FITNESS CENTER
SQUALUC

INFORMATION SYSTEMS AND DATABASE MANAGEMENT
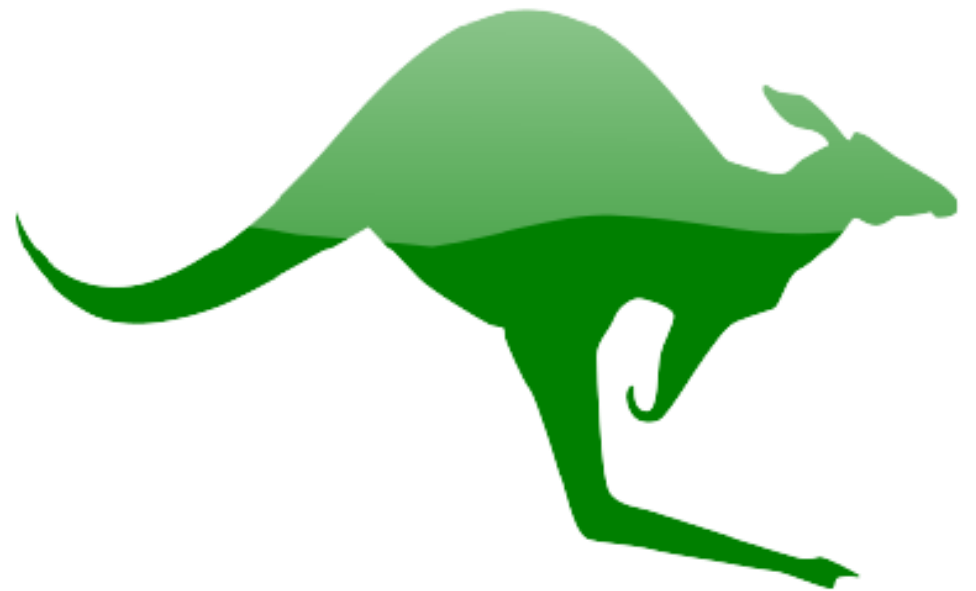
GYM PROJECT

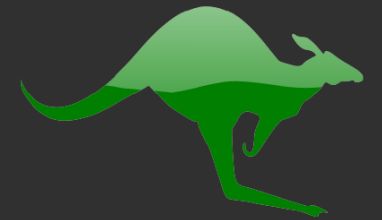# MOCKAROO

Data generator which requires data type to create simulated data to work with

HOW IT WORKS

Field Name	Type	Options		
id	Row Number	blank: 0 %	Σ	✕
first_name	First Name	blank: 0 %	Σ	✕
last_name	Last Name	blank: 0 %	Σ	✕
email	Email Address	blank: 0 %	Σ	✕
gender	Gender	blank: 0 %	Σ	✕
ip_address	IP Address v4	blank: 0 %	Σ	✕

+ ADD ANOTHER FIELD   **🤖 GENERATE FIELDS USING AI...**

Rows: 1000

GENERATE DATA   **PREVIEW**   **SAVE AS...**   **🤖 DERIVE FROM EXAMPLE...**   **MORE ▾**

EXCEL

Used to verify the consistency of data and to work with filters
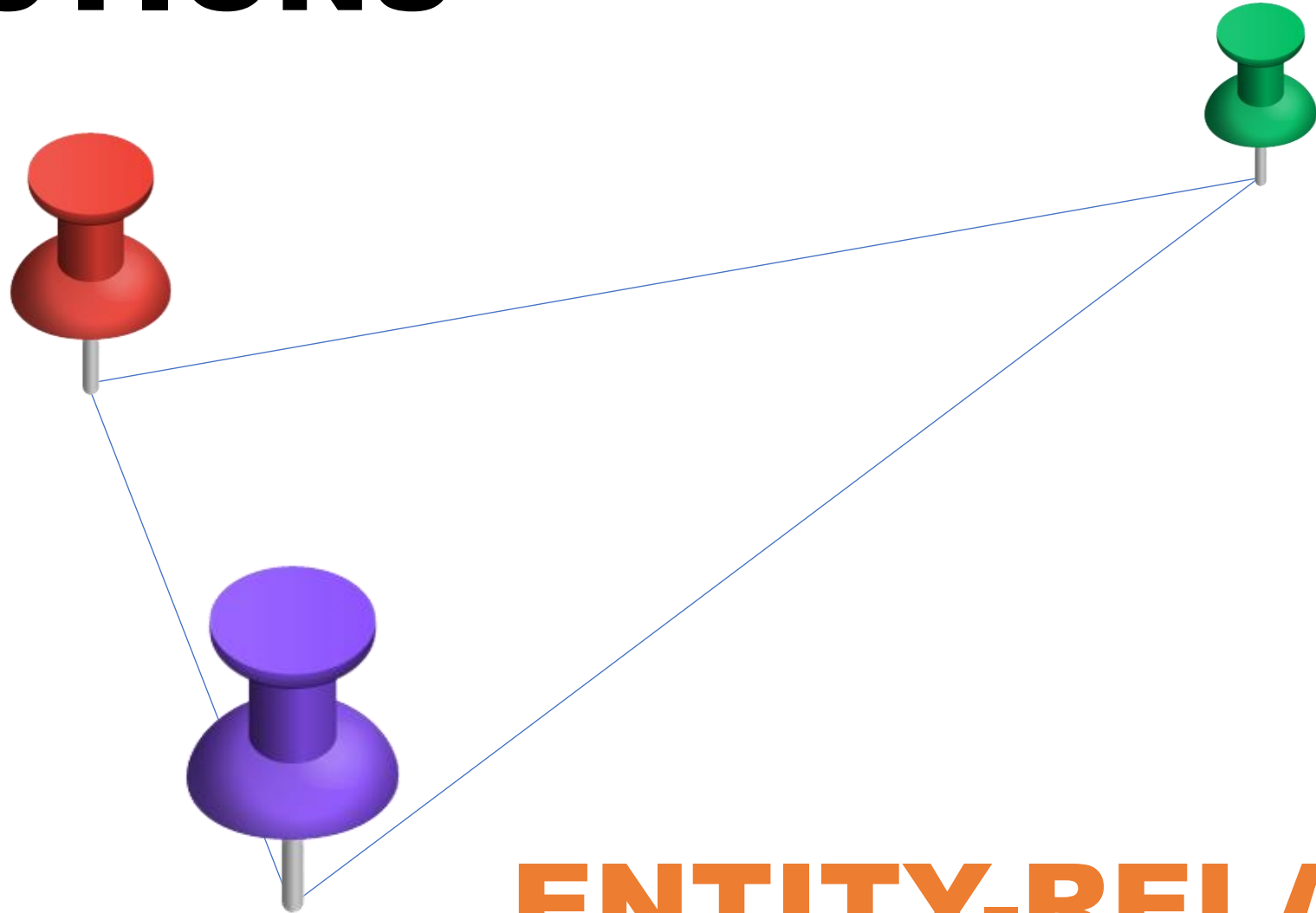
MySQL

Used to work on data with queries that would be useful to the management of the gym

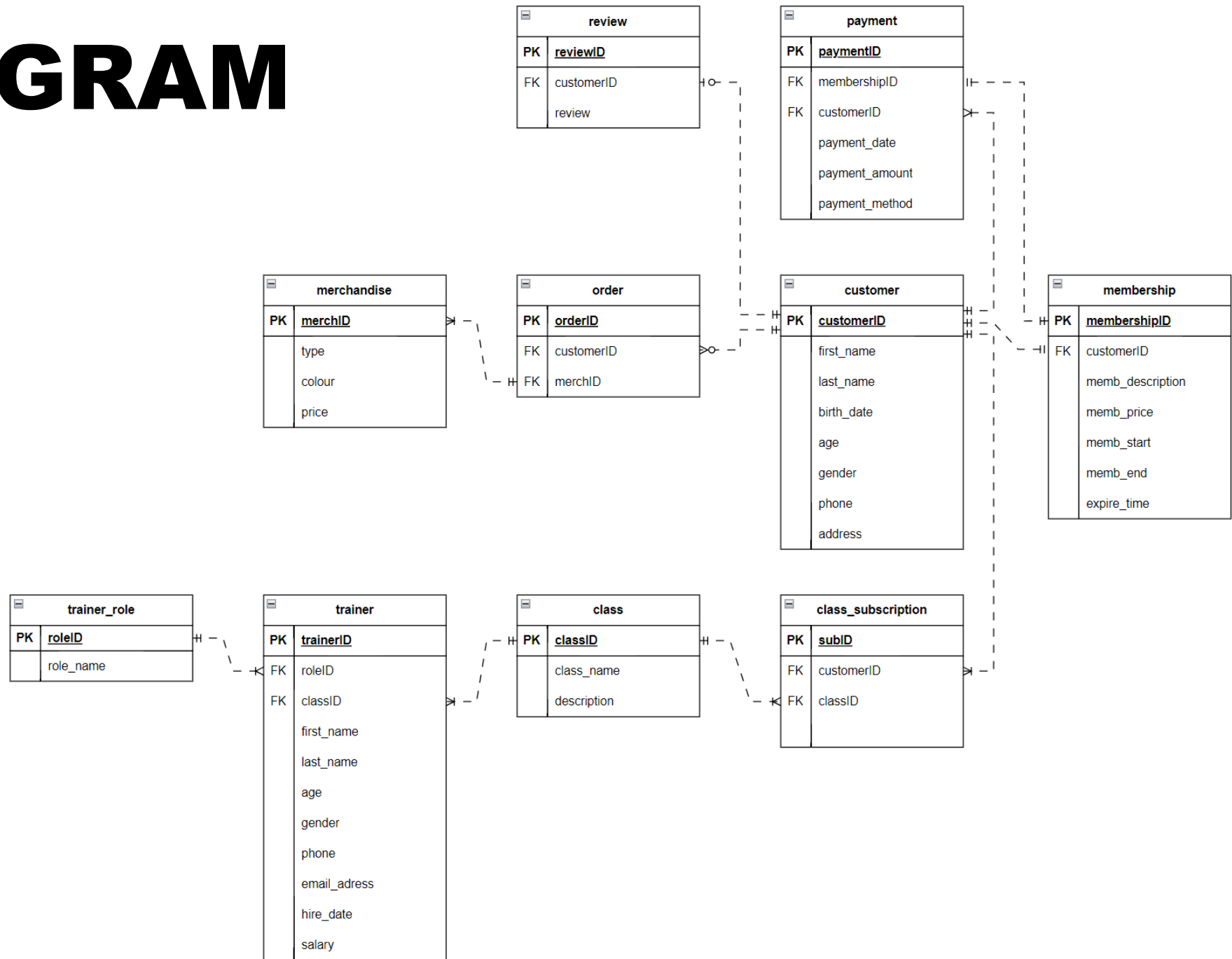# CONNECTIONS

THE
ENTITY-RELATION
DIAGRAM

ER DIAGRAM

QUERIES
CATEGORIES

1

CUSTOMERS

queries related to customers' habits, peculiarities and so on

2

TRAINERS

queries related to trainers' roles, salary and other characteristics

3

E-COMMERCE
SQUALUC

MERCHANDISING

queries related to the e-commerce and stores of the gym placed inside our spaces and online

WHICH CUSTOMERS GAVE A HIGH REVIEW?

```sql
SELECT c.last_name, c.first_name, c.age, c.gender, c.phone, r.review
FROM tblcustomer c, tblreview r
WHERE c.customerID = r.customerID_review AND r.review > 3
ORDER BY r.review DESC, c.last_name ASC;
```

last_name	first_name	age	gender	phone	review
Bawden	Danyette	60	Female	530-781-6677	5
Blucher	Dame	36	Male	714-538-7357	5
Celez	Edna	32	Female	402-755-3646	5
Coupe	Dru	34	Male	925-894-1236	5
Cuer	Leon	19	Male	468-439-1072	5
Drain	Aryn	58	Female	227-438-3615	5
Garnam	Charline	25	Female	209-714-1622	5
Goalby	Elsi	43	Female	794-885-6404	5
Lowton	Hill	23	Male	517-731-5214	5
MacKellar	Garrick	55	Male	612-408-8603	5
MacQuarrie	Caprice	42	Female	255-550-4677	5
Sanchez	Ranna	50	Female	994-656-0738	5
Varndall	Marlee	26	Female	991-434-4478	5
Von Helm...	Chauncey	57	Male	612-950-9098	5
Wibberley	Marion	64	Male	622-159-0293	5
Wilbor	Hollis	59	Male	899-100-2353	5

WHICH COURSES ARE ATTENDED BY CUSTOMERS WHO GAVE HIGH REVIEWS?

```sql
SELECT c.last_name, c.first_name, r.review, cl.class_name
FROM tblcustomer c
JOIN tblreview r ON c.customerID = r.customerID_review
JOIN tblclass_subscription cs ON c.customerID = cs.customerID_sub
JOIN tblclass cl ON cs.classID_sub = cl.classID
WHERE r.review > 3
ORDER BY r.review DESC, c.last_name ASC;
```

last_name	first_name	review	class_name
Blucher	Dame	5	MMA
Blucher	Dame	5	Pilates
Celez	Edna	5	Yoga
Coupe	Dru	5	Weight room
Coupe	Dru	5	MMA
Coupe	Dru	5	Yoga
Coupe	Dru	5	Pilates
Drain	Aryn	5	Weight room
Garnam	Charline	5	MMA
Garnam	Charline	5	Yoga
Garnam	Charline	5	Pilates
Garnam	Charline	5	Weight room
Goalby	Elsi	5	Spinning
Lowton	Hill	5	Pilates
Lowton	Hill	5	Spinning
MacQuarrie	Caprice	5	Yoga

WHICH CUSTOMERS ARE ELIGIBLE FOR AGE-RELATED DISCOUNTS?

```sql
SELECT c.first_name, c.last_name, date(c.birth_date) as birth_date,
       c.age, m.memb_price * 0.9 AS discounted_memb_price
FROM tblcustomer c
JOIN tblmembership m ON c.customerID = m.customerID_memb
WHERE c.age <= 20 OR c.age >= 65
ORDER BY c.age ASC;
```

first_name	last_name	birth_date	age	discounted_memb_price
Ninon	Dallimore	2004-03-27	18	117.0
Selena	Jira	2004-06-05	18	45.0
Giacomo	Trafford	2004-02-11	18	117.0
Mischa	Bortolomei	2003-06-12	19	432.0
Leon	Cuer	2003-06-06	19	45.0
Peggi	Ghio	2003-08-09	19	432.0
Caldwell	Kures	2003-02-28	19	432.0
Bronny	Dyer	2003-08-23	19	117.0
Abbey	Valenta	2003-12-30	19	432.0
Denver	McCluney	2003-07-22	19	45.0
Miguelita	Aubry	1957-03-20	65	45.0
Ottilie	Menier	1957-09-21	65	45.0
Skipton	Malcher	1957-08-19	65	432.0
Mariana	Anyon	1955-04-14	67	45.0
Barbi	Brazier	1955-01-12	67	45.0
Basile	Brinkman	1955-11-10	67	432.0

WHICH ARE THE MOST POPULAR COURSES AND THE GENDER DISTRIBUTION?

```sql
SELECT tblclass.class_name, c.gender,
       COUNT(tblclass_subscription.subID) AS subscription_count
FROM tblcustomer c
JOIN tblclass_subscription ON c.customerID = tblclass_subscription.customerID_sub
JOIN tblclass ON tblclass_subscription.classID_sub = tblclass.classID
GROUP BY c.gender, tblclass.class_name
ORDER BY tblclass.class_name, subscription_count DESC, c.gender;
```

class_name	gender	subscription_count
MMA	Male	37
MMA	Female	20
Pilates	Male	31
Pilates	Female	21
Spinning	Female	22
Spinning	Male	20
Weight room	Male	28
Weight room	Female	20
Yoga	Male	25
Yoga	Female	23

WHICH ARE THE MEMBERSHIPS WITH EXPIRY TIME LESS THAN A WEEK?

```sql
SELECT c.first_name, c.last_name, c.phone,
       tblmembership.memb_description, tblmembership.expire_time
FROM tblcustomer c, tblmembership
WHERE tblmembership.customerID_memb = c.customerID
AND tblmembership.expire_time < 8
ORDER BY tblmembership.expire_time ASC;
```

first_name	last_name	phone	memb_description	expire_time
Nick	Redmore	579-439-3528	Monthly	0
Ninon	Dallimore	265-594-1877	Quarterly	0
Jarvis	Kimmings	685-439-4424	Quarterly	1
Richart	Emanulsson	498-671-0791	Monthly	1
Calhoun	Newgrosh	626-795-6121	Quarterly	1
Marice	Jirka	175-593-1155	Quarterly	2
Drake	Ebanks	840-754-5359	Monthly	2
Marlee	Varndall	991-434-4478	Monthly	3
Peggi	Ghio	826-205-4226	Annual	3
Zelig	Sime	177-534-0673	Quarterly	3
Eddy	Heeney	788-177-1828	Quarterly	4
Dorris	Dumpleton	174-895-3704	Quarterly	5
Sauveur	Noorwood	671-125-1861	Quarterly	5
Scott	Guierre	927-722-6628	Annual	6
Arnuad	Wrintmore	272-251-9206	Monthly	6
Devlen	Flaonier	279-603-2026	Annual	7

WHICH ARE THE NON-PAYING CUSTOMERS?

```sql
SELECT c.customerID, c.first_name, c.last_name,
       tblmembership.memb_description,
       date(tblmembership.memb_start) memb_start
FROM tblcustomer c, tblmembership, tblpayment
WHERE tblmembership.customerID_memb = c.customerID
AND tblpayment.customerID_payment = c.customerID
AND tblpayment.payment_amount = 0
ORDER BY memb_start DESC;
```

customerID	first_name	last_name	memb_description	memb_start
126	Paxton	Braddick	Monthly	2023-10-19
45	Deb	Fermoy	Quarterly	2023-10-18
10	Abigail	Gregan	Monthly	2023-10-17
96	Skipton	Malcher	Annual	2023-10-16
117	Marlee	Varndall	Monthly	2023-10-04

FAILED

WHICH ARE THE 2023 SUBSCRIPTIONS?

```sql
SELECT c.first_name,c.last_name, date(tblmembership.memb_start) as memb_start,
        tblmembership.memb_description
FROM tblcustomer c, tblmembership
WHERE tblmembership.customerID_memb = c.customerID
    AND tblmembership.memb_start LIKE "2023%"
ORDER BY tblmembership.memb_start;
```

first_name	last_name	memb_start	memb_description
Halsy	Tupling	2023-01-04	Annual
Blythe	Shelp	2023-01-09	Annual
Susannah	MacRierie	2023-01-09	Annual
Caldwell	Kures	2023-01-12	Annual
Chauncey	Von Helmholtz	2023-01-25	Annual
Robenia	Riepel	2023-02-12	Annual
Aryn	Drain	2023-02-17	Annual
Donelle	Jery	2023-03-01	Annual
Diann	Barnbrook	2023-03-03	Annual
Susannah	Willcott	2023-03-13	Annual
Florian	Tapley	2023-03-15	Annual
Abner	Fryatt	2023-03-29	Annual
Ginelle	Seabon	2023-04-02	Annual
Redford	Rummings	2023-04-04	Annual
Darsie	Faich	2023-04-07	Annual
Danyette	Bawden	2023-04-13	Annual

Subscribe

HOW MANY DIFFERENT MEMBERSHIP TYPES THERE ARE IN 2023?

```sql
SELECT memb_description, count(memb_description)
FROM tblmembership
WHERE memb_start IN
    (SELECT memb_start
    FROM tblmembership
    WHERE tblmembership.memb_start LIKE "2023%")
GROUP BY memb_description;
```

memb_description	count(memb_description)
Annual	41
Monthly	48
Quarterly	46

WHAT IS THE PERCENTAGE OF SUBSCRIPTIONS IN DIFFERENT COURSES?

```sql
SELECT class_name,
    count(tblclass_subscription.subID) AS total_sub,round(
    (count(tblclass_subscription.subID)/(SELECT COUNT(subID)
                                FROM tblclass_subscription))*100,2) AS perc_sub
FROM tblclass, tblclass_subscription
WHERE tblclass_subscription.classID_sub = tblclass.classID
GROUP BY class_name
ORDER BY perc_sub DESC;
```

class_name	total_sub	perc_sub
MMA	57	23.08
Pilates	52	21.05
Weight room	48	19.43
Yoga	48	19.43
Spinning	42	17.00

Subscribe

WHICH CUSTOMERS ARE ENROLLED IN THE DIFFERENT CLASSES?

```sql
SELECT c.last_name, c.first_name, tblclass.class_name
FROM tblcustomer c
    RIGHT OUTER JOIN tblclass_subscription
    ON c.customerID = tblclass_subscription.customerID_sub
    INNER JOIN tblclass
    ON tblclass_subscription.classID_sub = tblclass.classID
ORDER BY class_name, last_name;
```

last_name	first_name	class_name
Alliberton	Ivett	MMA
Altamirano	Benn	MMA
Anfosso	Lowrance	MMA
Ankrett	Federico	MMA
Benninger	Jonah	MMA
Berney	Axel	MMA
Bew	Heindrick	MMA
Bhatia	Devlin	MMA
Blucher	Dame	MMA
Branney	Rafaellle	MMA
Bravington	Lucila	MMA
Brinkman	Basile	MMA
Chadney	Loren	MMA
Clere	Raphael	MMA
Cluet	Wilmer	MMA
Coupe	Dru	MMA

WHICH ARE THE SUBSCRIPTIONS IN MMA COURSE?

```sql
SELECT  c.last_name, c.first_name, age, gender, class_name

FROM tblcustomer c

INNER JOIN tblclass_subscription ON c.customerID = tblclass_subscription.customerID_sub

JOIN tblclass ON tblclass_subscription.classID_sub = tblclass.classID

WHERE  tblclass.class_name LIKE "MMA"

ORDER BY c.last_name;
```

last_name	first_name	age	gender	class_name
Alliberton	Ivett	37	Female	MMA
Altamirano	Benn	32	Male	MMA
Anfosso	Lowrance	40	Male	MMA
Ankrett	Federico	41	Male	MMA
Benninger	Jonah	28	Male	MMA
Berney	Axel	52	Male	MMA
Bew	Heindrick	40	Male	MMA
Bhatia	Devlin	63	Male	MMA
Blucher	Dame	36	Male	MMA
Branney	Rafaellle	40	Male	MMA
Bravington	Lucila	52	Female	MMA
Brinkman	Basile	67	Male	MMA
Chadney	Loren	27	Male	MMA
Clere	Raphael	38	Male	MMA
Cluet	Wilmer	37	Male	MMA
Coupe	Dru	34	Male	MMA

WHAT IS THE TOTAL FOR DIFFERENT PAYMENT METHODS?

```sql
SELECT payment_method, COUNT(paymentID) AS total_payments,
        SUM(payment_amount) AS total_amount
FROM tblpayment
GROUP BY payment_method;
```

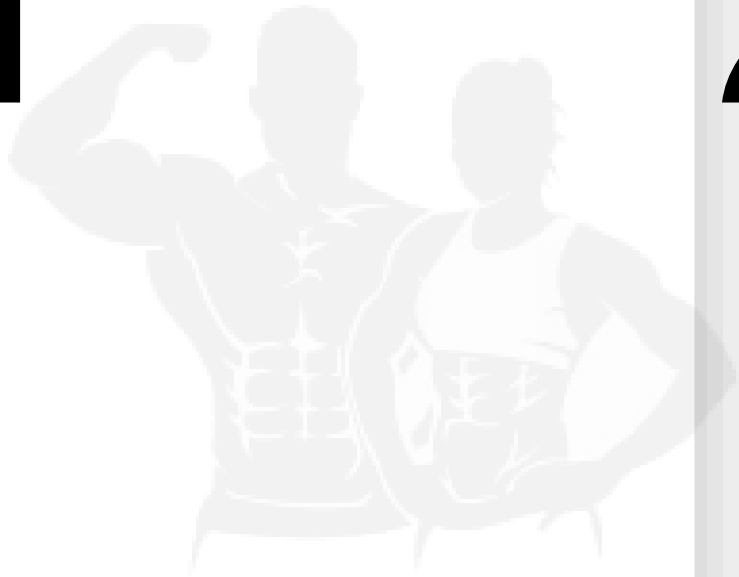| payment_method	total_payments	total_amount
Cash	65	14550
Credit Card	80	19950
Na	5	0

WHICH ARE THE CUSTOMERS WITH BELOW-AVERAGE REVIEWS?

```sql
CREATE VIEW worst_reviews AS
SELECT tblcustomer.last_name, tblcustomer.first_name, tblreview.review
FROM tblcustomer, tblreview
WHERE tblcustomer.customerID = tblreview.customerID_review
AND tblreview.review < (SELECT AVG(review) FROM tblreview)
ORDER BY tblreview.review DESC, tblcustomer.last_name;
```

last_name	first_name	review
Anyon	Mariana	3
Bendle	Reamonn	3
Benninger	Jonah	3
Bhatia	Devlin	3
Braddick	Paxton	3
Crabb	Alida	3
Ferrer	Micah	3
Flaonier	Devlen	3
Girardy	Galina	3
Guierre	Scott	3
Humm	Clayson	3
Jeannenet	Daune	3
Jirka	Marice	3
Just	Roley	3
Menier	Ottilie	3
Newgrosh	Calhoun	3

1

CUSTOMERS

queries related to customers' habits, peculiarities and so on

2

TRAINERS

queries related to trainers' roles, salary and other characteristics

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MERCHANDISING

queries related to the e-commerce and stores of the gym placed inside our spaces and online

WHAT'S THE AVERAGE SALARY OF OUR TRAINERS FOR EACH ROLE?

```sql
SELECT tbltrainer_role.role_name, round(AVG(tbltrainer.salary), 0) AS average_salary

FROM tbltrainer_role

JOIN tbltrainer ON  tbltrainer_role.roleID= tbltrainer.roleID_trainer

GROUP BY tbltrainer_role.role_name

ORDER BY average_salary DESC;
```

role_name	average_salary
Yoga Trainer	1650
MMA Trainer	1575
Personal Trainer	1480
Spinning Trainer	1400
Pilates Trainer	1225

WHICH OF OUR TRAINERS HAVE AN ABOVE AVERAGE SALARY?

```sql
SELECT first_name, last_name, gender,
       TIMESTAMPDIFF(YEAR , date(birth_date), CURDATE()) as age,
       date(hire_date) as hire_date, salary
FROM tbltrainer
WHERE salary >
    (SELECT AVG(salary)
    FROM tbltrainer
    WHERE roleID_trainer = tbltrainer.roleID_trainer);
```

first_name	last_name	gender	age	hire_date	salary
Erich	Stove	Male	44	2021-01-01	1800
Karly	Blazej	Female	53	2021-01-01	1650
Ellary	Upwood	Male	25	2021-01-01	1700
Avis	Perel	Female	45	2021-07-01	1650
Neal	Esberger	Male	51	2021-11-01	1750

WHICH TRAINERS WORK AS YOGA OR PILATES TRAINERS?

```sql
CREATE VIEW test AS
SELECT tr.last_name, tr.first_name, c.class_name
FROM tbltrainer tr
JOIN tblclass c ON tr.classID_trainer = c.classID
JOIN tbltrainer_role trr ON tr.roleID_trainer = trr.roleID
WHERE tr.classID_trainer IN
    (SELECT classID FROM tblclass WHERE class_name = 'Yoga' or class_name = "Pilates")
ORDER BY last_name;
```

last_name	first_name	class_name
Blazej	Karly	Yoga
Heugle	Mavis	Pilates
Sabathier	Ashby	Pilates

WHICH TRAINERS WORK WITH US SINCE THE OPENING YEAR?

```sql
SELECT tr.last_name, tr.first_name, tr.gender, date(tr.hire_date) as hire_date,
       tr.salary, c.class_name
FROM tbltrainer tr
JOIN tblclass c ON tr.classID_trainer = c.classID
WHERE YEAR(tr.hire_date) = 2021
ORDER BY hire_date, tr.salary DESC;
```

last_name	first_name	gender	hire_date	salary	class_name
Stove	Erich	Male	2021-01-01	1800	Weight room
Upwood	Ellary	Male	2021-01-01	1700	MMA
Blazej	Karly	Female	2021-01-01	1650	Yoga
Perel	Avis	Female	2021-07-01	1650	Weight room
Esberger	Neal	Male	2021-11-01	1750	Weight room

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MERCHANDISING

queries related to the e-commerce and stores of the gym placed inside our spaces and online

HOW MUCH DID WE EARN FROM EACH TYPE OF MERCH WE SOLD?

```sql
SELECT m.type, m.colour, COUNT(o.merchID) AS total_pieces,
       m.price, SUM(m.price) AS revenue
FROM tblmerchandise m
JOIN tblorder o ON m.merchID = o.merchID
GROUP BY m.type, m.colour, m.price
ORDER BY revenue DESC;
```

type	colour	total_pieces	unit_price	revenue
hoodie	blue	13	40	520
bag	grey	10	35	350
hoodie	red	8	40	320
shorts	white	12	20	240
shorts	orange	12	20	240
t-shirt	black	7	25	175
towel	light blue	13	12	156
towel	pink	11	12	132
t-shirt	green	5	25	125
t-shirt	white	4	25	100
socks	white	12	8	96

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WHICH TYPE OF MERCH HAS BEEN LESS IN DEMAND?

type	total_orders
bag	10
socks	12
t-shirt	16
hoodie	21
shorts	24
towel	24

```sql
SELECT m.type, count(o.orderID) AS total_orders
FROM tblmerchandise m, tblorder o
WHERE o.merchID = m.merchID
GROUP BY m.type
ORDER BY total_orders ASC;


UPDATE tblmerchandise
SET price = price * 0.9
WHERE type = (
    SELECT type
    FROM (
        SELECT m.type, COUNT(o.orderID) AS total_orders
        FROM tblmerchandise m
        JOIN tblorder o ON m.merchID = o.merchID
        GROUP BY m.type
        ORDER BY total_orders
        LIMIT 1
    ) as subquery
);
```

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WHICH CUSTOMERS SPENT MORE THAN 70$ IN OUR STORES?

```sql
SELECT c.first_name, c.last_name,
    SUM(merch.price) AS total_spend,
    GROUP_CONCAT(concat(merch.colour, " ", merch.type) SEPARATOR "; ") AS purchased_products,
    COUNT(o.orderID) AS total_pieces
FROM tblcustomer c, tblorder o, tblmerchandise merch
WHERE c.customerID = o.customerID_order
AND o.merchID = merch.merchID
GROUP BY c.customerID
HAVING total_spend > 70
ORDER BY total_spend DESC;
```

first_name	last_name	total_spend	purchased_products	total_pieces
Benn	Altamirano	127	light blue towel; blue hoodie; blue hoodie; grey ...	4
Garrick	MacKellar	100	grey bag; blue hoodie; white t-shirt	3
Devlin	Bhatia	100	orange shorts; blue hoodie; red hoodie	3
Mitzi	Petchell	85	orange shorts; blue hoodie; black t-shirt	3
Donelle	Jery	75	grey bag; blue hoodie	2
Tomi	Clayworth	75	grey bag; red hoodie	2

E-COMMERCE

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WHICH TYPE OF MERCH MAKES US BILL MORE THAN AVERAGE?

type	total_pieces	unit_price	total_revenue
hoodie	21	40	840
shorts	24	20	480

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```sql
SELECT m.type, COUNT(tblorder.merchID) AS total_pieces,
        ROUND(AVG(m.price)) AS unit_price,
        SUM(m.price) AS total_revenue
FROM tblmerchandise m
JOIN tblorder ON m.merchID = tblorder.merchID
GROUP BY m.type
HAVING SUM(m.price) > (SELECT AVG(total_revenue) FROM (
        SELECT SUM(price) AS total_revenue
        FROM tblmerchandise m
        JOIN tblorder ON m.merchID = tblorder.merchID
        GROUP BY m.type
    ) AS subquery)
ORDER BY
    total_revenue DESC;
```

ARE THERE ANY CUSTOMERS WHICH NEVER BOUGHT SOMETHING FROM THE STORE?

```sql
SELECT tblcustomer.last_name, tblcustomer.first_name, tblcustomer.gender,
       tblcustomer.age, tblcustomer.phone
FROM tblcustomer
WHERE tblcustomer.customerID NOT IN
         (SELECT DISTINCT tblorder.customerID_order
            FROM tblorder)
ORDER BY tblcustomer.last_name;
```

last_name	first_name	gender	age	phone
Albon	Abdul	Male	64	860-540-9073
Anfosso	Lowrance	Male	40	745-968-1620
Anyon	Mariana	Female	67	286-481-6993
Aubry	Miguelita	Female	65	667-178-6837
Bawden	Danyette	Female	60	530-781-6677
Benninger	Jonah	Male	28	435-316-3444
Bew	Heindrick	Male	40	859-740-0720
Blucher	Dame	Male	36	714-538-7357
Brinkman	Basile	Male	67	494-420-1928
Cassely	Dee dee	Female	55	448-965-2676
Chadney	Loren	Male	27	245-252-8767
Colledge	Leia	Female	33	813-998-9451
Coupe	Dru	Male	34	925-894-1236
Crabb	Alida	Female	39	628-960-6278
Croston	Cindi	Female	49	162-292-8903
Dallimore	Ninon	Female	18	265-594-1877

E-COMMERCE
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