

## W06-P1: use SQL command to create shop\_xx with 3 data (category is your ID's last digit)

The screenshot shows the PgAdmin interface. On the left, the 'shop\_19' table is selected under the 'category\_19' schema. The table structure is displayed in the center, showing columns: id (integer, primary key), name (character varying (255)), cat\_id (integer), price (real), remote\_url (character varying (255)), and local\_url (character varying (255)). The 'Data Output' tab at the bottom shows the following data:

id	name	cat_id	price	remote_url	local_url
1	Blue Tanktop	4	25	https://i.ibb.co/7CQVJNm/blue-tank.png	/img/womens/blue-tank.png
2	Floral Blouse	4	20	https://i.ibb.co/4W2DGKm/floral-blouse.png	/img/womens/floral-blouse.png
3	Floral Dress	4	80	https://i.ibb.co/KV18Ysr/floral-skirt.png	/img/womens/floral-skirt.png

The screenshot shows the Visual Studio Code editor with a SQL script for creating the 'shop\_19' table and inserting data. The script is as follows:

```
1 CREATE TABLE shop_19(
2   id int NOT NULL PRIMARY KEY,
3   name varchar(255),
4   cat_id int,
5   price real,
6   remote_url varchar(255),
7   local_url varchar(255),
8   FOREIGN KEY (cat_id) REFERENCES category_19(id) ON DELETE SET NULL ON UPDATE CASCADE
9 );
10
11 INSERT INTO shop_19 (id, name, cat_id, price, remote_url, local_url)
12 VALUES
13 (1, 'Blue Tanktop', 4, 25, 'https://i.ibb.co/7CQVJNm/blue-tank.png', '/img/womens/blue-tank.png'),
14 (2, 'Floral Blouse', 4, 20, 'https://i.ibb.co/4W2DGKm/floral-blouse.png', '/img/womens/floral-blouse.png'),
15 (3, 'Floral Dress', 4, 80, 'https://i.ibb.co/KV18Ysr/floral-skirt.png', '/img/womens/floral-skirt.png');
```

## W06-P2: Relational Model Constraints

定義域限制 (domain constraints)

crow2\_19/postgres@PostgreSQL 15

Query Query History

```
1 INSERT INTO shop_19 (id, name, cat_id, price, remote_url, local_url)
2 VALUES
3 (101, 'Blue Tanktop', 4, 'a25', 'https://i.ibb.co/7CQVJNm/blue-tank.png', '/img/womens/blue-tank.png')
```

Data Output Messages Notifications

ERROR: invalid input syntax for type real: "a25"  
LINE 3: (101, 'Blue Tanktop', 4, 'a25', 'https://i.ibb.co/7CQVJNm/bl...  
^

SQL state: 22P02  
Character: 102

## 關聯鍵限制 (primary key constraints)

crow2\_19/postgres@PostgreSQL 15

Query Query History

```
1 INSERT INTO shop_19 (id, name, cat_id, price, remote_url, local_url)
2 VALUES
3 (2, 'Blue Tanktop', 4, 25, 'https://i.ibb.co/7CQVJNm/blue-tank.png', '/img/womens/blue-tank.png')
4
```

Data Output Messages Notifications

ERROR: duplicate key value violates unique constraint "shop\_19\_pkey"  
DETAIL: Key (id)=(2) already exists.  
SQL state: 23505

## 實體完整限制 (entity integrity constraints)

crow2n2\_19/postgres@PostgreSQL 15

Query Query History

```
1 INSERT INTO shop_19 (id, name, cat_id, price, remote_url, local_url)
2 VALUES
3 (null, 'Blue Tanktop', 4, 25, 'https://i.ibb.co/7CQVJNm/blue-tank.png', '/img/womens/blue-tank.png')
4
```

Data Output Messages Notifications

ERROR: null value in column "id" of relation "shop\_19" violates not-null constraint  
DETAIL: Failing row contains (null, Blue Tanktop, 4, 25, https://i.ibb.co/7CQVJNm/blue-tank.png, /img/womens/blue-tank.png).  
SQL state: 23502

## 参考完整限制 (referential integrity constraint)

Dashboard Properties SQL Statistics Dependencies Dependents Processes crown2\_19/postgres@PostgreSQL 15\* public.st

crow2n2\_19/postgres@PostgreSQL 15

Query Query History

```
1 INSERT INTO shop_19 (id, name, cat_id, price, remote_url, local_url)
2 VALUES
3 (101, 'Blue Tanktop', 6, 25, 'https://i.ibb.co/7CQVJNm/blue-tank.png', '/img/womens/blue-tank.png')
4
5
```

Data Output Messages Notifications

ERROR: insert or update on table "shop\_19" violates foreign key constraint "shop\_19\_cat\_id\_fkey"  
DETAIL: Key (cat\_id)=(6) is not present in table "category\_19".  
SQL state: 23503

# W06-P3: ON UPDATE CASCADE

Browser

Dashboard Properties SQL Statistics Dependencies Dependents Processes public.category\_19/crown2\_19/postgres@PostgreSQL 15 public.sho

Functions  
Materialized Views  
Operators  
Procedures  
Sequences  
Tables (2)  
category\_19  
shop\_19  
Columns (6)  
id  
name  
cat\_id  
price  
remote\_url  
local\_url  
Constraints  
Indexes  
RLS Policies  
Rules  
Triggers  
Trigger Functions  
Types  
Views  
Subscriptions  
crown\_19  
Casts  
Catalogs  
Event Triggers

public.category\_19/crown2\_19/postgres@PostgreSQL 15

Query Query History

```
1 SELECT * FROM public.category_19
2 ORDER BY id ASC
```

Data Output Messages Notifications

	id [PK] integer	name character varying (255)	size character varying (20)	local_url character varying (255)	remote_url character varying (255)	link_url character varying (255)
1	1	hats	[null]	/img/homepage/hats.png	https://i.ibb.co/cvpntL1/hats.png	/crown2_19/shop_19/hat
2	2	jackets	[null]	/img/homepage/jackets.png	https://i.ibb.co/px2tCc3/jackets.png	/crown2_19/shop_19/jackets
3	3	sneakers	[null]	/img/homepage/sneakers.png	https://i.ibb.co/0jqHpnP/sneakers.png	/crown2_19/shop_19/sneakers
4	99	womens	large	/img/homepage/womens.png	https://i.ibb.co/GCCdy8t/womens.png	/crown2_19/shop_19/womens
5	5	mens	large	/img/homepage/mens.png	https://i.ibb.co/R70vBrQ/men.png	/crown2_19/shop_19/mens

Browser

Dashboard Properties SQL Statistics Dependencies Dependents Processes public.categor... public.shop\_19/crown2\_19/postgres@PostgreSQL 15

Functions  
Materialized Views  
Operators  
Procedures  
Sequences  
Tables (2)  
category\_19  
shop\_19  
Columns (6)  
id  
name  
cat\_id  
price  
remote\_url  
local\_url  
Constraints  
Indexes  
RLS Policies  
Rules  
Triggers  
Trigger Functions  
Types  
Views  
Subscriptions  
crown\_19  
Casts  
Catalogs

public.shop\_19/crown2\_19/postgres@PostgreSQL 15

Query Query History

```
1 SELECT * FROM public.shop_19
2 ORDER BY id ASC
```

Data Output Messages Notifications

	id [PK] integer	name character varying (255)	cat_id integer	price real	remote_url character varying (255)	local_url character varying (255)
1	1	Blue Tanktop	99	25	https://i.ibb.co/7CQVJNm/blue-tank.png	/img/womens/blue-tank.png
2	2	Floral Blouse	99	20	https://i.ibb.co/4W2DGKm/floral-blouse.png	/img/womens/floral-blouse.png
3	3	Floral Dress	99	80	https://i.ibb.co/KV18Ysr/floral-skirt.png	/img/womens/floral-skirt.png

# W06-P4: ON DELETE SET NULL