist	8 Helena Parkway
8	8 Jabbersphere	0 Luster Center
9	9 Topiclounge	49 Fremont Circle
10	10 Skipfire	262 Orin Road
11	11 Yakijo	5490 Bartillon Street
12	12 Lazy	9502 Luster Drive
13	13 Twimbo	7805 Moland Parkway
14	14 Kamba	16 Fulton Junction
15	15 Topiclounge	72095 Melvin Avenue
16	16 Twitterworks	7675 Sherman Alley
17	17 Aimb	1547 Lakeland Street
18	18 Ntag	0 Acker Point
19	19 Edgewire	14 Cottonwood Junction
20	20 Skynoodle	102 Eastlawn Place
21	21 Eabox	77960 Esker Avenue
22	22 Fivebridge	2 Jenna Road
23	23 Tagcat	4 Sage Crossing
24	24 Linktype	5887 Maple Lane
25	25 Wordify	18 Anthes Terrace
26	26 Browsecat	71492 Calypso Crossing
27	27 Babblestorm	71295 Grayhawk Street
28	28 Jayo	694 Eggendart Hill
29	29 Shufflagon	17865 Hase Park

Tabela ZAPOSLENI sa podacima 3000 zaposlenih:

SEDS x MEZAPOSLENI						
Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL						
Sort.. Filter:						
IDZAPOSLENOG	IMEZAPOSLENOG	PREZIMEZ...	TELEFON...	PICERIJA_IDPICERIJE	POZICIJA_IDPOZICIJE	
1	1 Erminie	Chancellor	6695203638		865	5
2	2 Brantley	Stannett	1489530815		208	6
3	3 Travers	Chishull	7685817516		196	9
4	4 Samaria	Tooker	7236007187		541	4
5	5 Sabine	Macak	9635218840		355	3
6	6 Leilah	Shernock	1824002086		156	2
7	7 Teddy	Bardey	9552869401		597	2
8	8 Ebony	Stearns	3983300446		73	9
9	9 Robina	Cannell	1832707936		305	5
10	10 Thebault	Gerardi	4152308304		621	3
11	11 Falito	Shimon	1793720697		248	2
12	12 Levin	Chrystal	6222811113		414	4
13	13 Lynnelle	Skey	5383188008		550	9
14	14 Giorgia	Vickors	8839570549		548	3
15	15 Virge	Geraldini	9398528082		190	7
16	16 Garey	Bickerton	4171245535		780	5
17	17 Phil	Daverin	8262053064		449	9
18	18 Emmy	Gerauld	2483380787		329	8
19	19 Helen-elizabeth	Oller	3767057685		237	10
20	20 Wilek	Clowsley	9534000750		44	10
21	21 Jennine	Claasen	3606025365		270	3
22	22 Mohammed	Dulson	6717475826		646	9
23	23 Salim	Perett	1846489327		361	1
24	24 Filip	O'Hara	1992432368		176	8
25	25 Thorn	Lantaff	4372633940		126	1
26	26 Jon	Beeckx	7898710209		303	7
27	27 Katinka	Grote	5117159277		450	10
28	28 Forbes	Chillis...	6727936786		243	3
29	29 Bernadine	Franchini	7548841178		625	2

Tabela Pozicija sa podacima 10 mogućih pozicija:

SEDS x MEPOZICIJA		
Columns Data Model Constraints Grants Statistics Triggers Fla		
Sort.. Filter:		
IDPOZICIJE	OPISPOZICIJE	PLATAPOZICIJE
1	1 Cook	70000
2	2 Chef	100000
3	3 Head Chef	150000
4	4 Manager	100000
5	5 Cashier	60000
6	6 Guard	65000
7	7 Cleaner	65000
8	8 Pizza Master	150000
9	9 Delivery Driver	80000
10	10 Accountant	90000

Tabela RECENZIJA sa podacima o 3000 recenzija:

	IDRECENZIJE	OCENARECENZIJE	KLIJENT_IDKLIJENT	PICERIJA_IDPICERIJE
1	1	3	2446	979
2	2	3	3451	470
3	3	4	52	856
4	4	5	294	363
5	5	4	3504	186
6	6	2	1400	905
7	7	3	2125	1000
8	8	3	750	506
9	9	3	62	911
10	10	5	3469	912
11	11	2	3275	911
12	12	2	3629	694
13	13	3	2066	543
14	14	5	480	735
15	15	5	2651	252
16	16	5	2701	34
17	17	3	3086	73
18	18	2	25	463
19	19	2	2403	977
20	20	5	2632	366
21	21	4	3148	37
22	22	2	328	863
23	23	3	1472	159
24	24	3	3654	804
25	25	5	1117	158
26	26	4	2629	309
27	27	3	3444	23
28	28	3	3183	253
29	29	2	2557	886

Tabela DOSTAVA sa podacima o 6 vrsta dostava:

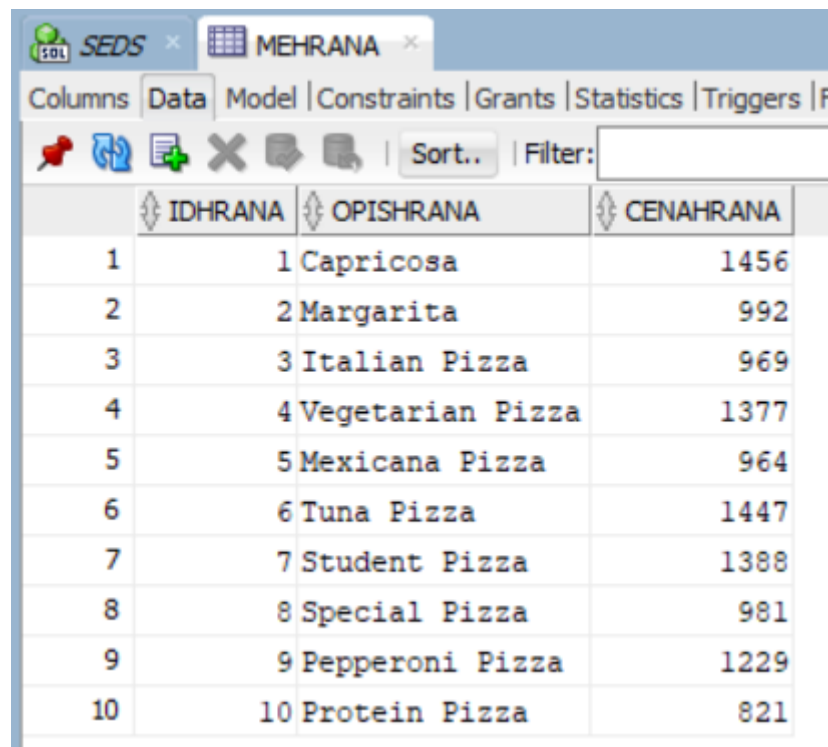
	IDOSTAVE	NACINDOSTAVE
1	1	Glovo
2	2	Wolt
3	3	Mr. D
4	4	Unknown
5	5	Uber Eats
6	6	In House



Tabela PORUDZBINA sa 2000 porudžbina:

IDPORUDZBINE	DATUMPORUDZBINE	KLIJENT_IDKLIJENT	ZAPOSLENI_IDZAPOSLENOG	DOSTAVA_IDDOSTAVE
1	1 23-OCT-22	4257	2253	3
2	5 15-DEC-22	2294	2410	4
3	8 06-MAY-22	120	2005	1
4	9 06-JUL-22	2035	2667	6
5	10 13-MAY-22	824	2766	2
6	11 21-APR-22	2103	293	6
7	14 09-AUG-22	4806	1710	5
8	15 28-MAY-22	2222	55	5
9	17 20-JUL-22	2656	2235	6
10	18 23-JAN-23	428	1401	3
11	19 07-MAR-23	4874	2904	2
12	21 08-OCT-22	494	493	1
13	23 20-JUL-22	1733	529	2
14	24 08-MAR-23	2024	1021	5
15	25 31-JUL-22	2140	2570	6
16	27 20-MAR-23	249	2079	4
17	28 20-JAN-23	3209	2859	3
18	29 23-AUG-22	1609	2693	1
19	30 16-DEC-22	1252	1890	6
20	31 06-MAR-23	1624	2093	6
21	38 16-MAR-23	2340	230	1
22	39 08-SEP-22	4331	2068	5
23	41 28-MAY-22	4318	1450	2
24	43 09-JUL-22	1421	209	6
25	45 09-DEC-22	1914	62	3
26	46 17-SEP-22	510	2439	3
27	48 04-FEB-23	491	999	1
28	49 21-DEC-22	2244	2944	2
29	50 25-JUN-22	1505	50	1

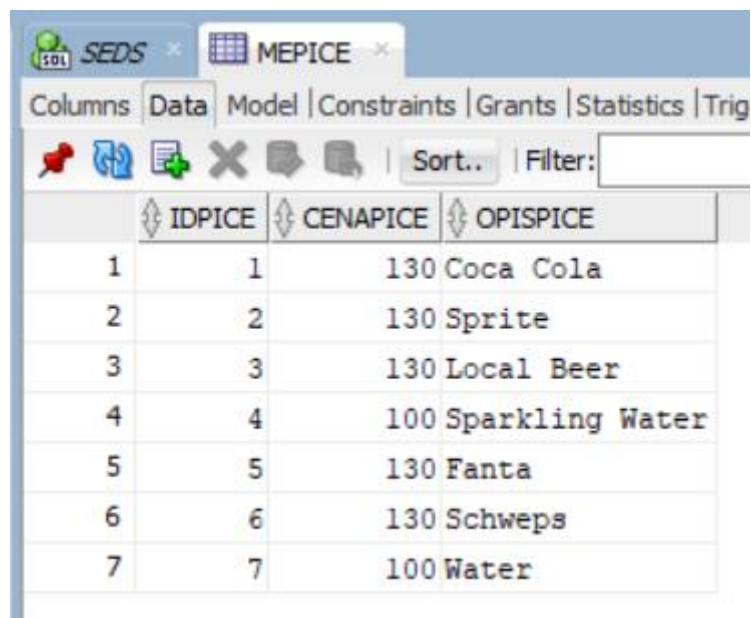
Tabela HRANA:



The screenshot shows the SQL Developer interface with the 'MEHRANA' table selected. The 'Data' tab is active, displaying a list of 10 rows. The columns are IDHRANA, OPISHRANA, and CENAHANA. The data represents different pizza types and their prices.

	IDHRANA	OPISHRANA	CENAHANA
1	1	Capricosa	1456
2	2	Margarita	992
3	3	Italian Pizza	969
4	4	Vegetarian Pizza	1377
5	5	Mexicana Pizza	964
6	6	Tuna Pizza	1447
7	7	Student Pizza	1388
8	8	Special Pizza	981
9	9	Pepperoni Pizza	1229
10	10	Protein Pizza	821

Tabela PICE:



The screenshot shows the SQL Developer interface with the 'MEPICE' table selected. The 'Data' tab is active, displaying a list of 7 rows. The columns are IDPICE, CENAPICE, and OPISPICE. The data represents different beverages and their prices.

	IDPICE	CENAPICE	OPISPICE
1	1	130	Coca Cola
2	2	130	Sprite
3	3	130	Local Beer
4	4	100	Sparkling Water
5	5	130	Fanta
6	6	130	Schweps
7	7	100	Water

Tabela JELOVNIK sa 8000 različitih jelovnika(tabela je popunjena tako da svaka porudžbina ima bar 1 odabran jelovnik a neke su imale vise odabranih):

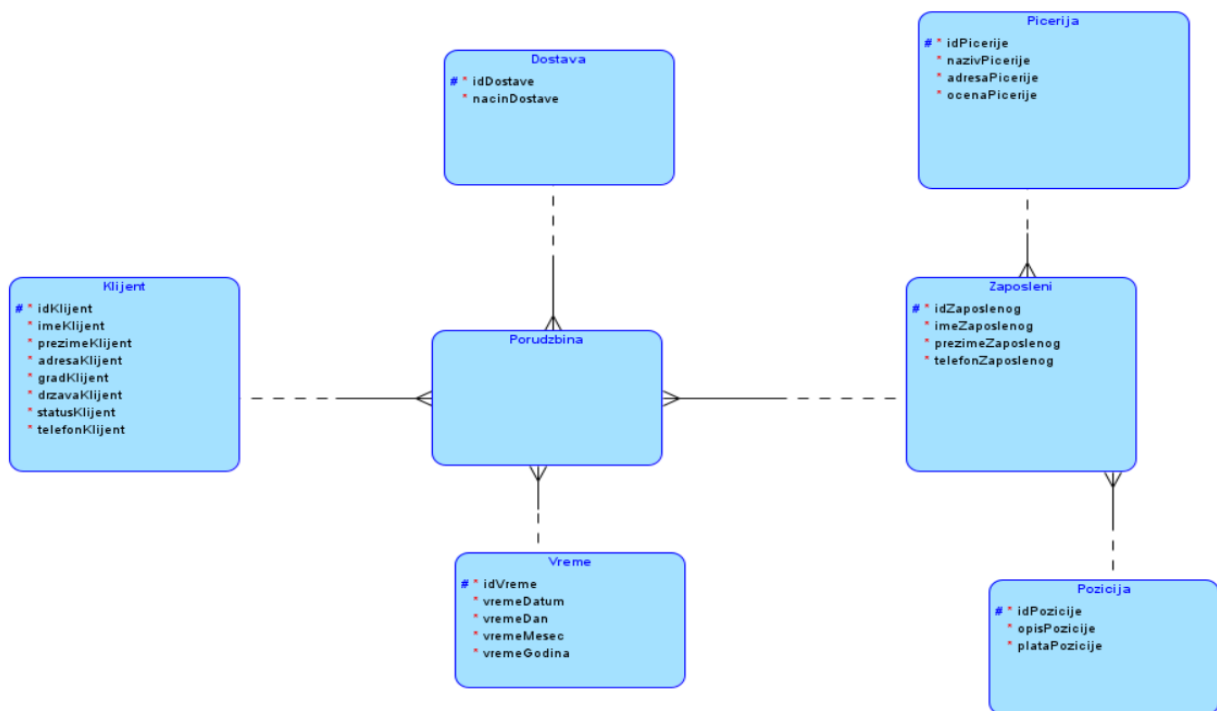
Welcome Page x SEDS x MEJELOVNIK x							
Columns   Data   Model   Constraints   Grants   Statistics   Triggers   Flashback   Dependencies   Details   Partitions   Indexes   SQL							
Sort..   Filter:							
	IDJELOVNIK	PORUDZBINA_IDPORUDZBINE	PICE_IDPICE	KOLICINAPICA	KOLICINAHRADE	HRANA_IDHRANA	
49	49	2046	4	1	1	4	
50	50	1318	2	0	3	8	
51	51	1466	7	0	1	4	
52	52	793	2	0	3	8	
53	53	835	4	3	3	1	
54	54	2141	2	3	1	6	
55	55	2415	4	3	1	1	
56	56	1548	3	2	2	8	
57	57	2232	6	3	2	4	
58	58	471	7	3	3	9	
59	59	1292	7	1	3	6	
60	60	1332	6	2	2	10	
61	61	1387	5	1	2	2	
62	62	2346	2	1	2	8	
63	63	629	2	3	1	5	
64	64	1522	7	0	1	7	
65	65	2832	7	2	3	8	
66	66	879	5	2	2	5	
67	67	1071	5	3	3	3	

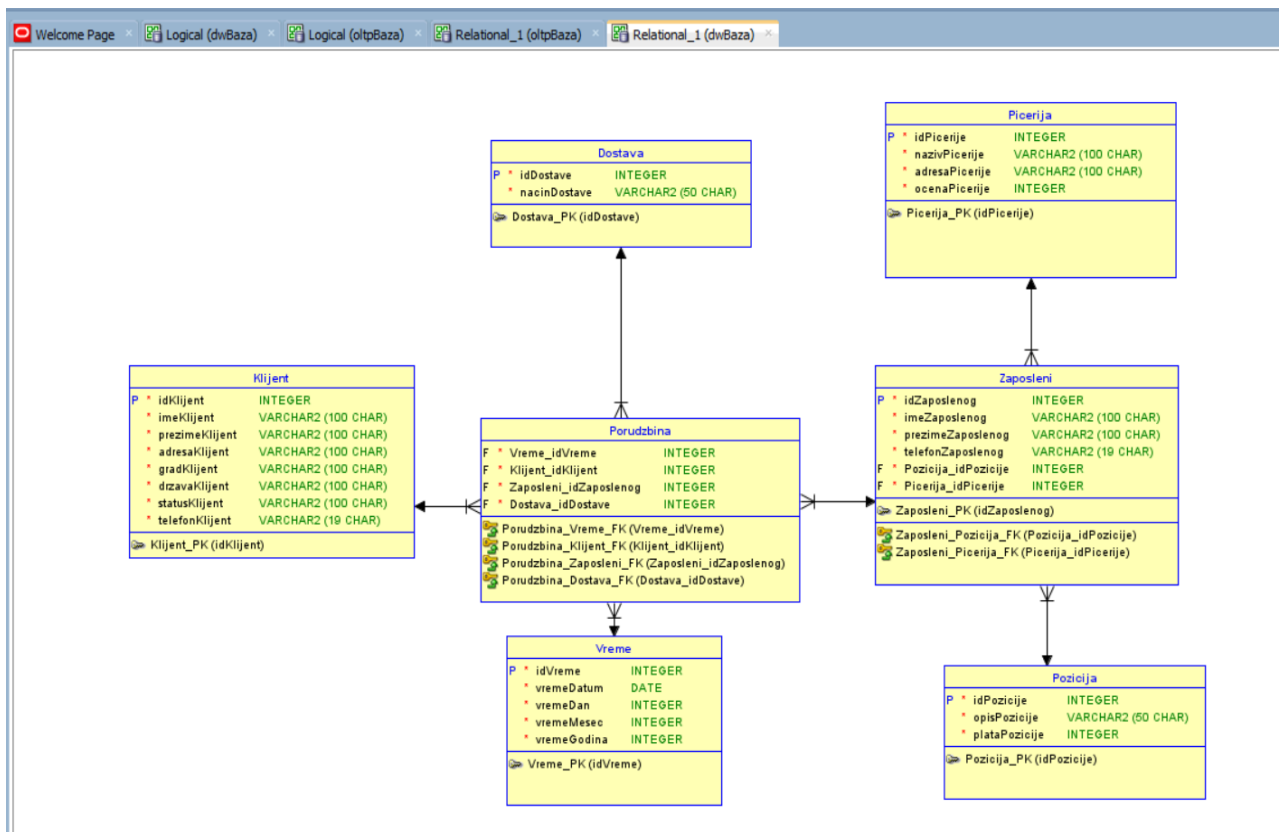
## DW BAZA PODATAKA

Nakon kreiranja OLTP šeme i baze podataka, sledeći korak je projektovanje i realizovanje DW šeme i baze podataka.

Glavna tabela je tabela činjenica PORUDZBINA u kojoj se nalaze strani ključevi iz gore pomenutih tabela dimenzija.

Opet prvo pravimo logičku šemu od koje dobijamo relacionu šemu uz čiju pomoć dobijamo DDL skriptu za generisanje tabela.





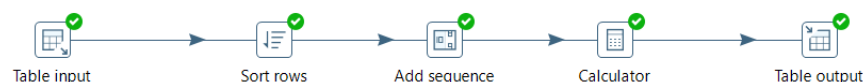
## Popunjavanje DW baze podataka - ECTL procesi

Nakon toga sledi popunjavanje kreiranog DW sistema podacima iz OLTP baze uz pomoć alata Pentaho Data Integration. Uz pomoć izvršavanja transformacija popunjavamo DW sistem podacima iz već postojeće OLTP baze.

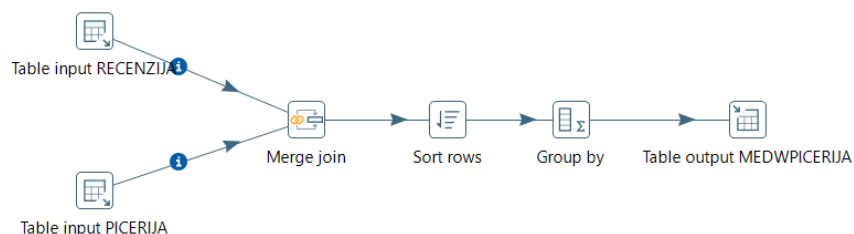
Uz pomoć *table input* funkcionalnosti spomenutog softvera dobivamo željene podatke iz OLTP baze podataka. Nakon raznih transformacija kao što su sort rows, calculator ili add sequence uz pomoć *table-output* funkcionalnosti obrađene podatke upisujemo u DW bazu.

Bilo je potrebno 7 različitih transformacija, neke su bile jednostavnije a neke teže, ispod se nalaze primeri 2 transformacija gde se mogu videti primene svih bitnih funkcionalnosti ovog programa.

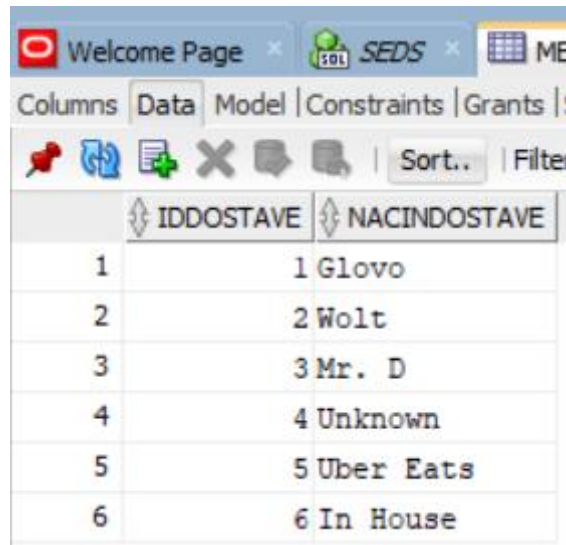
Transformacija za tabelu MEDWVREME:



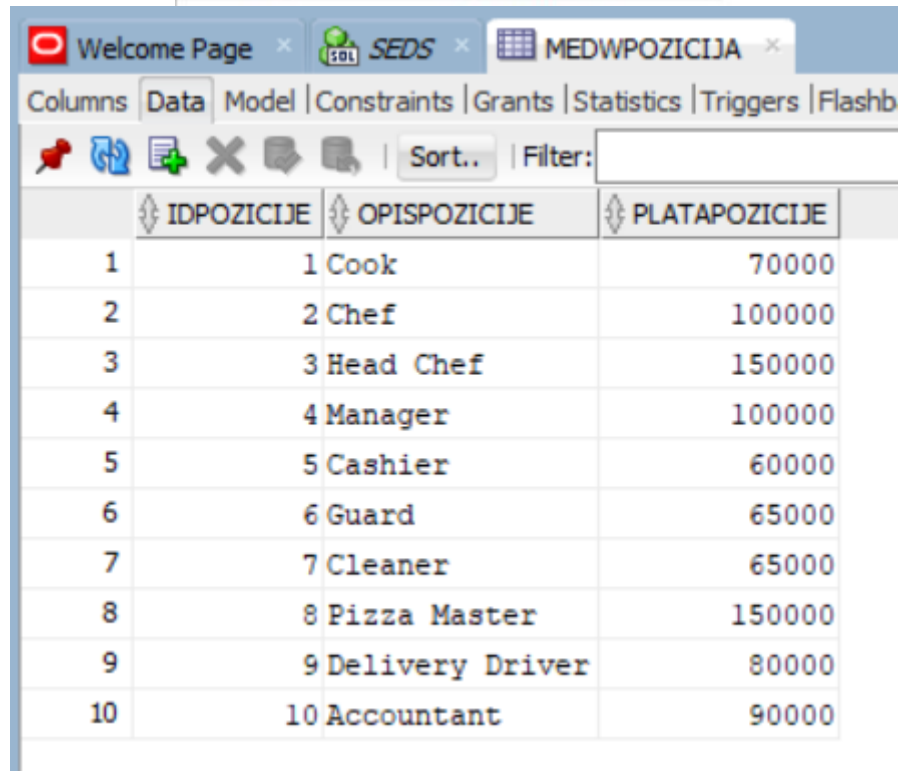
Transformacija za tabelu MEDWPICERIJA:



Nakon izvršavanja svih potrebnih transformacija dobijamo popunjenu DW bazu:



	IDDOSTAVE	NACINDOSTAVE
1	1	Glovo
2	2	Wolt
3	3	Mr. D
4	4	Unknown
5	5	Uber Eats
6	6	In House



	IDPOZICIJE	OPISPOZICIJE	PLATAPOZICIJE
1	1	Cook	70000
2	2	Chef	100000
3	3	Head Chef	150000
4	4	Manager	100000
5	5	Cashier	60000
6	6	Guard	65000
7	7	Cleaner	65000
8	8	Pizza Master	150000
9	9	Delivery Driver	80000
10	10	Accountant	90000

Welcome Page   SEDS   MEDWPICERIIJA				
Columns   Data   Model   Constraints   Grants   Statistics   Triggers   Flashback   Dependencies   Details   Partitions				
Sort:   Filter:				
IDPIC...	NAZIVPICERIIJE	ADRESAPICERIIJE	OCENAPICERIIJE	
1	1 Youspan	3 Algoma Court	3	
2	2 Dabvine	22376 Moland Street	3	
3	3 Babbblestorm	2 Commercial Avenue	4	
4	4 Cogibox	00 Graedel Plaza	5	
5	5 Yacero	656 Roth Place	4	
6	6 Yacero	8466 Longview Parkway	2	
7	7 Dablist	8 Helena Parkway	3	
8	8 Jabbersphere	0 Luster Center	3	
9	9 Topiclounge	49 Fremont Circle	3	
10	10 Skipfire	262 Orin Road	5	
11	11 Yakijo	5490 Bartillon Street	2	
12	12 Lazyzy	9502 Luster Drive	2	
13	13 Twimbo	7805 Moland Parkway	3	
14	14 Kamba	16 Fulton Junction	5	
15	15 Topiclounge	72095 Melvin Avenue	5	
16	16 Twitterworks	7675 Sherman Alley	5	
17	17 Aimbu	1547 Lakeland Street	3	
18	18 Ntag	0 Acker Point	2	
19	19 Edgewire	14 Cottonwood Junc...	2	

Welcome Page   SEDS   MEDWKLIJENT							
Columns   Data   Model   Constraints   Grants   Statistics   Triggers   Flashback   Dependencies   Details   Partitions   Indexes   SQL							
Sort:   Filter:							
IDKLIJENT	IMEKLIJENT	PREZIMEKLIJENT	ADRESAKLIJENT	GRADKLIJENT	DRZAVAKLIJENT	STATUSKLIJENT	TELEFONKLIJENT
1	1 Marlyn	Remington	2 Darwin Center	El Paso	United States	First Order	9153178937
2	2 Glynda	Bacop	03492 Welch Terrace	Fresno	United States	VIP	2091958761
3	3 Hermione	Cleminson	8812 Hovde Street	Grand Forks	United States	Blacklist	7019404944
4	4 Garrett	Royson	22696 Basil Alley	Savannah	United States	Blacklist	9122628168
5	5 Grant	Langlais	3 Gerald Street	Humble	United States	VIP	2818407792
6	6 Elsworth	Muriel	85312 Bluejay Parkway	Bakersfield	United States	VIP	6614869771
7	7 Nanette	Carme	523 Kim Trail	Hagerstown	United States	First Order	2403505170
8	8 Quent	Lilie	702 Crownhardt Drive	Kansas City	United States	Regular	8164011385
9	9 Lesly	Dives	4952 Jenifer Street	Humble	United States	Regular	7133814867
10	10 Tessie	Mannion	330 Graceland Drive	Houston	United States	VIP	7138350557
11	11 Biddie	Dellenbrok	496 School Terrace	Las Vegas	United States	VIP	7023037599
12	12 Consuelo	McKinney	10 Ramsey Way	Birmingham	United States	First Order	2052010955
13	13 Rustin	Brownswoth	675 Weeping Birch Road	Fort Worth	United States	Blacklist	6824485743
14	14 Veda	Cuffin	68369 Morning Park	Denver	United States	Regular	3038848512
15	15 Marsha	Musgrave	8449 Spohn Pass	Round Rock	United States	VIP	5122874803
16	16 Jarrett	Hunnicot	906 Warrior Hill	Houston	United States	First Order	7139624237
17	17 Drake	Kimblin	338 Cascade Park	Houston	United States	VIP	7132823315
18	18 Maressa	Giraths	58532 Namekagon Parkway	Gainesville	United States	First Order	3521085440
19	19 Evan	Cobello	2054 Sommers Center	Tulsa	United States	Regular	9182301071



Welcome Page

SEDS

MEDWPICERIJA

Columns

Data

Model

Constraints

Grants

Statistics

Triggers

Flashback

Dependencies

Details

Partitions

Sort..

Filter:

	IDPIC...	NAZIVPICERIJE	ADRESAPICERIJE	OCENAPICERIJE
1	1	Youspan	3 Algoma Court	3
2	2	Dabvine	22376 Moland Street	3
3	3	Babblestorm	2 Commercial Avenue	4
4	4	Cogibox	00 Graedel Plaza	5
5	5	Yacero	656 Roth Place	4
6	6	Yacero	8466 Longview Parkway	2
7	7	Dablist	8 Helena Parkway	3
8	8	Jabbersphere	0 Luster Center	3
9	9	Topiclounge	49 Fremont Circle	3
10	10	Skipfire	262 Orin Road	5
11	11	Yakijo	5490 Bartillon Street	2
12	12	Lazzy	9502 Luster Drive	2
13	13	Twimbo	7805 Moland Parkway	3
14	14	Kamba	16 Fulton Junction	5
15	15	Topiclounge	72095 Melvin Avenue	5
16	16	Twitterworks	7675 Sherman Alley	5
17	17	Aimbu	1547 Lakeland Street	3
18	18	Ntag	0 Acker Point	2
19	19	Edgewire	14 Cottonwood Junc...	2

Home Page		SEDS		MEDWZAPOSLENI							
Data	Model	Constraints	Grants	Statistics	Triggers	Flashback	Dependencies	Details	Partitions	Indexes	SQL
		Sort..		Filter:							
IDZAPOSLENOG	IMEZAPOSLENOG	PREZIMEZAPOSLE...	TELEFONZAPOSLENOG	POZICIJA_IDPOZICIJE	PICERIJA...						
1336	Bradford	Iven	9965006297	1	501						
1337	Adelaida	Stockin	7965478828	1	590						
1349	Constantine	Dawtre	3231979779	1	671						
1395	Edie	Mitkov	2032773660	1	308						
1401	Thatcher	Lacheze	6047860720	1	911						
1402	Tracee	Tolhurst	8762084885	1	29						
1404	Jacquenette	Phelips	5438593104	1	48						
1406	Marlowe	Scoble	9353960214	1	61						
1414	Cully	Hellyar	5746625340	1	615						
1426	Lisbeth	Hischke	8561335521	1	754						
1438	Georas	Kale	3112383245	1	754						
1441	Ursola	Lamb	1137770995	1	952						
1445	Violante	Passion	6561698115	1	219						
1448	Dorotea	Nials	8081959377	1	708						
1453	Othilia	Entreis	6105818243	1	781						
1455	Leann	Nolda	6391522950	1	517						
1469	Iorgo	Baudinelli	3168333947	1	911						
1471	Felecia	Sconce	4705166788	1	337						
1496	Zelda	Dixey	6436065318	1	474						
1498	Clarence	Callan	7232126042	1	181						

Welcome Page

SEDS

MEDWVREME

Columns

Data

Model

Constraints

Grants

Statistics

Triggers

Flashback

Dependencies

D

Sort..

Filter:

	IDVREME	VREMEDATUM	VREMEDAN	VREMEMESEC	VREMEGODINA
1	1	24-MAR-22	24	3	2022
2	2	24-MAR-22	24	3	2022
3	3	25-MAR-22	25	3	2022
4	4	25-MAR-22	25	3	2022
5	5	25-MAR-22	25	3	2022
6	6	25-MAR-22	25	3	2022
7	7	25-MAR-22	25	3	2022
8	8	25-MAR-22	25	3	2022
9	9	25-MAR-22	25	3	2022
10	10	25-MAR-22	25	3	2022
11	11	26-MAR-22	26	3	2022
12	12	26-MAR-22	26	3	2022
13	13	26-MAR-22	26	3	2022
14	14	26-MAR-22	26	3	2022
15	15	26-MAR-22	26	3	2022
16	16	26-MAR-22	26	3	2022
17	17	26-MAR-22	26	3	2022
18	18	26-MAR-22	26	3	2022
19	19	26-MAR-22	26	3	2022

Welcome Page x SEDS x MEDWPORUDZBINA x					
Columns   Data   Model   Constraints   Grants   Statistics   Triggers   Flashback   Dependencies   Details   Partitions   Indexes   SQL					
Sort.. Filter:					
	VREME_IDVREME	KLIJENT_IDKLIJENT	ZAPOSLENI_IDZAPOSLENOG	DOSTAVA_IDDOSTAVE	
1	1041	4257	2253	3	
2	1042	4257	2253	3	
3	1043	4257	2253	3	
4	1044	4257	2253	3	
5	1045	4257	2253	3	
6	1046	4257	2253	3	
7	1273	2294	2410	4	
8	1274	2294	2410	4	
9	1275	2294	2410	4	
10	1276	2294	2410	4	
11	1277	2294	2410	4	
12	1278	2294	2410	4	
13	1279	2294	2410	4	
14	1280	2294	2410	4	
15	1281	2294	2410	4	
16	1486	428	1401	3	
17	1487	428	1401	3	
18	1488	428	1401	3	
19	1489	428	1401	3	

# IZVEŠTAJI

Uz pomoć **Pentaho Report Designer-a** dobijamo izveštaje tj. odgovore na pitanja koja smo postavili na početku projekta.

Uz pomoć upita dobavljamo potrebne podatke i sa njima kreiramo vizuelne prikaze traženih podataka.

- Upiti i izveštaji na tražena pitanja:

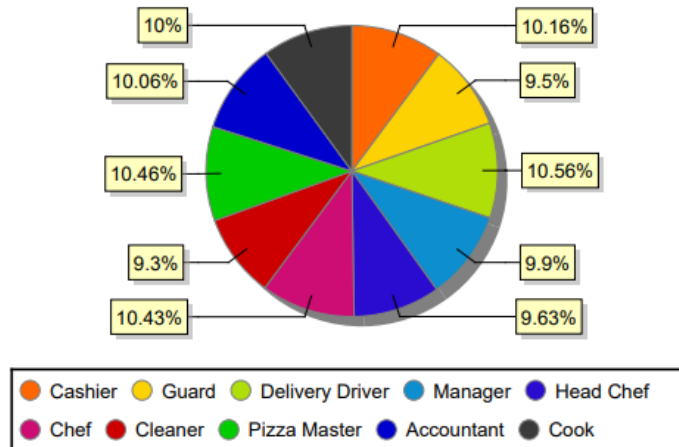
## 1. 10 Picerija sa najboljim ocenama

```
1 SELECT nazivpicerije, ocenapicerije
2 FROM MEDWPICERIJA
3 ORDER BY ocenaPicerije
4 DESC FETCH NEXT 10 ROWS ONLY
5
6
7
```

NAZIVPICERIJE	OCENAPICERIJE
Avamba	5
Oyoloo	5
Cogilith	5
Jazzy	5
Browseblab	5
Meemm	5
Quimm	5
Topicstorm	5
Rodel	5
Avavee	5

## 2. Raspodeljenost pozicija zaposlenih

```
1 SELECT p.OPISPOZICIJE as opis, COUNT(z.pozicija_idPozicije) AS count
2 FROM MEDWPOZICIJA p
3 INNERJOIN MEDWZAPOSLENI z ON p.idPozicije = z.pozicija_idPozicije
4 GROUP BY p.OPISPOZICIJE
5
```



3. Broj porudžbina za određenu vrstu porudžbine? (Uber Eats)

```
1 SELECT COUNT(*) AS Uber_Eats_Count
2 FROM medwPorudzbina
3 WHERE dostava_idDostave IN (
4     SELECT idDostave
5     FROM medwDostava
6     WHERE nacinDostave = 'Uber Eats'
7 )
```

Broj porudžbina putem Uber Eats

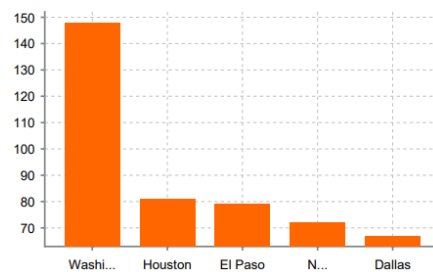


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#### 4. 5 gradova sa najviše klijenata?

```
1 SELECT gradKlijent, COUNT(*) AS Count_City
2 FROM MEDWKLIJENT
3 GROUP BY gradKlijent
4 ORDER BY COUNT(*) DESC
5 FETCH FIRST 5 ROWS ONLY
6
```

COUNT_CITY	GRADKLIJENT
148	Washington
81	Houston
79	El Paso
72	New York City
67	Dallas



## 5. Praćenje količine porudžbina po mesecima?

```

1 SELECT COUNT (idVreme), vremeMesec
2 FROM MEDWPorudzbina p
3 INNER JOIN medwvreme v on v.idVreme=p.vreme_idVreme
4 GROUP BY v.vremeMESEC
5 ORDER BY vremeMESEC
6

```

COUNT_PORUDŽBINA	MESEC
98	1
84	2
105	3
76	4
107	5
91	6
78	7
78	8
97	9
94	10
81	11
103	12

