

Simon Fraser University
CMPT 354
Summer 2022

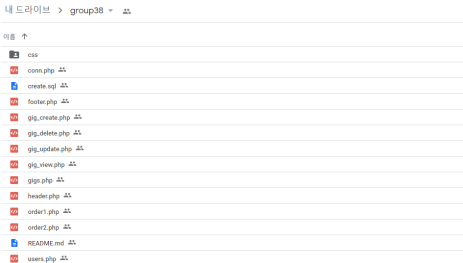
**Group Project - Implementation of a Relational
Database**

Project Title:	HelpHive
Project Milestone:	4

#	Student Name	Student Number	Email Address
1	JangHyeon (Peter) Lee	301292220	jla465@sfu.ca
2	Jooyoung Julia Lee	301414539	jla670@sfu.ca
3	Hanra Jeong	301449735	hja59@sfu.ca

By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above.

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by Simon Fraser University.

Code	 <p>https://drive.google.com/drive/folders/1RWBXK1Hm_kmaJbySuzy8FafQd8SaDBNs?usp=sharing</p>
SQL Script	create.sql located in the link above to create all the tables/data in the DB.
Project Description	<p>Description of the project: To recall our motto, “No one should be left without help or without the opportunity to help.” The project was created with the motivation of finding/providing help to those in need as there is a lack of functional platforms that are focused on the university. From a general perspective, our project (named HelpHive) is a platform for both clients and freelancers to exchange their talent, time, and effort. In the near future, our project aims to scrutinize the targetted community of a university so that each university has its own HelpHive, which would ensure safety and guarantee trust between each other as both the clients and freelancers will be the students.</p> <p>What it accomplishes: The project accomplishes the general goal of a freelance platform in creating proposals (gigs) from the freelancers (or sellers of a specific talent) and the freelancers can freely update and delete their created gigs. From the client side, the clients can view each gig and find more detailed information about the gigs. In the next few pages, both the client and freelances can return lists of all gigs created by each specific user and find the contacts of that user for communication. Also, the freelancers can see how much clients bought their gig and their total revenue, which the clients could also see and observe which gig is popular. The pages continue with observing the gig performance according to the order status, which provides much more detailed information on the current progress between the client and the freelancer. Though this may look simple and easy to manage just by looking at the few inputs, it is important to have appropriate queries to maintain and organize the data under specific conditions when the amount of data exceeds petabytes (according to the course intro lecture), which becomes far from easy to just analyze by looking. It is also crucial to note that the security side was not accounted for as the purpose of the project was to create queries and display them through an interface. In the near future, separating the privileges of accessing specific information will be executed to guarantee both the privacy and security of the users.</p>
Difference in Schema	<p>How my final schema is different from the original: After several trial and error, one of the most significant changes we made is that we treated both clients and freelancers as users who are capable of both receiving/providing help and thus, both have the privilege to create, update, and delete gigs. This naturally led to minimizing unnecessary tables and also, optimizing other tables such as categories, time, data, price, place, and experience into inherent gigs, orders, and skills tables in the new database.</p> <p>Reason why: The main reason for the changes was that there was a plethora of unnecessary and redundant information that prevents the accuracy and integrity of the system. Therefore, to guarantee the efficiency and simplicity of both the interface and the backend design, tables were reduced and combined relevant attributes into one. This allows both the admin and the users to clearly return lists from queries and find appropriate information rather than having to create a plethora of queries to represent the data without being excessive. Let's say if we maintained the original schema and designed the queries, then there were the following problems: 1) related data was scattered over a number of tables 2) data was not consistent 3) the relations were too complex and hacked with tricks.</p>

List of SQL Queries

Insert

```
$sql = "INSERT INTO gigs (title, description, category_id, price, user_id)
values('$title', '$desc', $cat, $price, $user)";
```

Before

 				id	title	description	category_id	price	user_id	
<input type="checkbox"/>		 Edit	 Copy	 Delete	1	Make any kimchi	I will teach you how to make any home-made kimchi.	1	30	1
<input type="checkbox"/>		 Edit	 Copy	 Delete	2	A good design makes a good house	I will create one-and-only blueprint of your dream...	2	1000	2
<input type="checkbox"/>		 Edit	 Copy	 Delete	3	The host you needed	I will be your host in any language.	3	100	4
<input type="checkbox"/>		 Edit	 Copy	 Delete	4	Living is mentality	I will be your counsellor for your current issues.	4	500	3
<input type="checkbox"/>		 Edit	 Copy	 Delete	5	Your business starts here	In any language, I can create a good business prop...	5	2000	5
<input type="checkbox"/>		 Edit	 Copy	 Delete	6	How to be a good cook	I will teach you the basics of being a good cook.	1	50	3
<input type="checkbox"/>		 Edit	 Copy	 Delete	7	Make your garden alive	I will design the structures eco-friendly way.	2	300	1
<input type="checkbox"/>		 Edit	 Copy	 Delete	8	MC for any program	The bilingual MC you needed for your program.	3	200	4
<input type="checkbox"/>		 Edit	 Copy	 Delete	9	The healing therapy	Clear your mind away with a chat.	4	75	5
<input type="checkbox"/>		 Edit	 Copy	 Delete	10	Translate in ENG or KR	I can translate your documents in ENG or KR	5	100	2

gig TABLE

Create New Gig

ID	Title	Category	Price	Seller	Operations
1	Make any kimchi	Lesson	30	Peter Lee	View Update Delete
2	A good design makes a good house	Home	1000	Hanra Jeong	View Update Delete
3	The host you needed	Event	100	JangHyeon Lee	View Update Delete
4	Living is mentality	Health	500	Julia Lee	View Update Delete
5	Your business starts here	Business	2000	Jooyoung Lee	View Update Delete
6	How to be a good cook	Lesson	50	Julia Lee	View Update Delete
7	Make your garden alive	Home	300	Peter Lee	View Update Delete
8	MC for any program	Event	200	JangHyeon Lee	View Update Delete
9	The healing therapy	Health	75	Jooyoung Lee	View Update Delete
10	Translate in ENG or KR	Business	100	Hanra Jeong	View Update Delete

Create Gig

Title:

Test Insert

Details:

Test

Category:

Lesson

Price:

\$5

Seller:

Peter Lee

Create

After

←	→	id	title	description	category_id	price	user_id
<input type="checkbox"/>	  Copy 	1	Make any kimchi	I will teach you how to make any home-made kimchi.	1	30	1
<input type="checkbox"/>	  Copy 	2	A good design makes a good house	I will create one-and-only blueprint of your dream...	2	1000	2
<input type="checkbox"/>	  Copy 	3	The host you needed	I will be your host in any language.	3	100	4
<input type="checkbox"/>	  Copy 	4	Living is mentality	I will be your counsellor for your current issues.	4	500	3
<input type="checkbox"/>	  Copy 	5	Your business starts here	In any language, I can create a good business prop...	5	2000	5
<input type="checkbox"/>	  Copy 	6	How to be a good cook	I will teach you the basics of being a good cook.	1	50	3
<input type="checkbox"/>	  Copy 	7	Make your garden alive	I will design the structures eco-friendly way.	2	300	1
<input type="checkbox"/>	  Copy 	8	MC for any program	The bilingual MC you needed for your program.	3	200	4
<input type="checkbox"/>	  Copy 	9	The healing therapy	Clear your mind away with a chat.	4	75	5
<input type="checkbox"/>	  Copy 	10	Translate in ENG or KR	I can translate your documents in ENG or KR	5	100	2
<input type="checkbox"/>	  Copy 	11	Test Insert	Insert	1	5	1

Create New Gig

ID	Title	Category	Price	Seller	Operations
1	Make any kimchi	Lesson	30	Peter Lee	View Update Delete
2	A good design makes a good house	Home	1000	Hanra Jeong	View Update Delete
3	The host you needed	Event	100	JangHyeon Lee	View Update Delete
4	Living is mentality	Health	500	Julia Lee	View Update Delete
5	Your business starts here	Business	2000	Jooyoung Lee	View Update Delete
6	How to be a good cook	Lesson	50	Julia Lee	View Update Delete
7	Make your garden alive	Home	300	Peter Lee	View Update Delete
8	MC for any program	Event	200	JangHyeon Lee	View Update Delete
9	The healing therapy	Health	75	Jooyoung Lee	View Update Delete
10	Translate in ENG or KR	Business	100	Hanra Jeong	View Update Delete
11	Test Insert	Lesson	5	Peter Lee	View Update Delete

Created a new row (11th) of gig

Delete

```
$sql = "DELETE FROM gigs
WHERE id=$id";
```

Create New Gig

ID	Title	Category	Price	Seller	Operations
1	Make any kimchi	Lesson	30	Peter Lee	View Update Delete
2	A good design makes a good house	Home	1000	Hanra Jeong	View Update Delete
3	The host you needed	Event	100	JangHyeon Lee	View Update Delete
4	Living is mentality	Health	500	Julia Lee	View Update Delete
5	Your business starts here	Business	2000	Jooyoung Lee	View Update Delete
6	How to be a good cook	Lesson	50	Julia Lee	View Update Delete
7	Make your garden alive	Home	300	Peter Lee	View Update Delete
8	MC for any program	Event	200	JangHyeon Lee	View Update Delete
9	The healing therapy	Health	75	Jooyoung Lee	View Update Delete
10	Translate in ENG or KR	Business	100	Hanra Jeong	View Update Delete

```
CREATE TABLE orders
(
  `id` int NOT NULL PRIMARY KEY,
  `requirements` varchar(500),
  `buyer` int NOT NULL,
  `gig` int NOT NULL,
  `status` int NOT NULL,
  FOREIGN KEY (`buyer`) REFERENCES users(`id`),
  FOREIGN KEY (`gig`) REFERENCES gigs(`id`) ON DELETE cascade,
  FOREIGN KEY (`status`) REFERENCES order_status(`id`)
);
```

Check cascade-on-delete situation

				id	requirements	buyer	gig	status
<input type="checkbox"/>				1	I want learn how to make water kimchi	2	1	1
<input type="checkbox"/>				2	Please re-design my basement	5	2	3
<input type="checkbox"/>				3	Host a birthday party in Korean	2	3	1
<input type="checkbox"/>				4	I need counselling in education	1	4	4
<input type="checkbox"/>				5	Construct a start-up proposal for government fundi...	3	5	4
<input type="checkbox"/>				6	Need a lesson to make based kimchi	4	1	1
<input type="checkbox"/>				7	Need a re-design of my roof	4	2	5
<input type="checkbox"/>				8	Need an MC for a program	5	3	1
<input type="checkbox"/>				9	Need to talk about my personal issues	1	4	1
<input type="checkbox"/>				10	Teach me how to make kimchi	3	1	4
<input type="checkbox"/>				11	Teach me how to make kimchi	5	1	4

order TABLE

 			id	title	description	category_id	price	user_id
<input type="checkbox"/>	  Edit  Copy  Delete		2	A good design makes a good house	I will create one-and-only blueprint of your dream...	2	1000	2
<input type="checkbox"/>	  Edit  Copy  Delete		3	The host you needed	I will be your host in any language.	3	100	4
<input type="checkbox"/>	  Edit  Copy  Delete		4	Living is mentality	I will be your counsellor for your current issues.	4	500	3
<input type="checkbox"/>	  Edit  Copy  Delete		5	Your business starts here	In any language, I can create a good business prop...	5	2000	5
<input type="checkbox"/>	  Edit  Copy  Delete		6	How to be a good cook	I will teach you the basics of being a good cook.	1	50	3
<input type="checkbox"/>	  Edit  Copy  Delete		7	Make your garden alive	I will design the structures eco-friendly way.	2	300	1
<input type="checkbox"/>	  Edit  Copy  Delete		8	MC for any program	The bilingual MC you needed for your program.	3	200	4
<input type="checkbox"/>	  Edit  Copy  Delete		9	The healing therapy	Clear your mind away with a chat.	4	75	5
<input type="checkbox"/>	  Edit  Copy  Delete		10	Translate in ENG or KR	I can translate your documents in ENG or KR	5	100	2

Create New Gig

ID	Title	Category	Price	Seller	Operations
2	A good design makes a good house	Home	1000	Hanra Jeong	View Update Delete
3	The host you needed	Event	100	JangHyeon Lee	View Update Delete
4	Living is mentality	Health	500	Julia Lee	View Update Delete
5	Your business starts here	Business	2000	Jooyoung Lee	View Update Delete
6	How to be a good cook	Lesson	50	Julia Lee	View Update Delete
7	Make your garden alive	Home	300	Peter Lee	View Update Delete
8	MC for any program	Event	200	JangHyeon Lee	View Update Delete
9	The healing therapy	Health	75	Jooyoung Lee	View Update Delete
10	Translate in ENG or KR	Business	100	Hanra Jeong	View Update Delete

Deleted the first row

← T →				id	requirements	buyer	gig	status
<input type="checkbox"/>				2	Please re-design my basement	5	2	3
<input type="checkbox"/>				3	Host a birthday party in Korean	2	3	1
<input type="checkbox"/>				4	I need counselling in education	1	4	4
<input type="checkbox"/>				5	Construct a start-up proposal for government fundi...	3	5	4
<input type="checkbox"/>				7	Need a re-design of my roof	4	2	5
<input type="checkbox"/>				8	Need an MC for a program	5	3	1
<input type="checkbox"/>				9	Need to talk about my personal issues	1	4	1

Due to cascade-on-delete, gig with id=1 are all

Update

```
$sql = "UPDATE gigs
SET title = '$title', description = '$desc', category_id = $cat, price = $price
WHERE id = $id";
```

		id	title	description	category_id	price	user_id		
<input type="checkbox"/>				1	Make any kimchi	I will teach you how to make any home-made kimchi.	1	30	1
<input type="checkbox"/>				2	A good design makes a good house	I will create one-and-only blueprint of your dream...	2	1000	2
<input type="checkbox"/>				3	The host you needed	I will be your host in any language.	3	100	4
<input type="checkbox"/>				4	Living is mentality	I will be your counsellor for your current issues.	4	500	3
<input type="checkbox"/>				5	Your business starts here	In any language, I can create a good business prop...	5	2000	5
<input type="checkbox"/>				6	How to be a good cook	I will teach you the basics of being a good cook.	1	50	3
<input type="checkbox"/>				7	Make your garden alive	I will design the structures eco-friendly way.	2	300	1
<input type="checkbox"/>				8	MC for any program	The bilingual MC you needed for your program.	3	200	4
<input type="checkbox"/>				9	The healing therapy	Clear your mind away with a chat.	4	75	5
<input type="checkbox"/>				10	Translate in ENG or KR	I can translate your documents in ENG or KR	5	100	2

Create New Gig

All Gigs

ID	Title	Category	Price	Seller	Operations
1	Make any kimchi	Lesson	30	Peter Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
2	A good design makes a good house	Home	1000	Hanra Jeong	<div><div>View</div><div>Update</div><div>Delete</div></div>
3	The host you needed	Event	100	JangHyeon Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
4	Living is mentality	Health	500	Julia Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
5	Your business starts here	Business	2000	Jooyoung Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
6	How to be a good cook	Lesson	50	Julia Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
7	Make your garden alive	Home	300	Peter Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
8	MC for any program	Event	200	JangHyeon Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
9	The healing therapy	Health	75	Jooyoung Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
10	Translate in ENG or KR	Business	100	Hanra Jeong	<div><div>View</div><div>Update</div><div>Delete</div></div>

Update Gig

Title:

Test Update

Details:

Update

Price:

\$5

Category:

Lesson

Update

deleted in order TABLE

		id	title	description	category_id	price	user_id		
<input type="checkbox"/>				1	Test Update	Update	1	5	1
<input type="checkbox"/>				2	A good design makes a good house	I will create one-and-only blueprint of your dream...	2	1000	2
<input type="checkbox"/>				3	The host you needed	I will be your host in any language.	3	100	4
<input type="checkbox"/>				4	Living is mentality	I will be your counsellor for your current issues.	4	500	3
<input type="checkbox"/>				5	Your business starts here	In any language, I can create a good business prop...	5	2000	5
<input type="checkbox"/>				6	How to be a good cook	I will teach you the basics of being a good cook.	1	50	3
<input type="checkbox"/>				7	Make your garden alive	I will design the structures eco-friendly way.	2	300	1
<input type="checkbox"/>				8	MC for any program	The bilingual MC you needed for your program.	3	200	4
<input type="checkbox"/>				9	The healing therapy	Clear your mind away with a chat.	4	75	5
<input type="checkbox"/>				10	Translate in ENG or KR	I can translate your documents in ENG or KR	5	100	2

Create New Gig

All Gigs

ID	Title	Category	Price	Seller	Operations
1	Test Update	Lesson	5	Peter Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
2	A good design makes a good house	Home	1000	Hanra Jeong	<div><div>View</div><div>Update</div><div>Delete</div></div>
3	The host you needed	Event	100	JangHyeon Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
4	Living is mentality	Health	500	Julia Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
5	Your business starts here	Business	2000	Jooyoung Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
6	How to be a good cook	Lesson	50	Julia Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
7	Make your garden alive	Home	300	Peter Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
8	MC for any program	Event	200	JangHyeon Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
9	The healing therapy	Health	75	Jooyoung Lee	<div><div>View</div><div>Update</div><div>Delete</div></div>
10	Translate in ENG or KR	Business	100	Hanra Jeong	<div><div>View</div><div>Update</div><div>Delete</div></div>

Updated the first row of gig

Selection

```
$sql = "SELECT title, description, price
FROM gigs INNER JOIN users on gigs.user_id=users.id
WHERE users.id=$id";
```

		id	name	email	username	password	skill_1	skill_2	skill_3		
<input type="checkbox"/>				1	Peter Lee	peter123@gmail.com	peter354	354	1	2	NULL
<input type="checkbox"/>				2	Hanra Jeong	hanra123@gmail.com	hanra354	354	2	5	NULL
<input type="checkbox"/>				3	Julia Lee	julia123@gmail.com	julia354	354	1	2	NULL
<input type="checkbox"/>				4	JangHyeon Lee	jang123@gmail.com	jang354	354	3	5	NULL
<input type="checkbox"/>				5	Jooyoung Lee	joo123@gmail.com	joo354	354	3	4	5

user TABLE

		id	title	description	category_id	price	user_id		
<input type="checkbox"/>				1	Make any kimchi	I will teach you how to make any home-made kimchi.	1	30	1
<input type="checkbox"/>				2	A good design makes a good house	I will create one-and-only blueprint of your dream...	2	1000	2
<input type="checkbox"/>				3	The host you needed	I will be your host in any language.	3	100	4
<input type="checkbox"/>				4	Living is mentality	I will be your counsellor for your current issues.	4	500	3
<input type="checkbox"/>				5	Your business starts here	In any language, I can create a good business prop...	5	2000	5
<input type="checkbox"/>				6	How to be a good cook	I will teach you the basics of being a good cook.	1	50	3
<input type="checkbox"/>				7	Make your garden alive	I will design the structures eco-friendly way.	2	300	1
<input type="checkbox"/>				8	MC for any program	The bilingual MC you needed for your program.	3	200	4
<input type="checkbox"/>				9	The healing therapy	Clear your mind away with a chat.	4	75	5
<input type="checkbox"/>				10	Translate in ENG or KR	I can translate your documents in ENG or KR	5	100	2

Get all gigs created by selected users (SELECTION)

Select Name:

Peter Lee

Run

Get all gigs created by selected users (SELECTION)

Select Name:

Peter Lee

Peter Lee

Hanra Jeong

Julia Lee

JangHyeon Lee

Jooyoung Lee

Run

Get all gigs created by selected users (SELECTION)

Select Name:

Peter Lee

Run

Title	Details	Price
Make any kimchi	I will teach you how to make any home-made kimchi.	\$30
Make your garden alive	I will design the structures eco-friendly way.	\$300

Projection (made 2)

```
$sql = "SELECT id, name, email
FROM users";
```

```
$sql = "SELECT buyer, gig
FROM orders";
```

		id	name	email	username	password	skill_1	skill_2	skill_3		
<input type="checkbox"/>				1	Peter Lee	peter123@gmail.com	peter354	354	1	2	NULL
<input type="checkbox"/>				2	Hanra Jeong	hanra123@gmail.com	hanra354	354	2	5	NULL
<input type="checkbox"/>				3	Julia Lee	julia123@gmail.com	julia354	354	1	2	NULL
<input type="checkbox"/>				4	JangHyeon Lee	jang123@gmail.com	jang354	354	3	5	NULL
<input type="checkbox"/>				5	Jooyoung Lee	joo123@gmail.com	joo354	354	3	4	5
<input type="checkbox"/>				6	I am a newbie	new123@gmail.com	new354	354	NULL	NULL	NULL

Get ID, Name, Email from user table (PROJECTION)

Run

Get BuyerID, GigID from orders TABLE (PROJECTION)

Run

Get ID, Name, Email from users TABLE (PROJECTION)

Run

ID	Name	Email
1	Peter Lee	peter123@gmail.com
2	Hanra Jeong	hanra123@gmail.com
3	Julia Lee	julia123@gmail.com
4	JangHyeon Lee	jang123@gmail.com
5	Jooyoung Lee	joo123@gmail.com
6	I am a newbie	new123@gmail.com



Join (made 2)

```
$sql = "SELECT o.id, u.name as buyer, g.title as gig, s.description as status
FROM order_status s
JOIN orders o ON s.id=o.status
JOIN gigs g ON o.gig=g.id
JOIN users u ON u.id=o.buyer
WHERE g.user_id=$seller AND s.id=$status
ORDER BY o.id ASC";
```

```
$sql = "SELECT *
FROM users u, skills s
WHERE u.skill_1 = s.id";
```

id	name	email	username	password	skill_1	skill_2	skill_3
1	Peter Lee	peter123@gmail.com	peter354	354	1	2	NULL
2	Hanra Jeong	hanra123@gmail.com	hanra354	354	2	5	NULL
3	Julia Lee	julia123@gmail.com	julia354	354	1	2	NULL
4	JangHyeon Lee	jang123@gmail.com	jang354	354	3	5	NULL
5	Jooyoung Lee	joo123@gmail.com	joo354	354	3	4	5

id	title	description	category_id	price	user_id
1	Make any kimchi	I will teach you how to make any home-made kimchi.	1	30	1
2	A good design makes a good house	I will create one-and-only blueprint of your dream...	2	1000	2
3	The host you needed	I will be your host in any language.	3	100	4
4	Living is mentality	I will be your counsellor for your current issues.	4	500	3
5	Your business starts here	In any language, I can create a good business prop...	5	2000	5
6	How to be a good cook	I will teach you the basics of being a good cook.	1	50	3
7	Make your garden alive	I will design the structures eco-friendly way.	2	300	1
8	MC for any program	The bilingual MC you needed for your program.	3	200	4
9	The healing therapy	Clear your mind away with a chat.	4	75	5
10	Translate in ENG or KR	I can translate your documents in ENG or KR	5	100	2

id	requirements	buyer	gig	status
1	I want learn how to make water kimchi	2	1	1
2	Please re-design my basement	5	2	3
3	Host a birthday party in Korean	2	3	1
4	I need counselling in education	1	4	4
5	Construct a start-up proposal for government fundi...	3	5	4
6	Need a lesson to make based kimchi	4	1	1
7	Need a re-design of my roof	4	2	5
8	Need an MC for a program	5	3	1
9	Need to talk about my personal issues	1	4	1
10	Teach me how to make kimchi	3	1	4
11	Teach me how to make kimchi	5	1	4

id	description
1	In Progress
2	Delivered
3	In Revision
4	Completed
5	Cancelled

order_status TABLE

Get buyers based on the seller and order status (JOIN)

Select Seller:

Select Status:

Run

Get buyers based on the seller and order status (JOIN)

Select Seller:

Peter Lee

Peter Lee
Hanra Jeong
Julia Lee
Janghyeon Lee
Jooyoung Lee

Select Status:

Run

Get buyers based on the seller and order status (JOIN)

Select Seller:

Select Status:

In Progress

Delivered
In Revision
Completed
Cancelled

Run

Get sellers and their first skill (JOIN)

Run

Get BuyerID, GigID from orders TABLE (PROJECTION)	
BuyerID	GigID
2	1
5	2
2	3
1	4
3	5
4	1
4	2
5	3
1	4
3	1
5	1
3	2
5	5
5	4
5	6
5	7
5	8
5	9
5	10

Get buyers based on the seller and order status (JOIN)		
Select Seller:	<input type="text" value="Peter Lee"/>	
Select Status:	<input type="text" value="In Progress"/>	
Run		
Buyer	Gig	Status
Hanra Jeong	Make any kimchi	In Progress
JangHyeon Lee	Make any kimchi	In Progress

Get sellers and their first skill (JOIN)		
Run		
Name	Email	1st Skill
Peter Lee	peter123@gmail.com	Cooking
Hanra Jeong	hanra123@gmail.com	Interior Design
Julia Lee	julia123@gmail.com	Cooking
JangHyeon Lee	jang123@gmail.com	Host MC
Jooyoung Lee	joo123@gmail.com	Host MC

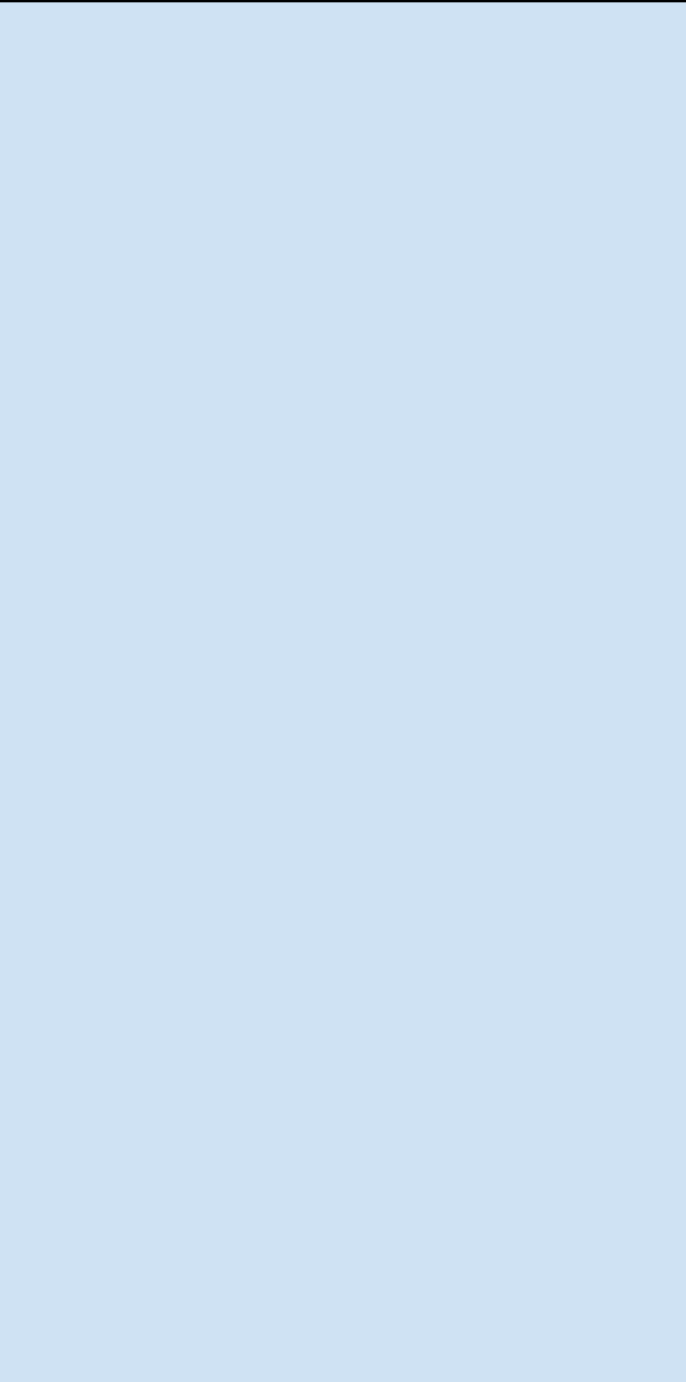
Aggregation (made 2)

```
$sql = "SELECT g.id, g.title, g.price, COUNT(o.gig) as order_count, SUM(g.price) as revenue
FROM gigs g
JOIN orders o ON g.id=o.gig
WHERE g.id=$id";
```

```
$sql = "SELECT DISTINCT u.id, u.name, u.email, g.title, COUNT(o.id) as total_count
FROM users u
INNER JOIN orders o ON u.id=o.buyer
INNER JOIN gigs g ON o.gig=g.id
WHERE g.id=$id
GROUP BY u.id";
```

id	title	description	category_id	price	user_id
1	Make any kimchi	I will teach you how to make any home-made kimchi.	1	30	1
2	A good design makes a good house	I will create one-and-only blueprint of your dream...	2	1000	2
3	The host you needed	I will be your host in any language.	3	100	4
4	Living is mentality	I will be your counsellor for your current issues.	4	500	3
5	Your business starts here	In any language, I can create a good business prop...	5	2000	5
6	How to be a good cook	I will teach you the basics of being a good cook.	1	50	3
7	Make your garden alive	I will design the structures eco-friendly way.	2	300	1
8	MC for any program	The bilingual MC you needed for your program.	3	200	4
9	The healing therapy	Clear your mind away with a chat.	4	75	5
10	Translate in ENG or KR	I can translate your documents in ENG or KR	5	100	2

Get total orders and revenue of a selected gig (AGGREGATION)				
Select Gig:	<input type="text" value="Make any kimchi"/>			
Run				
ID	Title	Price	Total Orders	Revenue
1	Make any kimchi	\$30	4	\$120



Nested Aggregation (made 3)

```
$sql = "SELECT g.id, g.title, count(o.id) as completed
FROM gigs g LEFT JOIN orders o ON g.id=o.gig
WHERE o.status=(SELECT id
FROM order_status os
WHERE os.description='$status')
AND g.id=$id";

$sql = "SELECT TEMPs.buyer, TEMPs.avgPrice
FROM (SELECT o2.buyer, avg(price) as avgPrice
FROM orders O2
LEFT JOIN gigs G ON O2.gig=G.id
GROUP by buyer) as TEMPs
WHERE TEMPs.avgPrice > 450
ORDER by TEMPs.buyer";

$sql = "SELECT g.id, g.category_id, AVG(g.Price) as avg_price
FROM gigs g
GROUP by g.category_id
HAVING 2 <= (SELECT count(*)
FROM gigs g2, orders o
WHERE g.id = g2.id
AND g2.id = o.gig)";
```

Division (made 2)

```
$sql = "SELECT *
FROM users U
WHERE NOT EXISTS (SELECT *
FROM gigs G
WHERE NOT EXISTS
(SELECT *
FROM orders O
WHERE O.buyer=U.id AND O.gig=G.id))";

$sql = "SELECT *
FROM users
WHERE not exists (SELECT *
FROM skills
WHERE skills.id=users.id);
```

id requirements buyer gig status

Edit

Copy

Delete

1 I want learn how to make water kimchi

2 1 1

Edit

Copy

Delete

2 Please re-design my basement

5 2 3

Edit

Copy

Delete

3 Host a birthday party in Korean

2 3 1

Edit

Copy

Delete

4 I need counselling in education

1 4 4

Edit

Copy

Delete

5 Construct a start-up proposal for government fundi...

3 5 4

Edit

Copy

Delete

6 Need a lesson to make based kimchi

4 1 1

Edit

Copy

Delete

7 Need a re-design of my roof

4 2 5

Edit

Copy

Delete

8 Need an MC for a program

5 3 1

Edit

Copy

Delete

9 Need to talk about my personal issues

1 4 1

Edit

Copy

Delete

10 Teach me how to make kimchi

3 1 4

Edit

Copy

Delete

11 Teach me how to make kimchi

5 1 4

id name email username password skill_1 skill_2 skill_3

Edit

Copy

Delete

1 Peter Lee

peter123@gmail.com

peter354

354

1

2

NULL

Edit

Copy

Delete

2 Hanra Jeong

hanra123@gmail.com

hanra354

354

2

5

NULL

Edit

Copy

Delete

3 Julia Lee

julia123@gmail.com

julia354

354

1

2

NULL

Edit

Copy

Delete

4 JangHyeon Lee

jang123@gmail.com

jang354

354

3

5

NULL

Edit

Copy

Delete

5 Jooyoung Lee

joo123@gmail.com

joo354

354

3

4

5

Get total orders and revenue of a selected gig (AGGREGATION)

Select Gig: Make any kimchi

Run

Get total orders and revenue of a selected gig (AGGREGATION)

Select Gig: Make any kimchi

Make any kimchi

A good design makes a good house

The host you needed

Living is mentality

Your business starts here

How to be a good cook

Get users and their total orders of a selected gig (AGGREGATION)

Select Gig: Make any kimchi

Run

Get users and their total orders of a selected gig (AGGREGATION)

Select Gig: Make any kimchi

Make any kimchi

A good design makes a good house

The host you needed

Living is mentality

Your business starts here

How to be a good cook

Get users and their total orders of a selected gig (AGGREGATION)

Select Gig: Make any kimchi

Run

ID	Name	Email	Gig	Total Orders
2	Hanra Jeong	hanra123@gmail.com	Make any kimchi	1
3	Julia Lee	julia123@gmail.com	Make any kimchi	1
4	JangHyeon Lee	jang123@gmail.com	Make any kimchi	1
5	Jooyoung Lee	joo123@gmail.com	Make any kimchi	1

Get number of orders of a selected gig based on current status (NESTED)

Select Gig: Make any kimchi

Current Status: In Progress

Run

Get number of orders of a selected gig based on current status (NESTED)

Select Gig: Make any kimchi

Current Status: Make any kimchi

A good design makes a good house

The host you needed

Living is mentality

Your business starts here

How to be a good cook

Make your garden alive

MC for any program

The host you needed

Get number of orders of a selected gig based on current status (NESTED)

Select Gig: Make any kimchi

Current Status: In Progress

In Progress

Delivered

In Revision

Completed

Cancelled

Buyers with an average purchase of more than \$450 per buyer (NESTED)

Run

Average price by category for gigs with 2 or more orders (NESTED)

Run

Get number of orders of a selected gig based on current status (NESTED)

Select Gig: Make any kimchi

Current Status: In Progress

Run

ID	Title	Number of Orders
1	Make any kimchi	2

Buyers with an average purchase of more than \$450 per buyer (NESTED)

Run

Buyer	Average Purchase
1	\$500
3	\$1010
4	\$515

Average price by category for gigs with 2 or more orders (NESTED)

Run

ID	Category_ID	Average Price
1	1	\$40
2	2	\$650
3	3	\$150
4	4	\$287.5
5	5	\$1050

id name email username password skill_1 skill_2 skill_3

Edit

Copy

Delete

1 Peter Lee

peter123@gmail.com

peter354

354

1

2

NULL

Edit

Copy

Delete

2 Hanra Jeong

hanra123@gmail.com

hanra354

354

2

5

NULL

Edit

Copy

Delete

3 Julia Lee

julia123@gmail.com

julia354

354

1

2

NULL

Edit

Copy

Delete

4 JangHyeon Lee

jang123@gmail.com

jang354

354

3

5

NULL

Edit

Copy

Delete

5 Jooyoung Lee

joo123@gmail.com

joo354

354

3

4

5

Edit

Copy

Delete

6 I am a newbie

new123@gmail.com

new354

354

NULL

NULL

NULL

Get users who purchased all gigs (DIVISION)

Run

Get users who do not have any skills (DIVISION)

Run

Get users who purchased all gigs (DIVISION)

Run

ID	Name	Email
5	Jooyoung Lee	joo123@gmail.com

Get users who do not have any skills (DIVISION)

Run

ID	Name	Email
6	I am a newbie	new123@gmail.com