

## Advanced SQL Queries

**Author:- Azarudhin Usman      Reference: Youtube - Analyst Adithya**

### Introduction:

This document covers SQL topics like Aggregate functions, Joins, Windows Functions and joins.

--drop table items

```
CREATE TABLE Items (  
    item_ID character(10) COLLATE pg_catalog."default" NOT NULL,  
    order_id character varying(40) COLLATE pg_catalog."default" DEFAULT  
NULL::character varying,  
    item_name VARCHAR(100) NOT NULL,  
    is_veg INTEGER NOT NULL  
);
```

```
INSERT INTO ITEMS VALUES  
(1,127143465064,'Paratha Kuruma',1),  
(2,127143465064,'Gobi Manchurian Dry',1),  
(3,127077028490,'Amritsari Paneer Tikka Lasagne',1),  
(4,126888939416,'Eggless Red Velvet Jar',1),  
(5,125668909627,'SEV PURI',1),  
(6,125668909627,'MASALA PURI',1),  
(7,125301846779,'Sepangkizhangu Fries',1),  
(8,124552896092,'Masala Kulcha',1),  
(9,124552896092,'Onion Aloo Mixed Paratha',1),  
(10,124552896092,'Mixed Vegetable Raita',1),  
(11,121958902961,'Penne Arrabiata Pasta La Vista',1),  
(12,121958902961,'Pind Di Daal Makhani with Jeera Rice',1),  
(13,120313745539,'Alfredo',1),  
(14,119284782350,'North Indian Value Combo Meals',1),  
(15,118674754387,'Veg Zinger',1),  
(16,118594611361,'Burnt Garlic Noodles + Chillli Corn (Serves 1)',1),  
(17,118594611361,'Chicken Fried Rice + Bbq Shredded Chicken Sauce',0),  
(18,118594611361,'Burnt Garlic Chicken Rice + Chilly Shredded Chicken  
(Serves 1)',0),  
(19,118594611361,'Butter Chicken',0),  
(20,118594611361,'Naan',1),  
(21,118507574782,'Seven Taste Uttapam',1),  
(22,118507574782,'Masala Kulcha',1),  
(23,118507574782,'Phulka',1),  
(24,118507574782,'Kadai Paneer',1),  
(25,118507574782,'Ghee Paneer Masal Dosa',1),  
(26,118507574782,'Sambar Idli',1),  
(27,118166623765,'Pomegranate Juices',1),  
(28,118166623765,'Mango Mastani',1),  
(29,117182948400,'Paneer Tikka Sub ( 15 cm, 6 Inch )',1),  
(30,117182948400,'Corn & Peas Sub ( 15 cm, 6 Inch )',1),
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(31,116840199924,'Classic Mac & Cheese',1),  
(32,116840199924,'Awadhi Paneer with Matar Pulao',1),  
(33,116840199924,'Sprite Can (300 ml)',1),  
(34,116840199924,'Nawabi Paneer Lababdar Parotta Bowl',1),  
(35,116840199924,'Triple Ripple Death by Chocolate',1),  
(36,116840199924,'Paneer 65 with Chilli Garlic Fried Rice',1),  
(37,116754798052,'Baked Veggie Pizza Wrap',1),  
(38,116754798052,'Jumbo Paneer Chole Wrap',1),  
(39,116754798052,'Rajma Masala Rice Bowl (Mini)',1),  
(40,116754798052,'Paneer Signature Rice Bowl (Mini)',1),  
(41,116754798052,'Hazelnut Brownie',1),  
(42,116690334483,'American Cheese Supreme - Veg',1),  
(43,116690334483,'Mcflurry Oreo Small',1),  
(44,116690334483,'Snack box',0),  
(45,116690334483,'McSpicy Paneer Burger',1),  
(46,116690334483,'Fries (R)',1),  
(47,116690334483,'New Chocolate Chip Muffin',1),  
(48,116666857091,'Palak Paneer Jumbo Lunchbox',1),  
(49,116666857091,'Palak Paneer Bread Kulcha Lunchbox',1),  
(50,116666857091,'Red Velvet Lava Cake',1),  
(51,116666857091,'Aloo Paratha With Dal Makhani',1),  
(52,114172231893,'Brownie',1),  
(53,111509575197,'Baby Corn Manchurian',1),  
(54,111332232888,'Aloo Sakh with Poori (3 Nos)',1),  
(55,111332232888,'Side Dish with Phulka Chapati (2 Nos)',1),  
(56,110902105248,'Gobi 65',1),  
(57,109947448158,'Cheese Corn Nuggets',1),  
(58,109947448158,'Veg Nuggets',1),  
(59,109947448158,'Butter Masala Corn Sandwich',1),  
(60,109519514675,'Super Saver Paneer Rice Bowl Meal',1),  
(61,109519514675,'Hazelnut Brownie',1),  
(62,107186347292,'Triple Chocolate Waffle',1),  
(63,107010105863,'Brownie Hotfudge Ice Cream Jar',1),  
(64,104678065783,'BBQ Cottage Sauce Pizza',1),  
(65,104678065783,'Corn & Cheddar Quesadilla',1),  
(66,104678065783,'Garlic Bread With Cheese',1),  
(67,104593523219,'Eggless Red Velvet Jar',1),  
(68,103989560561,'Oreo Brownie',2),  
(69,103989560561,'Trio of Chocolate Jar',1),  
(70,103899258502,'Gobi Manchurian',1),  
(71,103899258502,'Cashew Pulao',1),  
(72,103899258502,'Paneer Pulao',1),  
(73,103899258502,'Phulka',1),  
(74,102089628375,'Paneer 65 with Chilli Garlic Fried Rice',1),  
(75,102089628375,'Classic Mac & Cheese',1),  
(76,101569710926,'Butter Naan + Paneer Butter Masala + RoseMilk',1),  
(77,101569710926,'Gobi 65 Dry',1),  
(78,96303387993,'Triple Chocolate Waffle',1),  
(79,93259245959,'Nawabi Paneer Lababdar with Matar Pulao',1),  
(80,90174208184,'Double Chocolate Mousse',1),  
(81,88437200793,'Everyday Value 2 Reg Classic Paneer Combo',1),

(82,88437200793,'Cheesy Jalapeno Dip',1),  
(83,86796819721,'Chicken Schezwan Fried Rice',0),  
(84,86796243798,'Paneer & Onion',1),  
(85,86796243798,'Chicken Parcel',0),  
(86,86796243798,'Chicken Sausage',0),  
(87,85503629718,'Capsicum',1),  
(88,85503629718,'Golden Corn',1),  
(89,85503629718,'Farmhouse',1),  
(90,85413036372,'Nawabi Paneer Lababdar with Matar Pulao',1),  
(91,85413036372,'Triple Ripple Death by Chocolate',1),  
(92,85413036372,'Desi Dal Tadka with Jeera Rice',1),  
(93,83594429748,'Awadhi Paneer with Matar Pulao',1),  
(94,66209518020,'Paneer Butter Masala with Mattar Pulao',1),  
(95,65256281802,'Mutter Paneer & Paratha Lunchbox',1),  
(96,65030558417,'Strawberry (Baby)',1),  
(97,65030558417,'Hazelnut (Baby)',1),  
(98,64919239494,'Curd Rice',1),  
(99,64919239494,'Chocolate Milk Shake',1),  
(100,64337605340,'Garlic Naan',1),  
(101,64337605340,'Butter Naan',1),  
(102,64337605340,'Paneer Pulao',1),  
(103,64337605340,'Gobi Masala',1),  
(104,64337605340,'Strawberry Milk Shake',1),  
(105,63528835993,'Good ol" Rajma Chawal',1),  
(106,63528835993,'Peri Peri Chicken with Egg Corn Rice',0),  
(107,63528835993,'Paneer Butter Masala with Mattar Pulao',1),  
(108,61309491436,'The Paneer Overload Fusion Box',1),  
(109,60620307292,'Kitkat Oreo Shake [300 ml]',1),  
(110,58604508507,'Paneer Butter Masala with Matar Pulao + Choice of Dessert',1),  
(111,57681625363,'Oreo Chocolate Melt Jar',1),  
(112,56817719676,'Classic Mac & Cheese ',1),  
(113,55425946120,'Classic Mac & Cheese',1),  
(114,54997774768,'Classic Mac & Cheese',1),  
(115,54997774768,'Bailey"s Chocolate Mousse',1),  
(116,52839287946,'Chocolate Hazelnut Hunger Shake (Regular)',1),  
(117,52557909787,'Paneer Butter Masala with Mattar Pulao',1),  
(118,52471089408,'Makai Masala Rice Bowl',1),  
(119,50775345135,'Brownie Surprise',1),  
(120,49749872968,'Corn & Peas Sub (15 cms, 6 Inch)',1),  
(121,49749872968,'Corn & Peas Sub (15 cms, 6 Inch)',1),  
(122,49749872968,'Paneer Tikka Sub (15 cms, 6 Inch)',1),  
(123,49315198865,'Chocolate Lovers',1),  
(124,49315198865,'Swiss Choco Brownie',1),  
(125,49298321465,'Paneer Biryani',1),  
(126,49298321465,'Gobi Manchurian',1),  
(127,48342768684,'Kitkat Oreo Shake [300 ml]',1),  
(128,48342768684,'Berry Blast Shake [300 ml]',1),  
(129,48093468935,'Paneer & corn Pasta',1),  
(130,46946088452,'Paneer Pulao with Kadhi',1),  
(131,46946088452,'Gobi Manchurian',1),

(132,46709238766,'Tawa Ghee Phulka',1),  
(133,46709238766,'Mattar Paneer',1),  
(134,46709238766,'Punjabi Chaach Di-Bottle (Butter Milk)',1),  
(135,46709238766,'Cheese Garlic Kulcha',1),  
(136,45580335390,'Belgian Chocolate - Dark',1),  
(137,45329093270,'Peas Pulao ',1),  
(138,45329093270,'Mixed Veg Raita',1),  
(139,45046337544,'Paneer Tikka Masala',1),  
(140,45046337544,'Roti',1),  
(141,45046337544,'Naan',1),  
(142,44294169925,'Cookies & Cream',1),  
(143,44281184062,'Cheese corn Wrap',1),  
(144,43878488152,'Butterscotch Ice cream',1),  
(145,43878488152,'Swiss Chocolate Ice cream',1),  
(146,43878488152,'Oreo Cream and Fudge',1),  
(147,43875533945,'Gobi Manchurian (Dry)',1),  
(148,43875533945,'Paneer Fried Rice',1),  
(149,43875533945,'Chicken Fried Rice',0),  
(150,43875533945,'Dragon Chicken',0),  
(151,41434653260,'Classic Corn (Personal)',1),  
(152,41434653260,'Garlic Breadsticks',1),  
(153,40720888087,'Punjabi Thali (Limited)',1),  
(154,38930061426,'Fajita Veggies Quesadilla',1),  
(155,38930061426,'Cheesy Double Decker Taco Veg',1),  
(156,37720646109,'Chocodilla',1),  
(157,37720646109,'Cheesy Double Decker Taco Veg',1),  
(158,29854675649,'Cheese corn Wrap',1),  
(159,29854675649,'Paneer & corn Pasta',1),  
(160,27788088847,'Cheese corn Wrap',1),  
(161,27788088847,'Trimasu Shake',1),  
(162,26146797097,'Phulka Chapati',1),  
(163,26146797097,'Daily Special Side Dish (Portion)',1),  
(164,22941287885,'Idli (2 Pcs)',1),  
(165,22941287885,'Chapathi Korma',1),  
(166,22512634359,'Paneer Pulao with Raita',1),  
(167,22512535762,'Idli (2 Pcs)',1),  
(168,22512535762,'Poori Masala',1),  
(169,21823031245,'Poori Masala',1),  
(170,21823031245,'Uttapam',1),  
(171,20698577867,'Crunchy Chicken',0),  
(172,20698577867,'Paneer & corn Pasta',1),  
(173,19986548494,'Mango Blast Thick Shake',1),  
(174,19578602443,'Cheesy Rice Bowl - Veg',1),  
(175,19578602443,'Mexican McAllooTikki Burger',1),  
(176,19578602443,'McEgg Meal ( R )',0),  
(177,19405811984,'Veg Pulao with Raita',1),  
(178,19405811984,'Rasmalai',1),  
(179,1181693164,'Tawa Paneer Frankie',1),  
(180,1181693164,'Schezwan Paneer Frankie',1),  
(181,1177912478,'Mexican Fries (Chef Suggested)',1),  
(182,1177912478,'Maggi Italiano',1),

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(183,1172808867,'Bubble Gum Ice cream (95 gms)',1),
(184,1172808867,'Butterscotch Bliss Ice cream (95 gms)',1),
(185,1161151700,'Golden Corn',1),
(186,1161151700,'Cheesy Dip',1),
(187,1161151700,'Paneer & Onion',1),
(188,1161151700,'Butterscotch Mousse Cake',1),
(189,1129725726,'Triple Choco Chip Thick Shake',1),
(190,1123341565,'Cookie and Cream Milkshake',1),
(191,1123287736,'Veg Pulao + 3 Phulkas + Dal Fry + Mango Drink (200 ml)',1),
(192,1096353194,'Cheese Tandoori Veg Pizza Sandwich',1),
(193,1096353194,'Mixed Choco Sandwich',1)

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-- Drop table Orders

```

CREATE TABLE IF NOT EXISTS public.ORDERS
(
    ID character(2) COLLATE pg_catalog."default" NOT NULL,
    ORDER_ID character varying(40) COLLATE pg_catalog."default" DEFAULT
NULL::character varying,
    order_total INTEGER NOT NULL,
    restaurant_name character varying(100),
    order_time timestamp with time zone,
    rain_mode integer not null,
    on_time integer not null,
    CONSTRAINT Orders_pkey PRIMARY KEY (ID)
)
TABLESPACE pg_default;

```

```

insert into orders values
(1,127143465064,463.0,'A2B Veg','2022-02-05 19:07:45',0,1),
(2,127077028490,252.0,'Firangi Bake','2022-02-05 00:40:28',0,1),
(3,126888939416,190.0,'The Table','2022-02-02 20:25:40',0,1),
(4,125668909627,258.0,'Sree gupta bhavan','2022-01-19 17:31:50',0,0),
(5,125301846779,194.0,'Idlies','2022-01-15 11:34:07',0,1),
(6,124552896092,320.0,'Shyam"s Bombay Halwa House','2022-01-06
19:31:37',0,0),
(7,121958902961,304.0,'The Bowl Company','2021-12-07 18:58:22',0,1),
(8,120313745539,169.0,'Super Munch','2021-11-18 17:59:06',2,1),
(9,119284782350,212.0,'Mansukh"s Sweets and Snacks','2021-11-06
20:09:43',5,1),
(10,118674754387,336.0,'KFC','2021-10-30 18:42:35',0,1),
(11,118594611361,752.0,'The Chopstix- Kk Nagar','2021-10-29
20:26:52',0,0),
(12,118507574782,661.0,'Sabarees Veg Restaurant','2021-10-28
20:16:14',0,1),
(13,118166623765,212.0,'Lassi House','2021-10-24 21:33:43',2,1),
(14,117182948400,407.0,'Subway','2021-10-13 12:19:09',0,0),
(15,116840199924,1139.0,'The Bowl Company','2021-10-09 13:06:40',0,1),
(16,116754798052,809.0,'Faasos','2021-10-08 13:23:19',0,0),
(17,116690334483,1053.0,'McDonald"s','2021-10-07 19:28:55',0,1),

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(18,116666857091,894.0,'LunchBox','2021-10-07 12:57:38',0,1),  
(19,114172231893,174.0,'Drunken Monkey','2021-09-08 16:00:32',0,1),  
(20,111509575197,224.0,'Sangeetha"s Desi Mane','2021-08-08  
20:22:56',0,0),  
(21,111332232888,108.0,'Mansukh"s Sweets and Snacks','2021-08-06  
19:07:13',0,0),  
(22,110902105248,194.0,'Sangeetha"s Desi Mane','2021-08-01  
19:38:26',0,1),  
(23,109947448158,204.0,'The Sandwich Shop 2.0','2021-07-21  
18:27:29',0,1),  
(24,109519514675,293.0,'Faasos','2021-07-16 19:35:14',0,0),  
(25,107186347292,179.0,'The Belgian Waffle Co.','2021-06-19  
19:29:08',0,0),  
(26,107010105863,133.0,'The Thickshake Factory','2021-06-17  
18:31:46',0,1),  
(27,104678065783,655.0,'Amelie"s Cafe & Creamery','2021-05-21  
18:44:26',0,0),  
(28,104593523219,194.0,'The Table','2021-05-20 19:15:24',0,0),  
(29,103989560561,353.0,'The Table','2021-05-13 19:29:21',0,1),  
(30,103899258502,688.0,'Kamakshi Mess','2021-05-12 18:24:18',0,0),  
(31,102089628375,368.0,'The Bowl Company','2021-04-21 19:43:49',0,0),  
(32,101569710926,271.0,'Bakya Veg Restaurant','2021-04-15 19:18:30',0,1),  
(33,96303387993,193.0,'The Belgian Waffle Co.','2021-02-13  
20:26:28',0,1),  
(34,93259245959,164.0,'The Bowl Company','2021-01-09 14:50:46',0,1),  
(35,90174208184,158.0,'Roll Over','2020-12-04 21:53:28',0,1),  
(36,88437200793,406.0,'Domino"s Pizza','2020-11-14 19:23:21',0,1),  
(37,86796819721,190.0,'Moonlight Takeaway & Delivery','2020-10-26  
19:43:40',0,1),  
(38,86796243798,209.0,'Domino"s Pizza','2020-10-26 19:34:04',0,0),  
(39,85503629718,344.0,'Domino"s Pizza','2020-10-11 20:30:30',0,0),  
(40,85413036372,401.0,'The Bowl Company','2020-10-10 19:20:36',0,1),  
(41,83594429748,133.0,'The Bowl Company','2020-09-19 18:10:30',0,0),  
(42,66209518020,153.0,'The Bowl Company','2020-03-02 13:01:59',0,0),  
(43,65256281802,137.0,'LunchBox','2020-02-20 12:14:42',0,0),  
(44,65030558417,102.0,'Richy Rich Ice Creams','2020-02-17 21:32:39',0,0),  
(45,64919239494,160.0,'HOTEL ANANDHA BHAVAN (Imperial Road)','2020-02-16  
14:37:20',0,0),  
(46,64337605340,374.0,'HOTEL ANANDHA BHAVAN (Imperial Road)','2020-02-09  
21:03:26',0,0),  
(47,63528835993,502.0,'The Bowl Company','2020-01-31 12:23:56',0,1),  
(48,61309491436,173.0,'VEJ','2020-01-05 19:54:52',0,1),  
(49,60620307292,166.0,'Frozen Bottle','2019-12-28 20:28:28',0,1),  
(50,58604508507,240.0,'The Bowl Company','2019-12-05 12:31:48',0,0),  
(51,57681625363,192.0,'The Table','2019-11-24 20:10:26',0,1),  
(52,56817719676,110.0,'Good For One','2019-11-14 20:12:00',0,1),  
(53,55425946120,185.0,'The Bowl Company','2019-10-29 17:35:47',0,1),  
(54,54997774768,244.0,'The Bowl Company','2019-10-24 18:39:34',0,1),  
(55,52839287946,152.0,'KEVENTERS','2019-09-29 19:04:48',0,1),  
(56,52557909787,138.0,'The Bowl Company','2019-09-26 12:55:10',0,0),  
(57,52471089408,140.0,'The Good Bowl','2019-09-25 12:48:09',0,0),

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(58,50775345135,161.0,'Roll Over','2019-09-05 21:45:46',0,1),
(59,49749872968,555.0,'Subway','2019-08-25 00:54:32',0,1),
(60,49315198865,262.0,'Cream and Fudge','2019-08-20 00:09:59',0,1),
(61,49298321465,307.0,'Sangeetha"s Desi Mane','2019-08-19 19:28:41',0,1),
(62,48342768684,328.0,'Frozen Bottle','2019-08-08 18:02:48',0,1),
(63,48093468935,157.0,'Food Track','2019-08-05 20:47:49',0,1),
(64,46946088452,319.0,'Mansukh"s Sweets and Snacks','2019-07-23
14:04:48',0,1),
(65,46709238766,559.0,'Shyam"s Bombay Halwa House','2019-07-20
20:17:18',0,0),
(66,45580335390,109.0,'The Belgian Waffle Co','2019-07-07 18:42:15',0,0),
(67,45329093270,277.0,'Sree gupta bhavan','2019-07-04 20:54:54',0,1),
(68,45046337544,471.0,'Sangeetha"s Desi Mane','2019-07-01 14:22:18',0,1),
(69,44294169925,107.0,'Oh so Stoned','2019-06-22 21:26:10',0,1),
(70,44281184062,97.0,'Food Track','2019-06-22 17:49:45',0,1),
(71,43878488152,455.0,'Cream and Fudge','2019-06-18 01:58:09',0,1),
(72,43875533945,651.0,'Moonlight Takeaway & Delivery','2019-06-18
01:08:53',0,1),
(73,41434653260,192.0,'Pizza Hut','2019-05-20 19:07:34',0,1),
(74,40720888087,191.0,'Desi Rasoi"s Punjabi Dhaba','2019-05-12
12:51:28',0,0),
(75,38930061426,277.0,'Taco Bell','2019-04-21 19:24:22',0,1),
(76,37720646109,164.0,'Taco Bell','2019-04-07 19:27:26',0,0),
(77,29854675649,278.0,'Food Track','2019-01-06 18:27:55',0,1),
(78,27788088847,225.0,'Food Track','2018-12-13 20:24:49',0,0),
(79,26146797097,409.0,'Mansukh"s Sweets and Snacks','2018-11-24
20:29:58',0,1),
(80,22941287885,121.0,'A2B Veg','2018-10-18 18:04:48',0,1),
(81,22512634359,146.0,'Mansukh"s Sweets and Snacks','2018-10-13
19:00:35',0,1),
(82,22512535762,415.0,'A2B Veg','2018-10-13 18:58:56',0,1),
(83,21823031245,154.0,'A2B Veg','2018-10-05 19:27:11',0,1),
(84,20698577867,315.0,'Food Track','2018-09-22 19:06:18',0,1),
(85,19986548494,188.0,'The Thickshake Factory','2018-09-14
13:19:09',0,0),
(86,19578602443,272.0,'McDonald"s','2018-09-09 20:00:03',0,0),
(87,19405811984,152.0,'Mansukh"s Sweets and Snacks','2018-09-07
20:00:12',0,0),
(88,1181693164,147.0,'Tibbs Frankie','2018-05-16 19:07:46',0,1),
(89,1177912478,203.0,'Maggevala Curly Cravings','2018-05-09
20:02:39',0,1),
(90,1172808867,184.0,'Ibaco','2018-04-29 21:06:22',0,1),
(91,1161151700,313.0,'Domino"s Pizza','2018-04-06 19:05:59',0,0),
(92,1129725726,192.0,'The Thick Shake Factory','2018-01-07
17:12:33',0,1),
(93,1123341565,125.0,'Food Centralis','2017-12-10 20:51:31',0,1),
(94,1123287736,209.0,'Rice n Spice','2017-12-10 19:24:06',0,0),
(95,1096353194,140.0,'The Sandwich Shop','2017-07-02 19:09:02',0,0)

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```
-- Distinct Food Order Items
```

```
select item_name, count(distinct item_name) from items group by item_name;
```

Output:

Query

Query History

1

select count(distinct item\_name) from items

2

group by item\_name;

3

Data Output

Messages

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</

```
-- Group veg and non veg items  
select is_veg, count(*) as totalitems from items group by is_veg;
```

Output:

Query

Query History










1

select is\_veg, count(\*) as totalitems from items group by is\_veg;

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	is_veg integer	totalitems bigint
1	0	12
2	1	180
3	2	1



```
-- Count the number of unique orders
select count(distinct order_id) from orders;
```

Output:










1


select count(distinct order\_id) from orders;

Data Output

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	count bigint	
1	95	

```
-- Show items which contains chicken in their name
select * from items where item_name like '%Chicken%';
```

Output:

Query

Query History










1 select \* from items where item\_name like '%Chicken%';





2

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	item_id character 	order_id character varying (40) 	item_name character varying (100) 	is_veg integer 
1	17	118594611361	Chicken Fried Rice + Bbq Shredded Chicken Sauce	0
2	18	118594611361	Burnt Garlic Chicken Rice + Chilly Shredded Chicken (Serves ...	0
3	19	118594611361	Butter Chicken	0
4	83	86796819721	Chicken Schezwan Fried Rice	0
5	85	86796243798	Chicken Parcel	0
6	86	86796243798	Chicken Sausage	0
7	106	63528835993	Peri Peri Chicken with Egg Corn Rice	0
8	149	43875533945	Chicken Fried Rice	0
9	150	43875533945	Dragon Chicken	0
10	171	20698577867	Crunchy Chicken	0

```
-- Show items which contains Paratha in their name
select * from items where item_name like '%Paratha%';
```

Output:

```
1 select * from items where item_name like '%Paratha%';
2
```

	item_id character	order_id character varying (40)	item_name character varying (100)	is_veg integer
1	1	127143465064	Paratha Kuruma	1
2	9	124552896092	Onion Aloo Mixed Paratha	1
3	51	116666857091	Aloo Paratha With Dal Makhani	1
4	95	65256281802	Mutter Paneer & Paratha Lunchbox	1

```
-- Average Items per Order
select count(item_name)/count(distinct order_id) from items group by
order_id;
```

Output:

```
1 select order_id, count(item_name)/count(distinct order_id) from items group by order_id;
2
```

	order_id character varying (40)	?column? bigint
1	101569710926	2
2	102089628375	2
3	103899258502	4
4	103989560561	2
5	104593523219	1
6	104678065783	3

```
-- Item ordered the most number of times
select item_name, count(*) from items
group by item_name
order by count(*) desc;
```

Output:

```

1 select item_name, count(*) from items
2 group by item_name
3 order by count(*) desc;
4

```

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	item_name character varying (100)	count bigint
1	Classic Mac & Cheese	4
2	Paneer Butter Masala with Mattar Pulao	3
3	Gobi Manchurian	3
4	Paneer & corn Pasta	3

----Orders during rainy times

```
select rain_mode, count(distinct order_id) from orders group by rain_mode;
```

Output:

```

1 select rain_mode, count(distinct order_id) from orders group by rain_mode;
2

```

Data Output Messages Notifications



	rain_mode integer	count bigint
1	0	92
2	2	2
3	5	1

--Unique restaurant names

```
select distinct restaurant_name from orders;
```

Output:

```

1 select distinct restaurant_name from orders;
2

```

Data Output Messages Notifications



	restaurant_name character varying (100)	
1	The Thick Shake Factory	
2	The Sandwich Shop	
3	Ibaco	
4	The Good Bowl	
5	The Chopstix- Kk Nagar	
6	The Thickshake Factory	

```

--Restaurant with most orders
select Restaurant_name, count(order_id) from orders
group by Restaurant_name
order by count(order_id) desc;

```

Output:

```

1 select Restaurant_name, count(order_id) from orders
2 group by Restaurant_name
3 order by count(order_id) desc;
4

```

Data Output Messages Notifications



	restaurant_name character varying (100)	count bigint
1	The Bowl Company	12
2	Mansukh"s Sweets and Snacks	6
3	Food Track	5
4	Sangeetha"s Desi Mane	4
5	The Table	4
6	A2B Veg	4

```
--Restaurant with most orders with limit function
select Restaurant_name, count(order_id) from orders
group by Restaurant_name
order by count(order_id) desc limit 1;
```

Output:

1	select	Restaurant_name,	count(order_id)	from	orders
2	group by	Restaurant_name			
3	order by	count(order_id)	desc	limit	1;
4					

Data Output	Messages	Notifications
<div> <div>≡+</div> <div>📄</div> <div>▼</div> <div>📋</div> <div>▼</div> <div>🗑️</div> <div>🗄️</div> <div>⬇️</div> <div>📈</div> </div>		
	restaurant_name character varying (100) 🔒	count bigint 🔒
1	The Bowl Company	12

```
--Orders placed per month and year
select To_char(order_time, 'YYYY-MM'), count(distinct order_id) from orders
group by To_char(order_time, 'YYYY-MM')
order by count(distinct order_id) desc;
```

Output:

1	select	To_char(order_time, 'YYYY-MM'),	count(distinct order_id)	from	orders
2	group by	To_char(order_time, 'YYYY-MM')			
3	order by	count(distinct order_id)	desc;		
4					

Data Output	Messages	Notifications
<div> <div>≡+</div> <div>📄</div> <div>▼</div> <div>📋</div> <div>▼</div> <div>🗑️</div> <div>🗄️</div> <div>⬇️</div> <div>📈</div> </div>		
	to_char text 🔒	count bigint 🔒
1	2021-10	9
2	2019-08	5
3	2019-07	5
4	2021-05	4

### --Revenue made by month

```
select To_char(order_time, 'YYYY-MM'), sum(order_total) from orders
group by To_char(order_time, 'YYYY-MM')
order by sum(order_total) desc;
```

#### Output:

1	select To_char(order_time, 'YYYY-MM'), sum(order_total) from orders
2	group by To_char(order_time, 'YYYY-MM')
3	order by sum(order_total) desc;
4	

	Data Output	Messages	Notifications
	to_char text	sum bigint	
1	2021-10	6263	
2	2021-05	1890	
3	2019-07	1735	
4	2019-08	1609	

### --Revenue made by each restaurants by month

```
select restaurant_name,To_char(order_time, 'YYYY-MM'), sum(order_total)
from orders
group by restaurant_name, To_char(order_time, 'YYYY-MM')
order by sum(order_total) desc;
```

#### Output:

1	select restaurant_name,To_char(order_time, 'YYYY-MM'), sum(order_total) from orders
2	group by restaurant_name, To_char(order_time, 'YYYY-MM')
3	order by sum(order_total) desc;
4	

	Data Output	Messages	Notifications
	restaurant_name character varying (100)	to_char text	sum bigint
1	The Bowl Company	2021-10	1139
2	McDonald's	2021-10	1053
3	LunchBox	2021-10	894

### -- Revenue made by each restaurants by year

```
select restaurant_name, SUM(ORDER_TOTAL) from orders
```

```
GROUP BY restaurant_name
ORDER BY SUM(ORDER_TOTAL) DESC;
```

**Output:**

1	<b>select</b> restaurant_name, <b>SUM</b> (ORDER_TOTAL) <b>from</b> orders
2	<b>GROUP BY</b> restaurant_name
3	<b>ORDER BY SUM</b> (ORDER_TOTAL) <b>DESC</b> ;
4	
5	

Data Output	Messages	Notifications
<div> <div>+</div> <div>📄</div> <div>▼</div> <div>📋</div> <div>▼</div> <div>🗑️</div> <div>🗄️</div> <div>⬇️</div> <div>📈</div> </div>		
	restaurant_name character varying (100)	sum bigint
1	The Bowl Company	3971
2	Mansukh's Sweets and Snacks	1346
3	McDonald's	1325
4	Domino's Pizza	1272

**--Average Order Value**

```
select sum(order_total)/count(distinct order_id) as Avg_amount_perID from
orders;
```

**Output:**

```

1 select sum(order_total)/count(distinct order_id) as Avg_amount_perID from orders;
2

```

Data Output

Messages

Notifications

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	avg_amount_perid
	bigint
1	293

**--Find the total amount spent on each year**

**-- Approach 1**

```
select to_char(order_time,'YYYY'), sum(order_total)
from orders
group by to_char(order_time,'YYYY')
order by sum(order_total) desc;
```

**Output:**

1	select to_char(order_time,'YYYY'), sum(order_total)
2	from orders
3	group by to_char(order_time,'YYYY')
4	order by sum(order_total) desc;
5	

Data Output	Messages	Notifications
<div> <div>+</div> <div>📄</div> <div>▼</div> <div>📋</div> <div>▼</div> <div>🗑️</div> <div>🗄️</div> <div>⬇️</div> <div>📈</div> </div>		
	avg_amount_perid bigint	🔒
1	293	

## -- Approach 2

```
select extract('YEAR' from order_time), SUM(ORDER_TOTAL) from orders
GROUP BY extract('YEAR' from order_time)
ORDER BY SUM(ORDER_TOTAL) DESC;
```

## -- Output

1	select extract('YEAR' from order_time), SUM(ORDER_TOTAL) from orders
2	GROUP BY extract('YEAR' from order_time)
3	ORDER BY SUM(ORDER_TOTAL) DESC;
4	
5	

Data Output	Messages	Notifications
<div> <div>+</div> <div>📄</div> <div>▼</div> <div>📋</div> <div>▼</div> <div>🗑️</div> <div>🗄️</div> <div>⬇️</div> <div>📈</div> </div>		
	extract numeric	sum bigint
1	2021	11343
2	2019	7484
3	2020	3442
4	2018	3436
5	2022	1677
6	2017	474

## --YOY (Year-on-Year) Change in revenue using lag function

The Year-over-Year (YoY) growth rate is a measure of the percentage change in a specific metric from one year to the next. In the context of amount spent by each customer, you can calculate the YoY growth rate using the following formula:



## YoY Growth Rate

$$\text{YoY Growth Rate} = \left( \frac{\text{Current Year Value} - \text{Previous Year Value}}{\text{Previous Year Value}} \right) \times 100$$

```
select yearorder, revenue, lag(revenue)over(order by yearorder) as
previous_revenue from(select to_char(order_time,'YYYY') as yearorder,
sum(order_total) as revenue from orders
group by to_char(order_time,'YYYY')
order by sum(order_total) desc) a;
```

```
1 select yearorder, revenue, lag(revenue)over(order by yearorder) as previous_revenue
2 from(select to_char(order_time,'YYYY') as yearorder, sum(order_total) as revenue from orders
3 group by to_char(order_time,'YYYY')
4 order by sum(order_total) desc) a;
5
```

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	yearorder	revenue	previous_revenue
	text	bigint	bigint
1	2017	474	[null]
2	2018	3436	474
3	2019	7484	3436
4	2020	3442	7484
5	2021	11343	3442
6	2022	1677	11343

## -- YOY change in revenue using lag function

```
with a as (
select extract('YEAR' from order_time) as yearorder, SUM(ORDER_TOTAL) as
total from orders
GROUP BY extract('YEAR' from order_time))
select yearorder, total, lag(total) over(order by yearorder) as
previous_revenue,
((total - LAG(total) OVER (ORDER BY yearorder)) / LAG(total) OVER (ORDER
BY yearorder) * 100) AS proportion from a;
```

**Output:**

```

1 with a as (
2   select extract('YEAR' from order_time) as yearorder, SUM(ORDER_TOTAL)::decimal as total from orders
3   GROUP BY extract('YEAR' from order_time))
4   select yearorder, total, lag(total) over(order by yearorder)::decimal as previous_revenue,
5   round((((total::decimal - LAG(total) OVER (ORDER BY yearorder)::decimal) / total))*100,2)
6   AS proportion from a;
7

```

Data Output Messages Notifications



	yearorder numeric	total numeric	previous_revenue numeric	proportion numeric
1	2017	474	[null]	[null]
2	2018	3436	474	86.20
3	2019	7484	3436	54.09
4	2020	3442	7484	-117.43
5	2021	11343	3442	69.66
6	2022	1677	11343	-576.39

-- Find the max revenue and year.

-- Approach 1

```

select extract('YEAR' from order_time) as orderyear, sum(order_total) as
revenue
from orders
group by extract('YEAR' from order_time)
order by sum(order_total) desc limit 1;

```

Output:

```

1 select extract('YEAR' from order_time) as orderyear, sum(order_total) as revenue
2   from orders
3   group by extract('YEAR' from order_time)
4   order by sum(order_total) desc limit 1;
5

```

Data Output Messages Notifications



	orderyear numeric	revenue bigint
1	2021	11343

-- Approach 2

```

with a as(
select extract('YEAR' from order_time) as orderyear, sum(order_total) as
revenue
from orders
group by extract('YEAR' from order_time))
select orderyear, revenue, rank() over(order by revenue desc) from a limit

```

1;

Output:

<pre>1 with a as( 2 select extract('YEAR' from order_time) as orderyear, sum(order_total) as revenue 3 from orders 4 group by extract('YEAR' from order_time)) 5 select orderyear, revenue, rank() over(order by revenue desc) from a limit 1; 6</pre>			
Data Output Messages Notifications			
	orderyear numeric	revenue bigint	rank bigint
1	2021	11343	1

--Restaurant with highest revenue ranking

```
with a as(
select restaurant_name, sum(order_total) as revenue
from orders
group by restaurant_name)
select restaurant_name, revenue, rank() over(order by revenue desc) from
a limit 1;
```

Output:

<pre>1 with a as( 2 select restaurant_name, sum(order_total) as revenue 3 from orders 4 group by restaurant_name) 5 select restaurant_name, revenue, rank() over(order by revenue desc) from a limit 1; 6</pre>			
Data Output Messages Notifications			
	restaurant_name character varying (100)	revenue bigint	rank bigint
1	The Bowl Company	3971	1

--Join order and item tables and find product combos using self join

```
select a.order_id, b.order_id, a.item_name from items a
join orders b on a.order_id = b.order_id;
```

Output:

```
1 select a.order_id, b.order_id, a.item_name from items a
2 join orders b on a.order_id = b.order_id;
3
```

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	order_id character varying (40)	order_id character varying (40)	item_name character varying (100)
1	127143465064	127143465064	Paratha Kuruma
2	127143465064	127143465064	Gobi Manchurian Dry

\*\*\*\*\*-----END-----\*\*\*\*\*