-- CREATE TABLE `author\_article` (

`author\_id` int(10) unsigned NOT NULL,

`article\_id` int(10) unsigned NOT NULL,

primary key(`author\_id`, `article\_id`),

constraint `fk\_author\_id` foreign key (`author\_id`) references `author` (id) on delete cascade,

constraint `fk\_article\_id` foreign key (`article\_id`) references `author` (id) on delete cascade

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

SELECT article.title, author.name

FROM article

LEFT JOIN author\_article ON article.id = author\_article.article\_id

LEFT JOIN author ON author.id = author\_article.author\_id;

CREATE TABLE `category` (

`id` int(10) unsigned NOT NULL auto\_increment,

`name` int(10) unsigned NOT NULL,

primary key(`id`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

CREATE TABLE `category\_article` (

`category\_id` int(10) unsigned NOT NULL,

`article\_id` int(10) unsigned NOT NULL,

primary key(`category\_id`, `article\_id`),

constraint `fk\_category\_id` foreign key (`category\_id`) references `category` (id) on delete cascade,

constraint `frk\_article\_id` foreign key (`article\_id`) references `article` (id) on delete cascade

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4\_unicode\_ci;

SELECT article.title, category.name

FROM article

LEFT JOIN category\_article ON article.id = category\_article.article\_id

LEFT JOIN category ON category.id = category\_article.category\_id;

-- ALTER TABLE `article` DROP COLUMN `author\_id`;

-- ALTER TABLE `article` DROP FOREIGN KEY `fk\_author`;

-- ALTER TABLE author DROP COLUMN author\_id;

-- ALTER TABLE `author\_article` DROP FOREIGN KEY `fk\_article\_id`;

-- describe article;

-- ALTER TABLE author\_article ADD CONSTRAINT fk\_article FOREIGN KEY (grade\_id) REFERENCES grades(id);

-- ALTER TABLE author\_article ADD CONSTRAINT fk\_article\_id FOREIGN KEY (`article\_id`) REFERENCES article(id) on delete cascade;

SELECT article.title, author.name, category.name

FROM category

INNER JOIN category\_article ON category.id = category\_article.category\_id

INNER JOIN article ON article.id = category\_article.article\_id

INNER JOIN author\_article ON article.id = author\_article.article\_id

INNER JOIN author ON author.id = author\_article.author\_id;

//Find the name of all authors that have written more than 2 articles as well as how many articles have they written

SELECT author.name,

COUNT(aa.article\_id)

FROM author

JOIN author\_article AS aa

ON author.id = aa.author\_id

GROUP BY aa.author\_id

HAVING count(aa.article\_id) > 2

//find the name of all authors who have articles in more that 1 categories

-- find the name of all authors who have 0 articles

SELECT author.name

FROM author

JOIN author\_articles

ON author.id = author\_article.author\_id

GROUP BY author\_article.author\_id

HAVING COUNT(author\_article) = 0;