

Welcome to the **Java** **Course**

Module 4 – Day 05

Content of the course

- Introduction to Database Theory and SQL Basics
- Database connection with Java
- Table Management and Relationships
- Advanced SQL Queries
- Data Normalization
- **Views, subqueries and nested queries**

Course survey



Event Manager Project - Step 4

- New feature: Allow the user to buy a ticket. The user should be requested:
 - his personal details.
 - which event he wants to attend
 - which ticket type he would like to buy
- Is your database in 3NF? No need to make the updates, just think about what would be needed to convert it to 3NF.



PostgreSQL **TIPS**

Concat fields

Select **two** columns

```
1 Select first_name, last_name from  
   actor
```

	first_name character varying (45) 	last_name character varying (45) 
1	Penelope	Guinness
2	Nick	Wahlberg
3	Ed	Chase
4	Jennifer	Davis

Concat fields

Join two tables in one, with a **separator** .


```
1 Select first_name || ' ' || last_name from  
actor
```

	?column? text
1	Penelope Guinness
2	Nick Wahlberg
3	Ed Chase

Concat fields

Join two tables in one, with a separator and a **column name** .

```
1 Select first_name || ' ' || last_name AS actor_name from actor
```

	actor_name text 
1	Penelope Guinness
2	Nick Wahlberg
3	Ed Chase
4	Jennifer Davis

LIKE %

```
SELECT *  
FROM customer  
WHERE first_name LIKE '%w%' OR first_name LIKE '%W%'
```

more details: https://www.w3schools.com/sql/sql_like.asp

	customer_id [PK] integer	store_id smallint	first_name character varying (45)	last_name character varying (45)	email character varying (50)	address
1	87	1	Wanda	Patterson	wanda.patterson@sakilacustomer.org	
2	105	1	Dawn	Sullivan	dawn.sullivan@sakilacustomer.org	
3	115	1	Wendy	Harrison	wendy.harrison@sakilacustomer.org	
4	212	2	Wilma	Richards	wilma.richards@sakilacustomer.org	
5	219	2	Willie	Howell	willie.howell@sakilacustomer.org	

Subqueries

A query inside another.

```
1 SELECT *  
2 FROM actor  
3 WHERE actor_id IN (SELECT actor_id FROM film_actor WHERE film_id = 1);
```

Views

Views

- Virtual tables that are defined based on the result of a SELECT query.
- No extra storage.

more details: https://www.w3schools.com/sql/sql_view.asp

Views

- Customer table

	customer_id [PK] integer	store_id smallint	first_name character varying (45)	last_name character varying (45)	email character varying (50)	address_id smallint	activebool boolean	create_date date	last_update timestamp without time zone	active integer
1	524	1	Jared	Ely	jared.ely@sakilacustomer.org	530	true	2006-02-14	2013-05-26 14:49:45.738	1
2	1	1	Mary	Smith	mary.smith@sakilacustomer.org	5	true	2006-02-14	2013-05-26 14:49:45.738	1
3	2	1	Patricia	Johnson	patricia.johnson@sakilacustomer.org	6	true	2006-02-14	2013-05-26 14:49:45.738	1
4	3	1	Linda	Williams	linda.williams@sakilacustomer.org	7	true	2006-02-14	2013-05-26 14:49:45.738	1

- View table

```
1 CREATE VIEW customer_info AS
2 SELECT customer_id, first_name, last_name, email
3 FROM customer;
```

	customer_id [PK] integer	first_name character varying (45)	last_name character varying (45)	email character varying (50)
1	524	Jared	Ely	jared.ely@sakilacustomer.org
2	1	Mary	Smith	mary.smith@sakilacustomer.org
3	2	Patricia	Johnson	patricia.johnson@sakilacustomer.org
4	3	Linda	Williams	linda.williams@sakilacustomer.org

Now YOUR TURN !

Let's do the exercises

Event Manager Project - Step 5

Add new features to your project. Some ideas:

- Allow the user to see the list of events for which he has tickets.
- Allow the user to filter the events by location.
- Allow the user to see the list of all future events ordered by date
- Allow the user to see how many tickets are left for some event



Thank you!

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