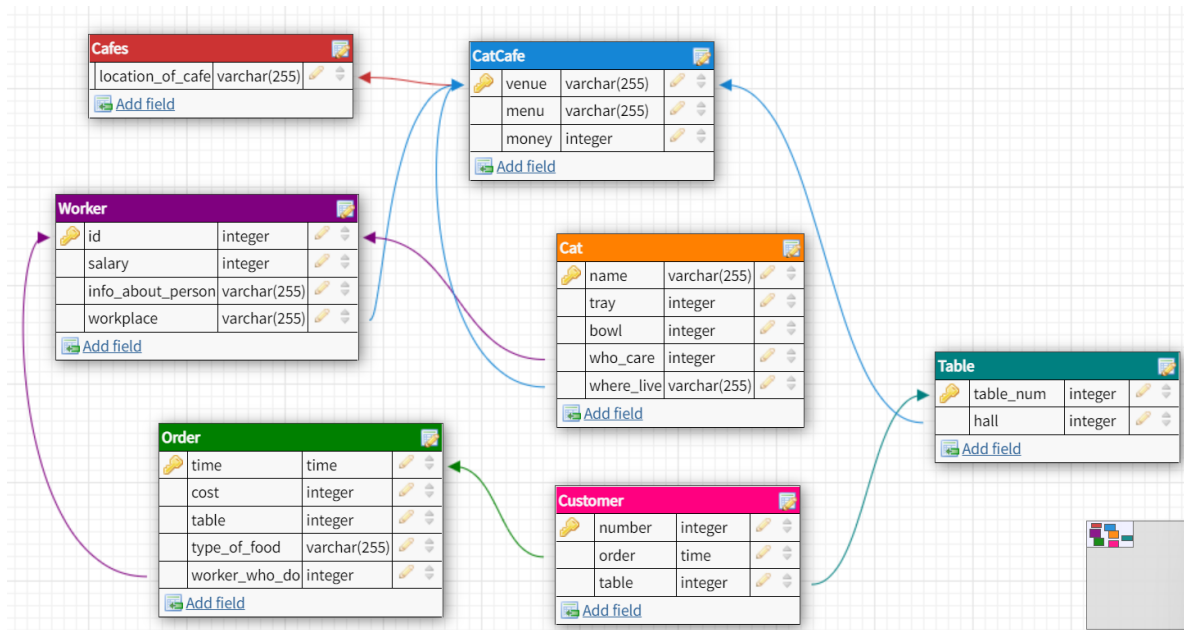


## Create Database



```

CREATE TABLE "public.CatCafe" (
    "venue" VARCHAR(55) NOT NULL,
    "workplace" VARCHAR(55) NOT NULL,
    "tables" integer(55) NOT NULL,
    "menu" VARCHAR(55) NOT NULL,
    "workers" integer(55) NOT NULL,
    "money" integer(55) NOT NULL,
    "cats" VARCHAR(55) NOT NULL,
    "customers" VARCHAR(55) NOT NULL,
    CONSTRAINT "CatCafe_pk" PRIMARY KEY ("venue")
) WITH (
    OIDS=FALSE
);

CREATE TABLE "public.Worker" (
    "id" serial(1) NOT NULL,
    "salary" integer(1) NOT NULL,
    "info_about_person" VARCHAR(55) NOT NULL,
    "workplace" VARCHAR(5) NOT NULL,
    "orders" DATETIME(55) NOT NULL,
    "care_about(cat)" VARCHAR(55) NOT NULL,
    CONSTRAINT "Worker_pk" PRIMARY KEY ("id")
) WITH (
    OIDS=FALSE
);

CREATE TABLE "public.Customer" (
    "number" serial(1) NOT NULL,
    "order" serial(1) NOT NULL,
    "play_with(cat)" serial(55) NOT NULL,
    "table" serial(1) NOT NULL,
    CONSTRAINT "Customer_pk" PRIMARY KEY ("number")
) WITH (
    OIDS=FALSE
);

CREATE TABLE "public.Cat" (
    "name" serial(1) NOT NULL,
    "tray" serial(1) NOT NULL,
    "bowl" serial(1) NOT NULL,
    "who_care(worker)" serial(55) NOT NULL,
    CONSTRAINT "Cat_pk" PRIMARY KEY ("name")
) WITH (
    OIDS=FALSE
);

CREATE TABLE "public.Order" (
    "time" DATETIME(1) NOT NULL,
    "cost" integer(1) NOT NULL,
    "table" integer(1) NOT NULL,
    "type_of_food" VARCHAR(55) NOT NULL,
    CONSTRAINT "Order_pk" PRIMARY KEY ("time")

```

```

) WITH (
  OIDS=FALSE
);

CREATE TABLE "public.Table" (
  "table_num" serial(1) NOT NULL,
  "free" integer(55) NOT NULL,
  "occupation" integer(55) NOT NULL,
  CONSTRAINT "Table_pk" PRIMARY KEY ("table_num")
) WITH (
  OIDS=FALSE
);

CREATE TABLE "public.Cafes" (
  "location_of_cafe" integer(55) NOT NULL
) WITH (
  OIDS=FALSE
);

ALTER TABLE "CatCafe" ADD CONSTRAINT "CatCafe_fk0" FOREIGN KEY ("venue")
REFERENCES "Cafes"("location_of_cafe");
ALTER TABLE "CatCafe" ADD CONSTRAINT "CatCafe_fk1" FOREIGN KEY ("customers")
REFERENCES "Customer"("number");

ALTER TABLE "Worker" ADD CONSTRAINT "Worker_fk0" FOREIGN KEY ("id")
REFERENCES "CatCafe"("workers");
ALTER TABLE "Worker" ADD CONSTRAINT "Worker_fk1" FOREIGN KEY ("salary")
REFERENCES "CatCafe"("money");
ALTER TABLE "Worker" ADD CONSTRAINT "Worker_fk2" FOREIGN KEY ("workplace")
REFERENCES "CatCafe"("workplace");
ALTER TABLE "Worker" ADD CONSTRAINT "Worker_fk3" FOREIGN KEY ("orders")
REFERENCES "Order"("time");
ALTER TABLE "Worker" ADD CONSTRAINT "Worker_fk4" FOREIGN KEY
("care_about(cat)") REFERENCES "Cat"("name");

ALTER TABLE "Customer" ADD CONSTRAINT "Customer_fk0" FOREIGN KEY ("order")
REFERENCES "Order"("time");
ALTER TABLE "Customer" ADD CONSTRAINT "Customer_fk1" FOREIGN KEY
("play_with(cat)") REFERENCES "Cat"("name");
ALTER TABLE "Customer" ADD CONSTRAINT "Customer_fk2" FOREIGN KEY ("table")
REFERENCES "Table"("table_num");

ALTER TABLE "Cat" ADD CONSTRAINT "Cat_fk0" FOREIGN KEY ("name") REFERENCES
"CatCafe"("cats");
ALTER TABLE "Cat" ADD CONSTRAINT "Cat_fk1" FOREIGN KEY ("who_care(worker)")
REFERENCES "Worker"("id");

ALTER TABLE "Order" ADD CONSTRAINT "Order_fk0" FOREIGN KEY ("cost")
REFERENCES "CatCafe"("money");
ALTER TABLE "Order" ADD CONSTRAINT "Order_fk1" FOREIGN KEY ("table")
REFERENCES "CatCafe"("tables");
ALTER TABLE "Order" ADD CONSTRAINT "Order_fk2" FOREIGN KEY ("type_of_food")
REFERENCES "CatCafe"("menu");

```

```
ALTER TABLE "Table" ADD CONSTRAINT "Table_fk0" FOREIGN KEY ("table_num")  
REFERENCES "CatCafe"("tables");
```

- vnější spojení tabulek

What order who processed

```
SELECT * FROM "Order" LEFT OUTER JOIN "Worker" On ("Order".worker_who_do = "Worker".id);
```

	time time without time zone	cost integer	table integer	type_of_food character varying (255)	worker_who_do integer	id integer	salary integer	info_about_person character varying (255)	workplace character varying (255)
1	12:30:00	1	1	Salad	1	1	10	Man Ray	BlackStreet48
2	20:30:00	2	2	Tea, Ice Cream	1	1	10	Man Ray	BlackStreet48
3	15:15:00	2	3	Meat, Bread	1	1	10	Man Ray	BlackStreet48
4	16:20:00	3	4	Wine, Bread	2	2	10	John Green	BlackStreet48
5	15:22:00	1	3	Ice cream	2	2	10	John Green	BlackStreet48

- vnitřní spojení tabulek

Who works in what cafe

```
SELECT * FROM "Worker" INNER JOIN "CatCafe" On ("Worker".workplace = "CatCafe".venue )
```

	id integer	salary integer	info_about_person character varying (255)	workplace character varying (255)	venue character varying (255)	menu character varying (255)	money integer
1	1	10	Man Ray	BlackStreet48	BlackStreet48	Bread, Water, Meat, Salad	1000
2	2	10	John Green	BlackStreet48	BlackStreet48	Bread, Water, Meat, Salad	1000
3	3	20	Anna Hoffman	BlackStreet48	BlackStreet48	Bread, Water, Meat, Salad	1000
4	4	10	Lukas Fask	RedStreet22	RedStreet22	Wine, Tea, Lemon, IceCream	500
5	5	20	John Little	RedStreet22	RedStreet22	Wine, Tea, Lemon, IceCream	500

- podmínku na data

What order was placed after 3 p.m.

```
SELECT * FROM "Order" WHERE (time > '15:00:00') ORDER BY TIME;
```

	time [PK] time without time zone	cost integer	table integer	type_of_food character varying (255)	worker_who_do integer
1	15:15:00	2	3	Meat, Bread	1
2	15:22:00	1	3	Ice cream	2
3	16:20:00	3	4	Wine, Bread	2
4	20:30:00	2	2	Tea, Ice Cream	1

- agregaci a podmínku na hodnotu agregační funkce

```
SELECT worker_who_do, count(*) as table FROM "Order" GROUP BY worker_who_do ORDER BY worker_who_do;
```

Which employee serves how many tables

	worker_who_does_it integer	table bigint
1	1	3
2	2	2

- řazení a stránkování

```
SELECT * FROM "Worker" WHERE (salary > 10) ORDER BY salary;
```

Looking for all employees whose salary is more than 10

	id [PK] integer	salary integer	info_about_person character varying (255)	workplace character varying (255)
1	3	20	Anna Hoffman	BlackStreet48
2	5	20	John Little	RedStreet22
3	6	30	Bill Klin	RedStreet22

Only 10 clients are displayed

```
SELECT * FROM "Customer" LIMIT 10;
```

	number integer	order time without time zone	table integer
1	1	20:00:25.479619	10
2	1	20:05:32.521731	2
3	0	20:09:55.416434	1
4	0	20:03:57.504921	10
5	0	20:09:18.10318	10
6	0	20:00:46.809742	10
7	1	20:06:10.798841	4
8	0	20:06:48.108158	3
9	1	20:09:54.028425	7
10	1	20:07:38.831878	8

```

DO $$
    Begin
        For r IN 1..32000 LOOP
            INSERT INTO "Customer"("number", "order", "play_with", "table") VALUES
                (SELECT * FROM random()),
                (select time '20:00:00' +
                    random() * (time '00:10:00' -
                        time '00:00:00')),
                (SELECT * FROM floor(random() * 10 + 1)),
                (SELECT * FROM floor(random() * 10 + 1));
        END LOOP;
    END
$$;

```

	number integer	order time without time zone	table integer
1	1	20:00:25.479619	10
2	1	20:05:32.521731	2
3	0	20:09:55.416434	1
4	0	20:03:57.504921	10
5	0	20:09:18.10318	10
6	0	20:00:46.809742	10
7	1	20:06:10.798841	4
8	0	20:06:48.108158	3
9	1	20:09:54.028425	7
10	1	20:07:38.831878	8
11	1	20:04:10.656924	10
12	1	20:04:34.460388	10
13	0	20:07:02.581287	7
14	1	20:09:44.967042	6
15	1	20:00:43.792741	10
16	1	20:01:01.375028	5
17	0	20:04:14.74258	7
18	0	20:00:25.639847	10