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Instructions

2

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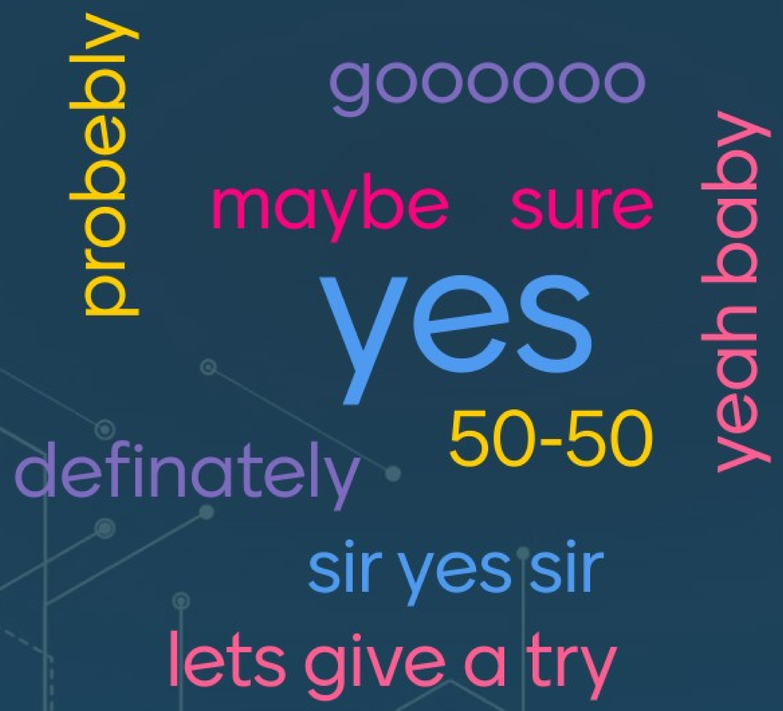
Are you ready to rock on?

13 responses



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Today's agenda

- Total Recall
- Three-Layered Architecture
- Database Layer Design
- Discuss the task

Total Recall

What do you remember from the last session?

8 responses

mvc mvp mvvm

amet won at quizz battle

data design

mvvm

mvc

mvvm mvc mvp

7

What is the difference between Architectural pattern and Design patterns?

arch - general structure
desing - local logic

design*

ap is the pattern of the application, dp is the pattern of the code

design pattern is more about solving the specific problem . Architectural design general structure

architecture

Helps in organizing classes and objects to solve recurring implementation challenges.

Design ones are those that focus on solving specific problem Architectural is used generally design app

Architectural patterns are high-level strategies that define the structure of an application, while design patterns are more specific solutions that address problems within components of the applicati

3 1 ? 10

What is the difference between Architectural pattern and Design patterns?

Architectural Patterns and Design Patterns are fundamental concepts in software development, but they operate at different levels of abstraction and serve distinct purposes in problem-solving. (Otabek

architectural pattern - high-level structure of a software system, design pattern - focuses on solving recurring problems at the code level within a system

ap overall structure and organization of a system dp specific coding problems at a micro level

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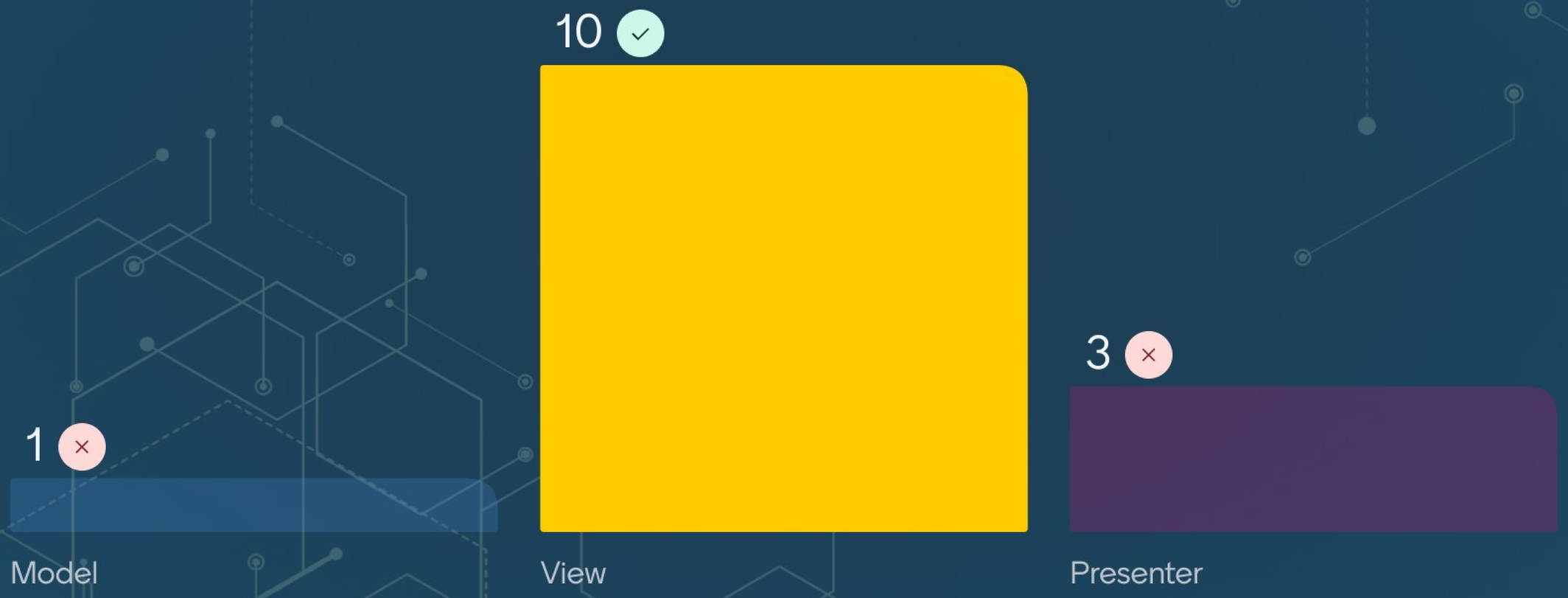
Who is receiving requests in MVP?



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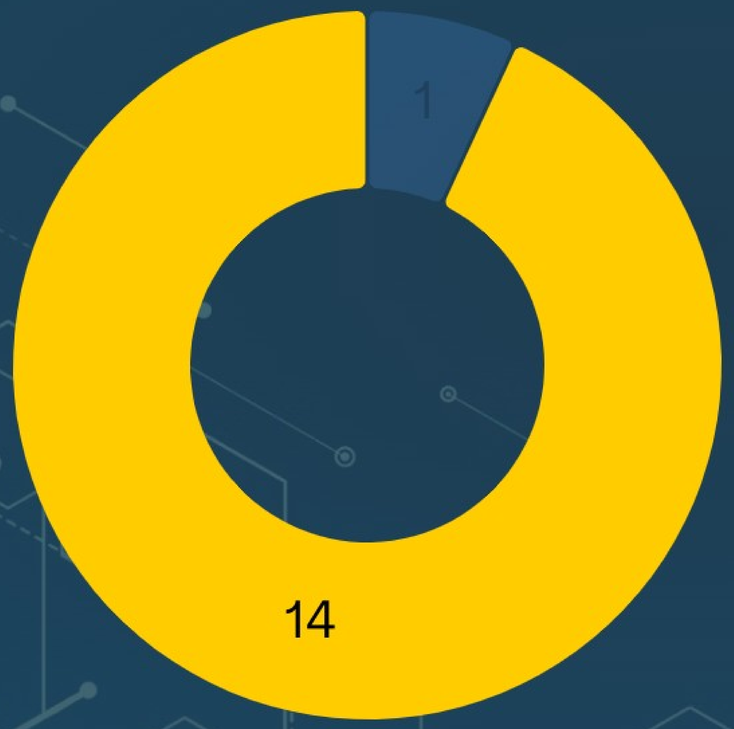
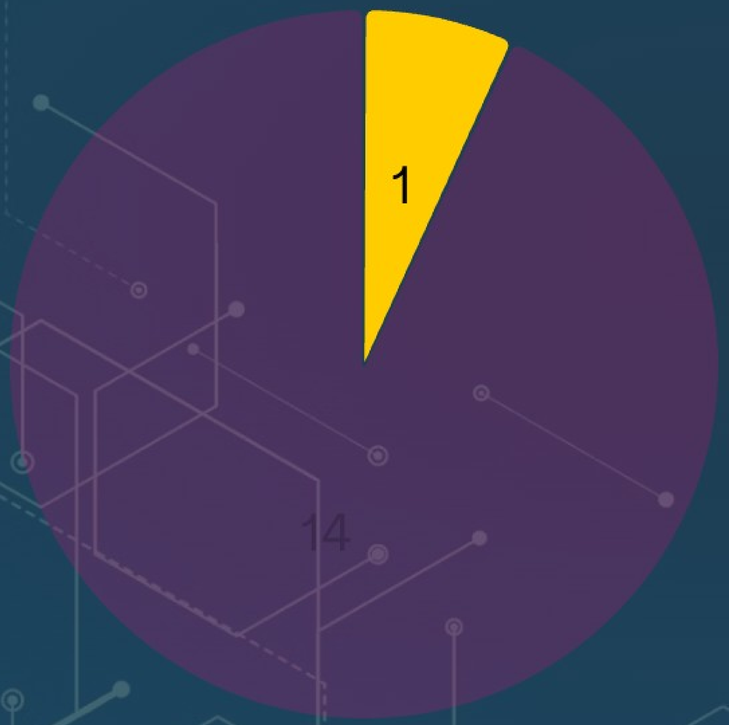
How many *Views* can be refered to *Presenter* in MVP?



1	Multiple	×
14	1	✓
0	2	×

1 1 1 15

Who is receiving requests in MVVM?



0	Model	×
1	View	✓
14	View-Model	×

1 1 1 15

Difference between MVC and MVVM ???

MVC: Controller manages UI logic and updates Model & View. MVVM: ViewModel binds UI & Model, enabling two-way data binding. (Otabek Ortikov)

MVC: Controller updates View. MVVM: ViewModel binds data automatically to View

In MVC, the Controller updates the View directly, while in MVVM, the ViewModel updates the View through data binding. MVVM promotes a clearer separation of concerns, making it easier to test and maint

1.controller receives the request , mvvm - view receives the request 2. in mvvm multiple view can be sent, 3 in mvc only 1

MVC 1 M - model handles business logic 2 V - Accepts User Requests 3 C - Processes Requests MVVM - model handles business logic - V Accepts User Requests - VM connects both layers for data binding

in MVVM, a "ViewModel" acts as the intermediary between the View and Model, handling presentation logic and data binding, while in MVC, the "Controller" directly manages the interaction between the Vi

1. The View in MVVM takes the input from the user and acts as the entry point of the application. 2. In MVC User Inputs are handled by the Controller

mvc is fast to design and used in simpler projects

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Difference between MVC and MVVM ???

MVC: Controller handles user input, updates model and view.
MVVM: ViewModel binds data to view, enabling better separation and testing.

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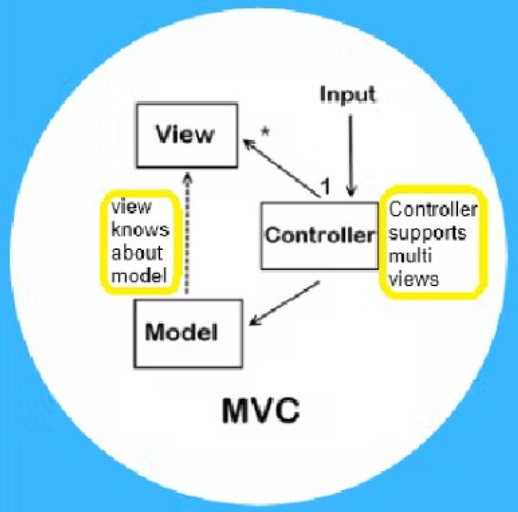
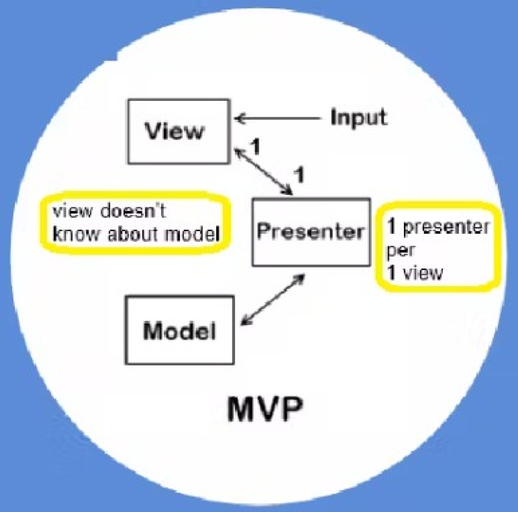
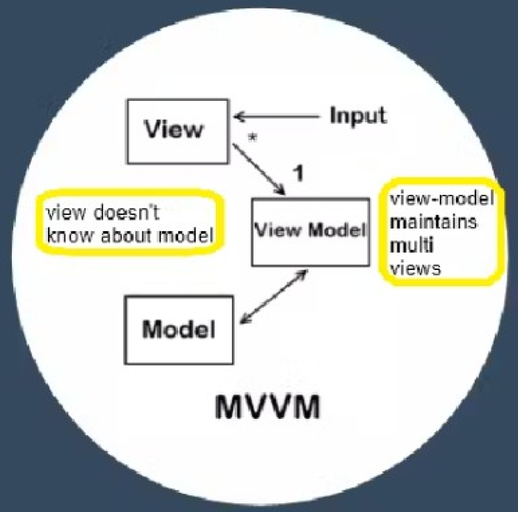
MVC VS MVP VS MVVM







Simple algorithm to define Pattern

- Notice the request operator...
- If request comes to 'Dispatcher' - it's a Controller => MVC
- If some View layer receive requests => MVP or MVVM
- Notice View relationship...
- If 'Dispatcher' serves only for one View - it's a Presenter => MVP
- If 'Dispatcher' serve for several Views - it's a View-Model => MVVM

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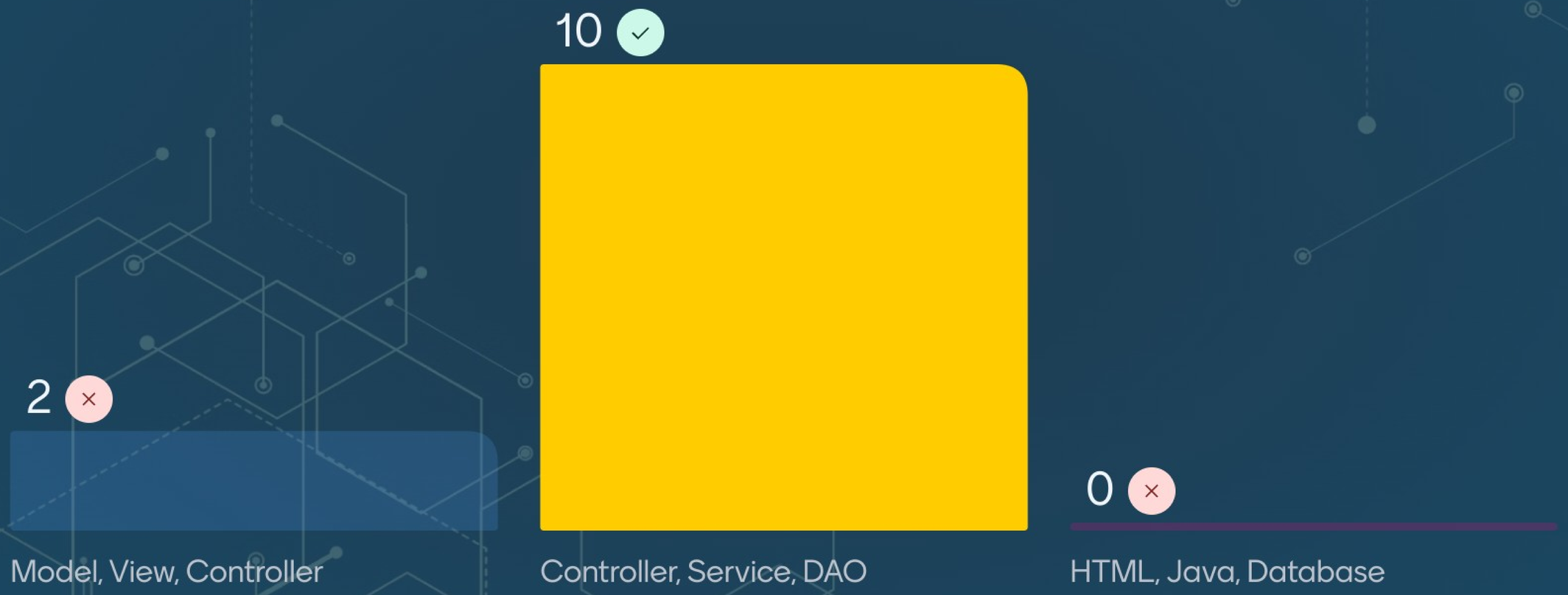
What are the layers in *3-layered architecture* ?



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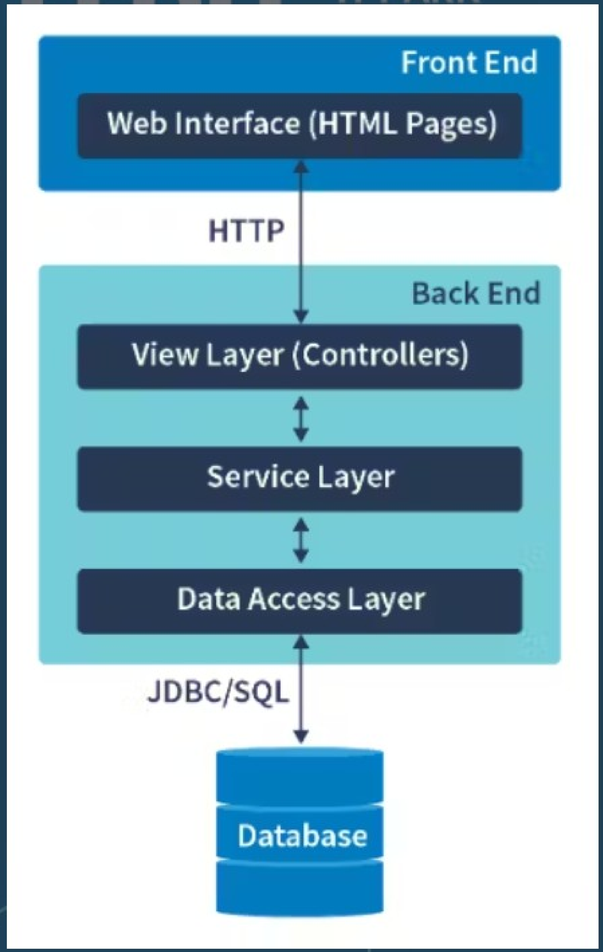
Architecture Advanced (ws-03)

Code

If you want to follow the examples -
Select an appropriate workshop (ws-...) at
https://github.com/AndreiRohau/itpu-java-web-2025



explore an example from ws-02

ERD

Entity Relationship Diagram

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Have you started the theory of '**Design of a Web App Database**'?

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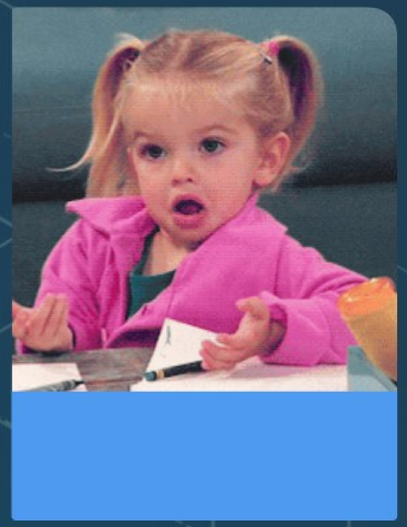

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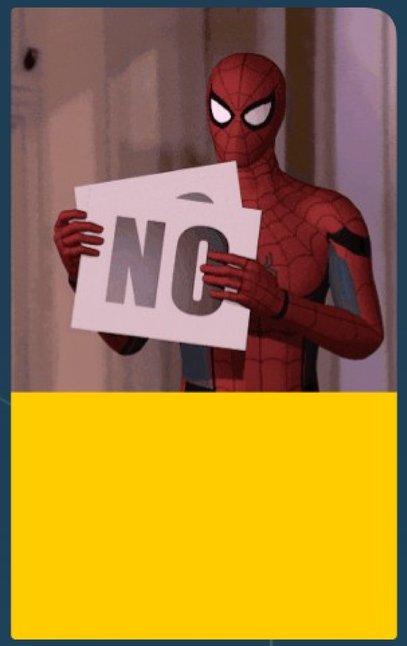

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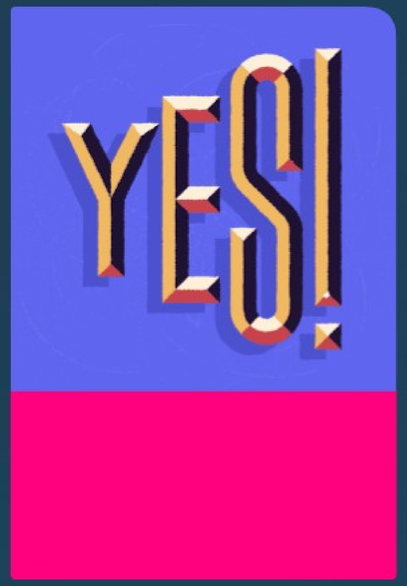

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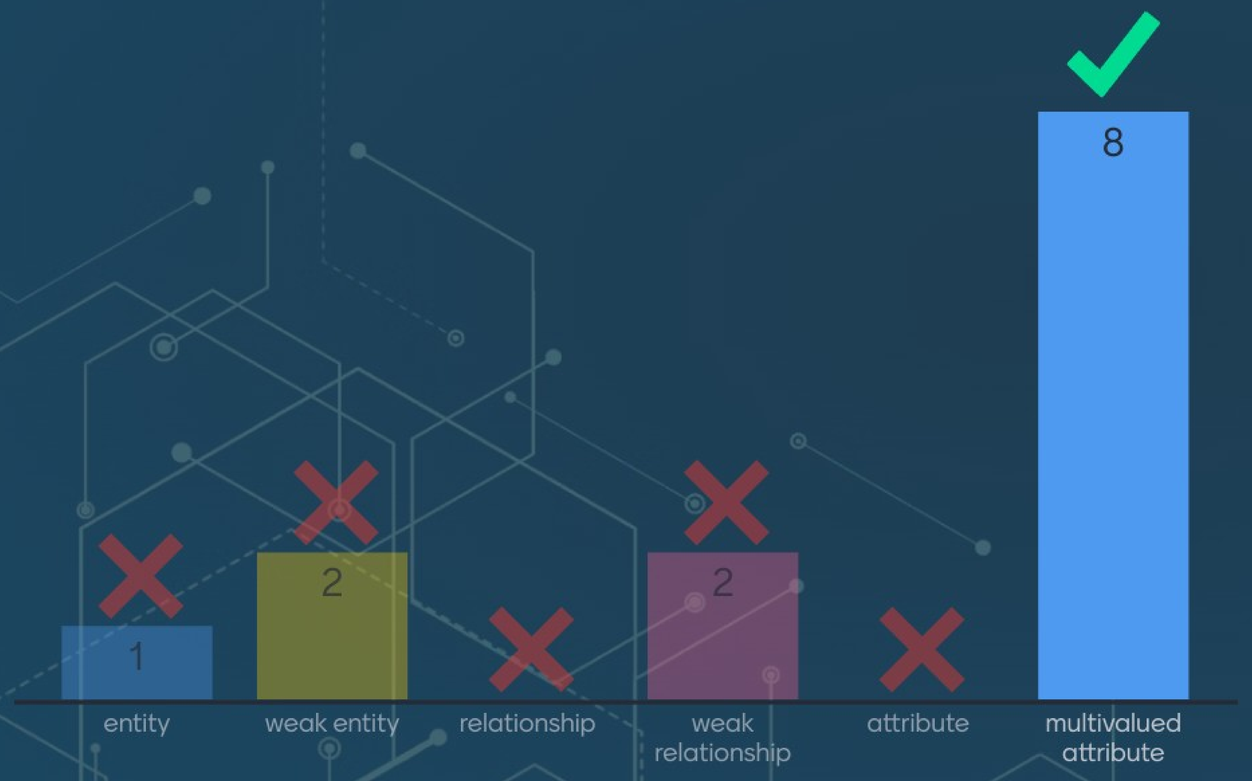
Explore code from ws-03

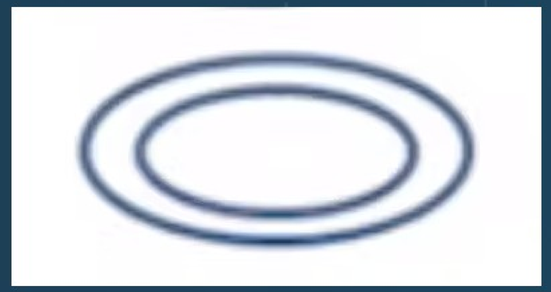
https://github.com/AndreiRohau/itpu-java-web-2025/tree/main/ws-03-architecture-advanced

Quiz after a coffee break

select correct meaning:

select correct meaning:





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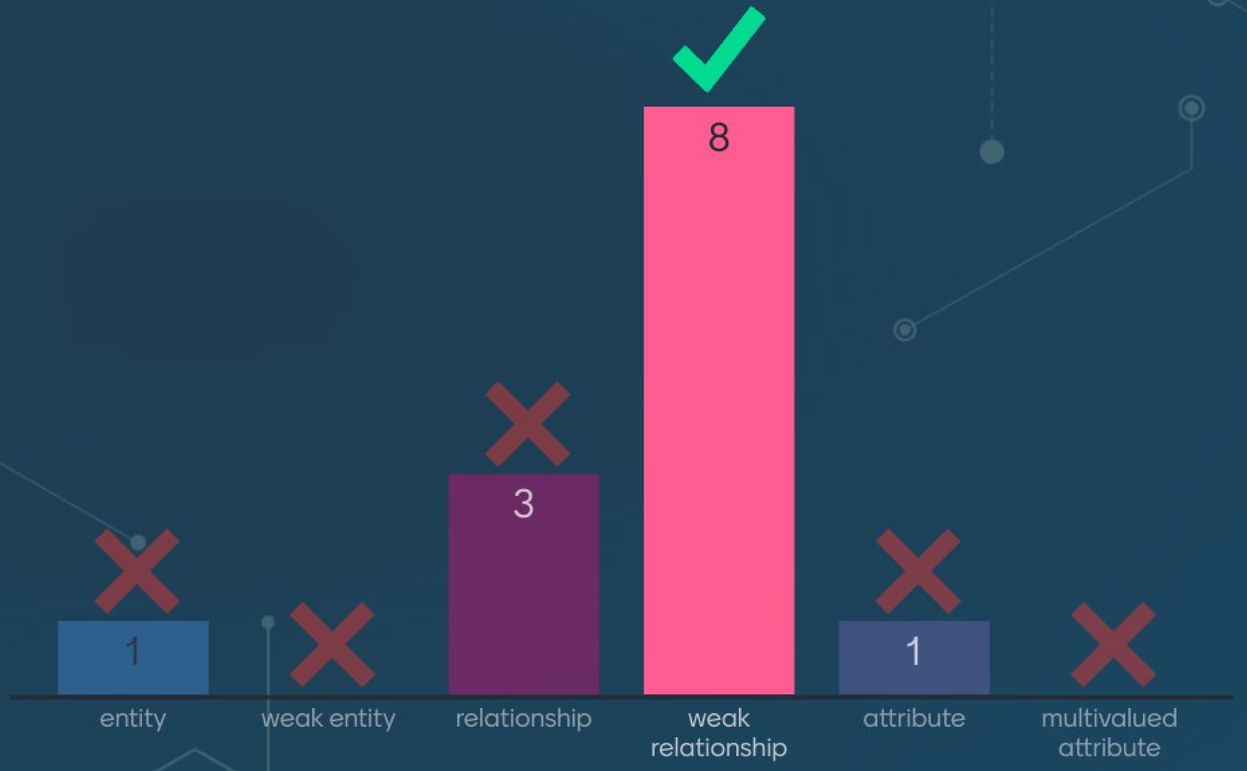
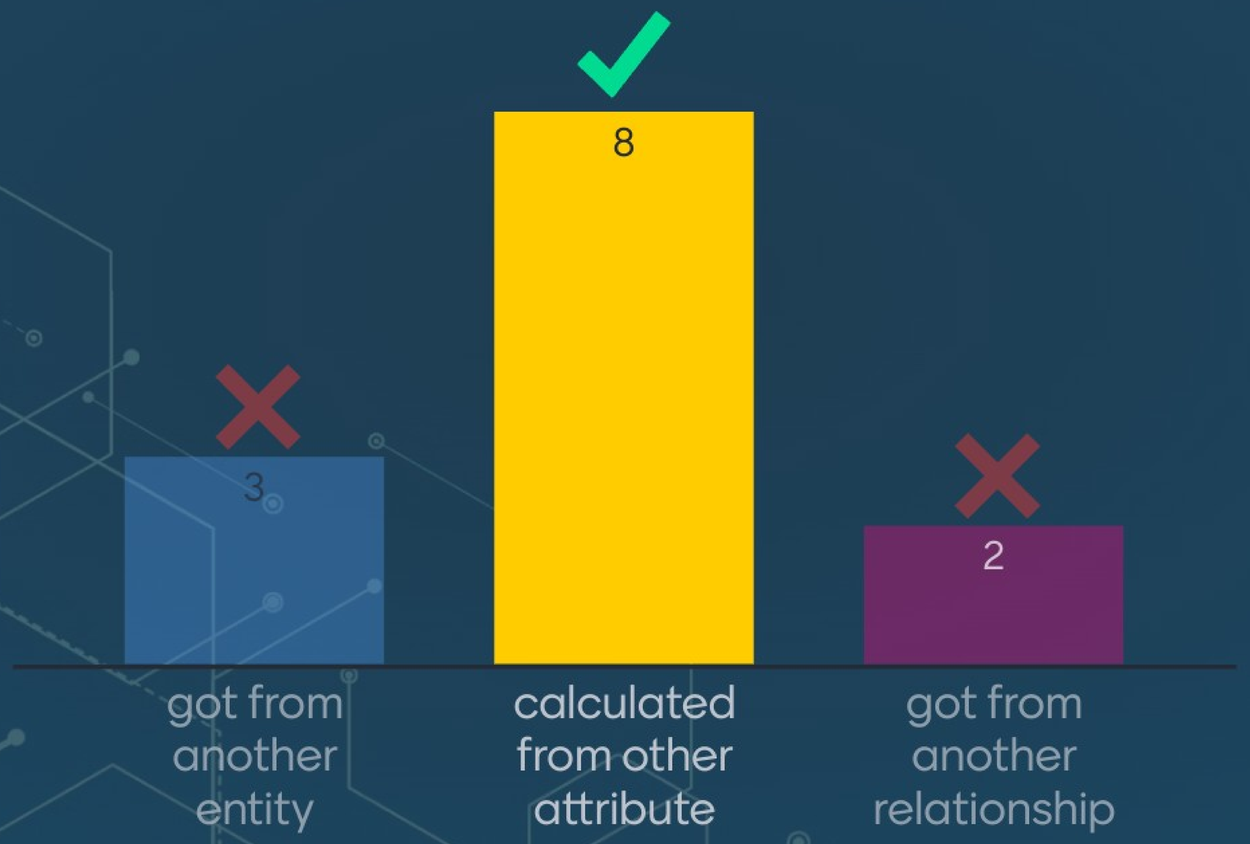
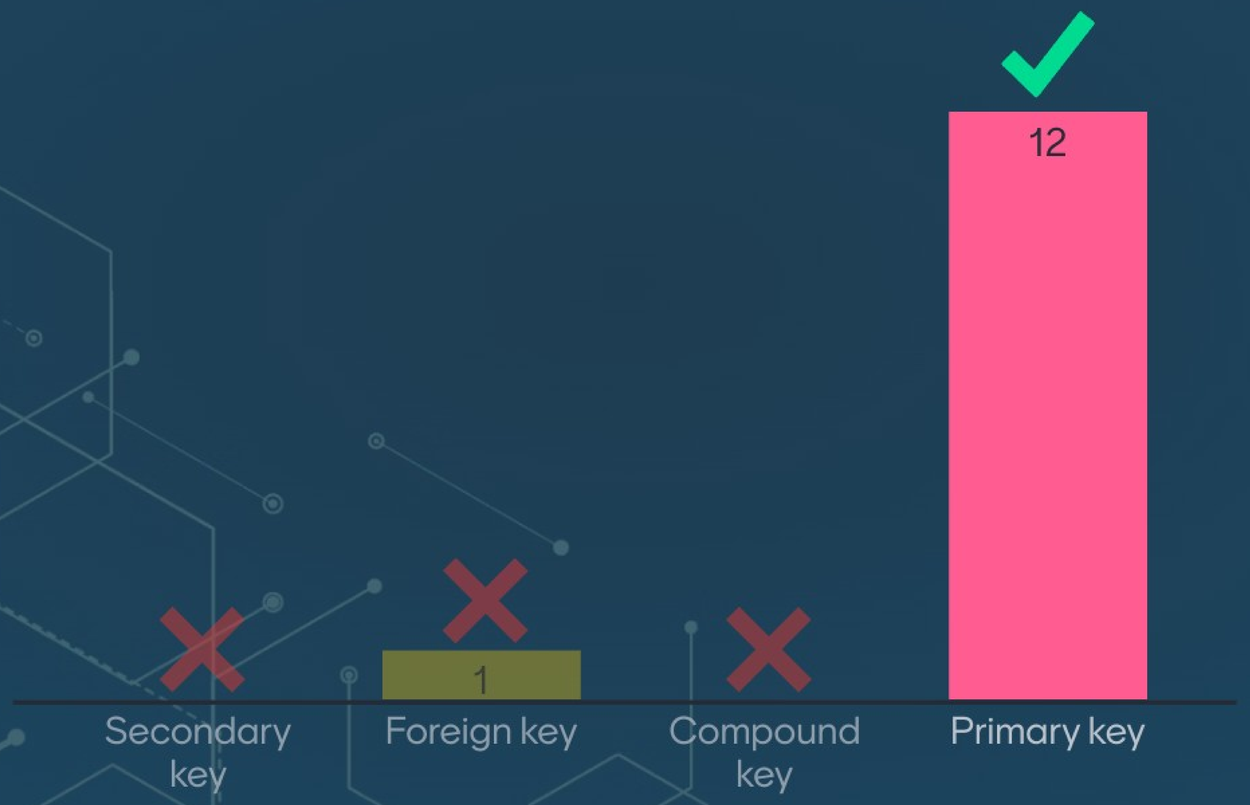
select correct meaning:



Derived Attribute -



What is the entity attribute that uniquely identifies an instance in a table?



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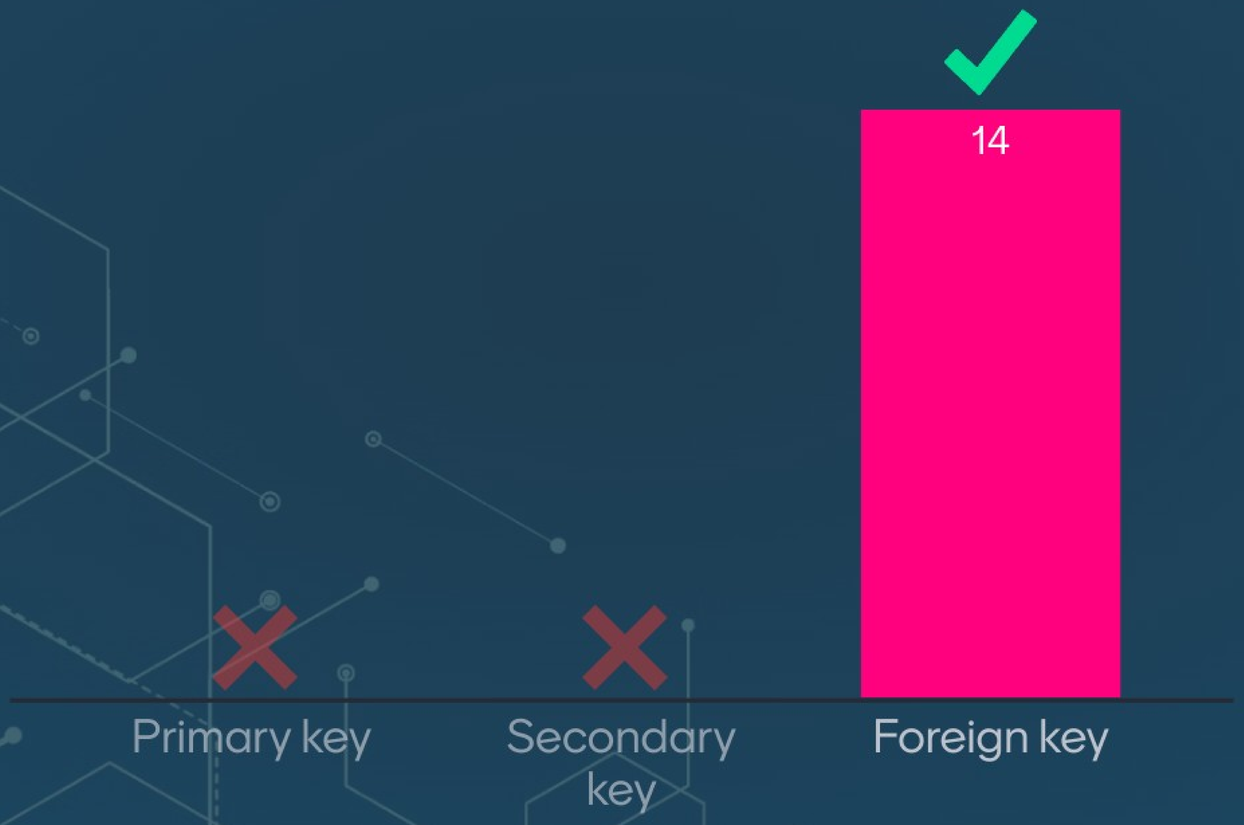
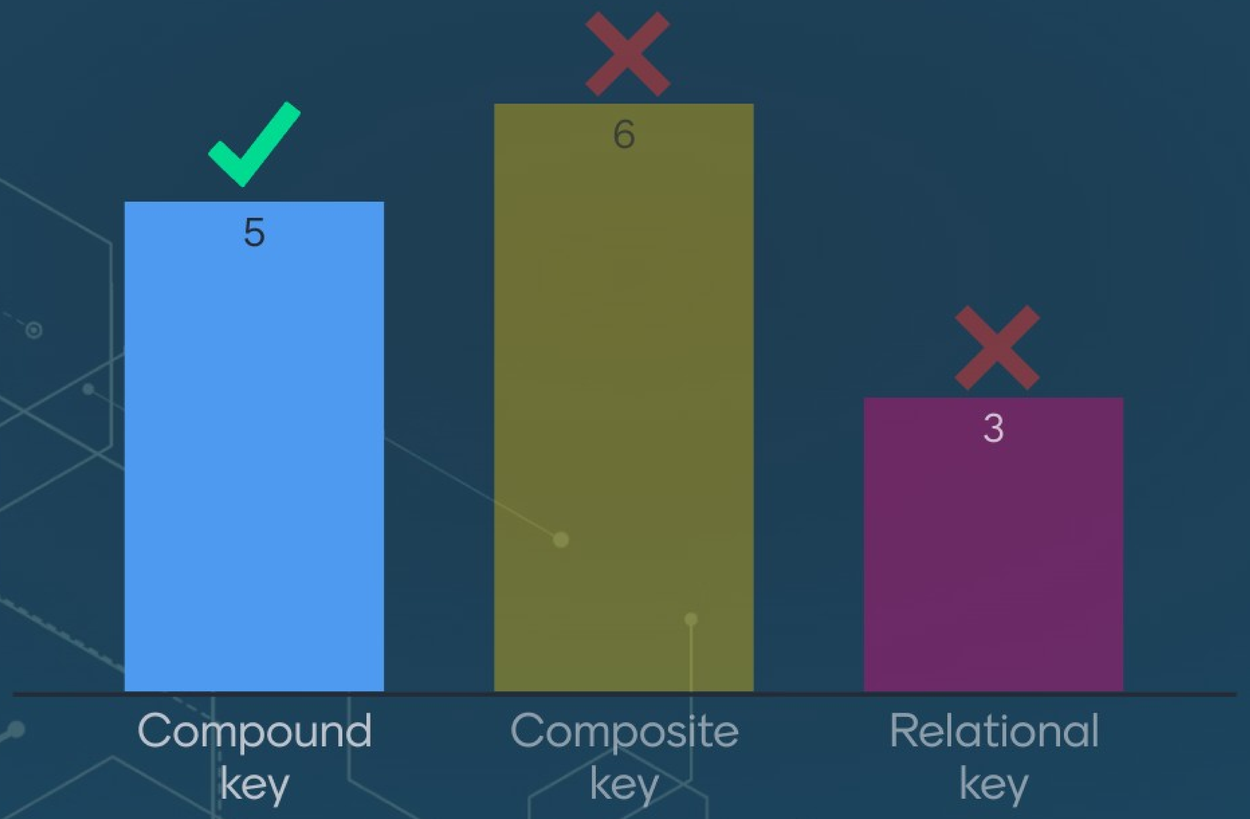
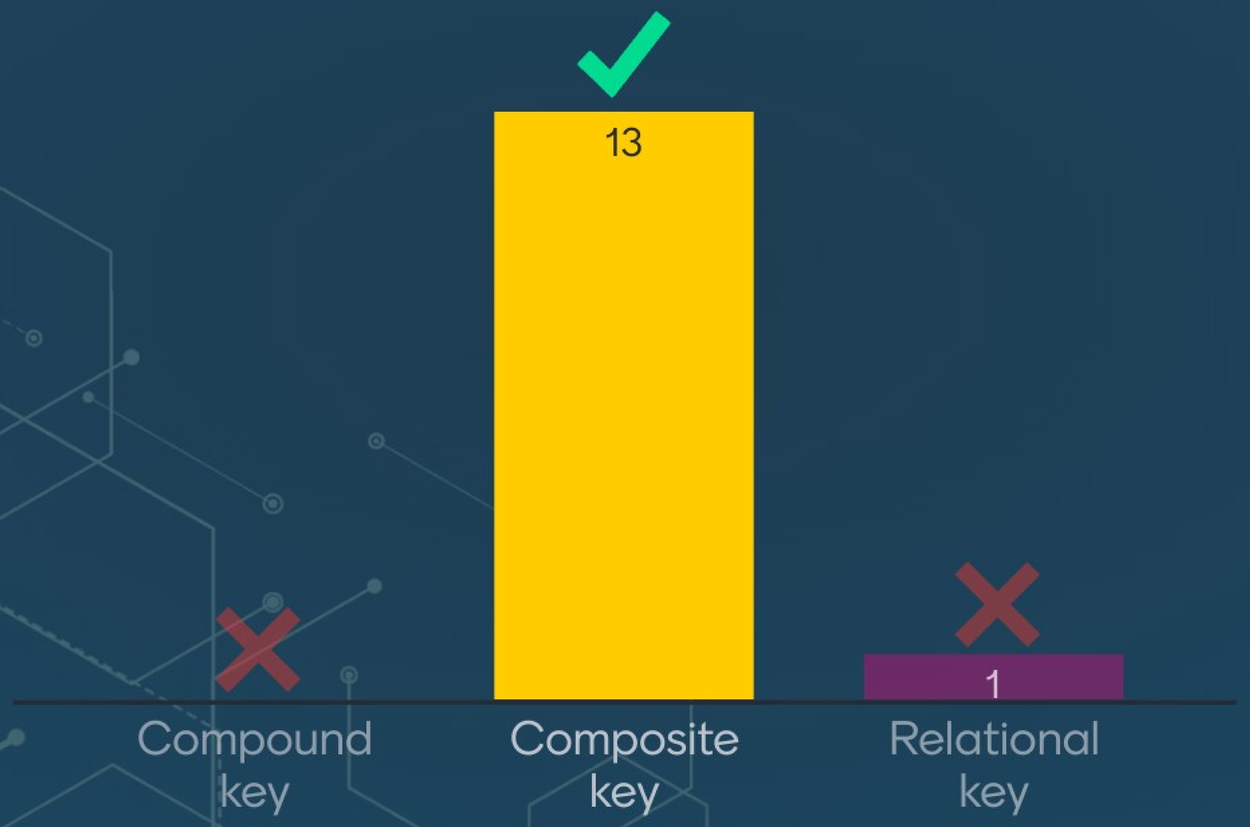
A key that is used to reference a primary key from another table is



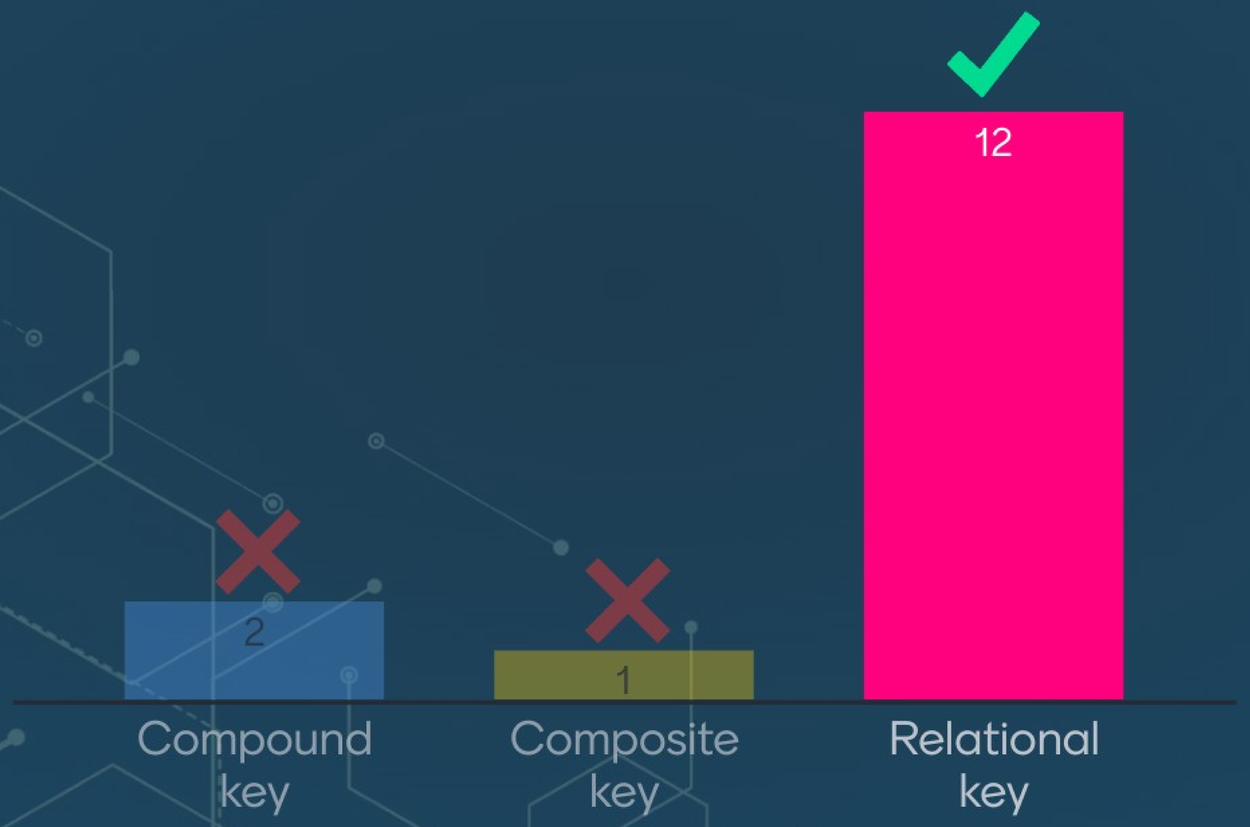
What is used when two or more primary keys from another entities are necessary to determine a unique entity?



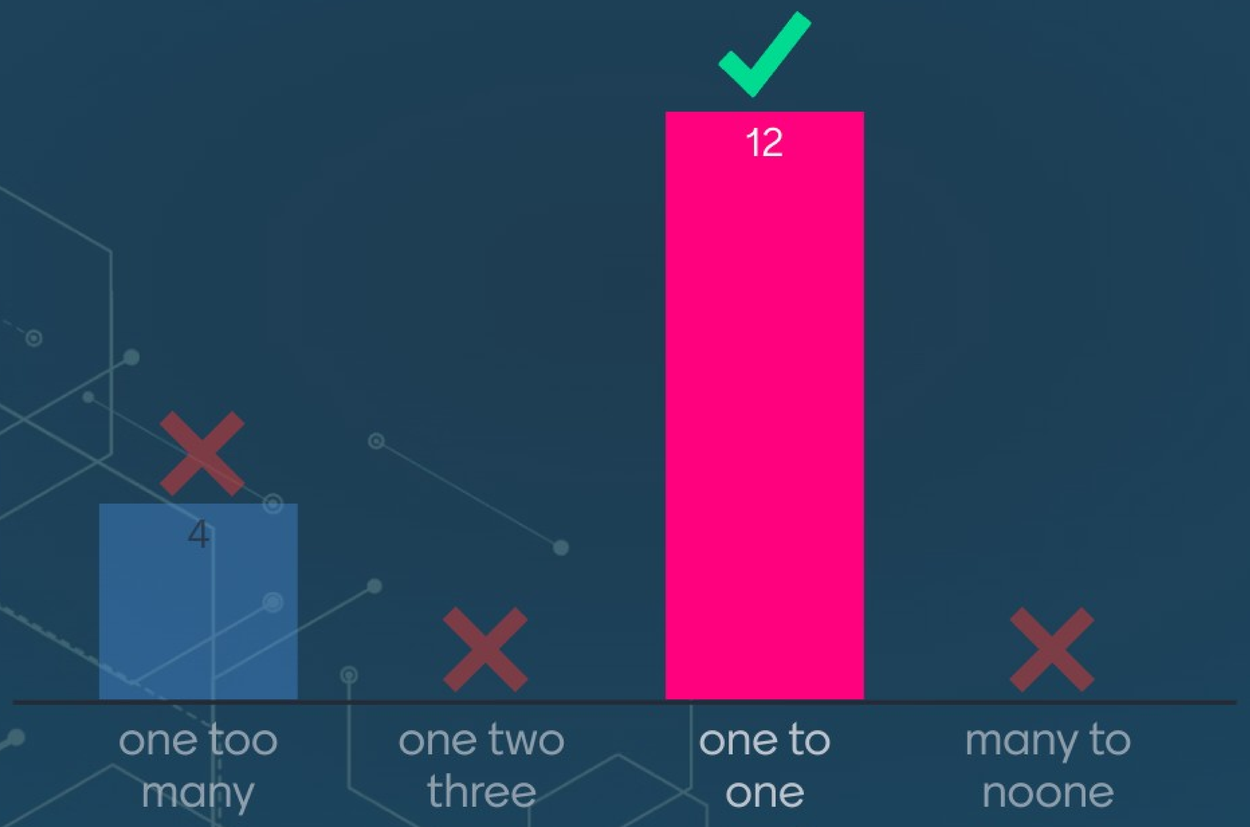
What is used when two or more attributes are necessary to determine uniqueness of an entity?



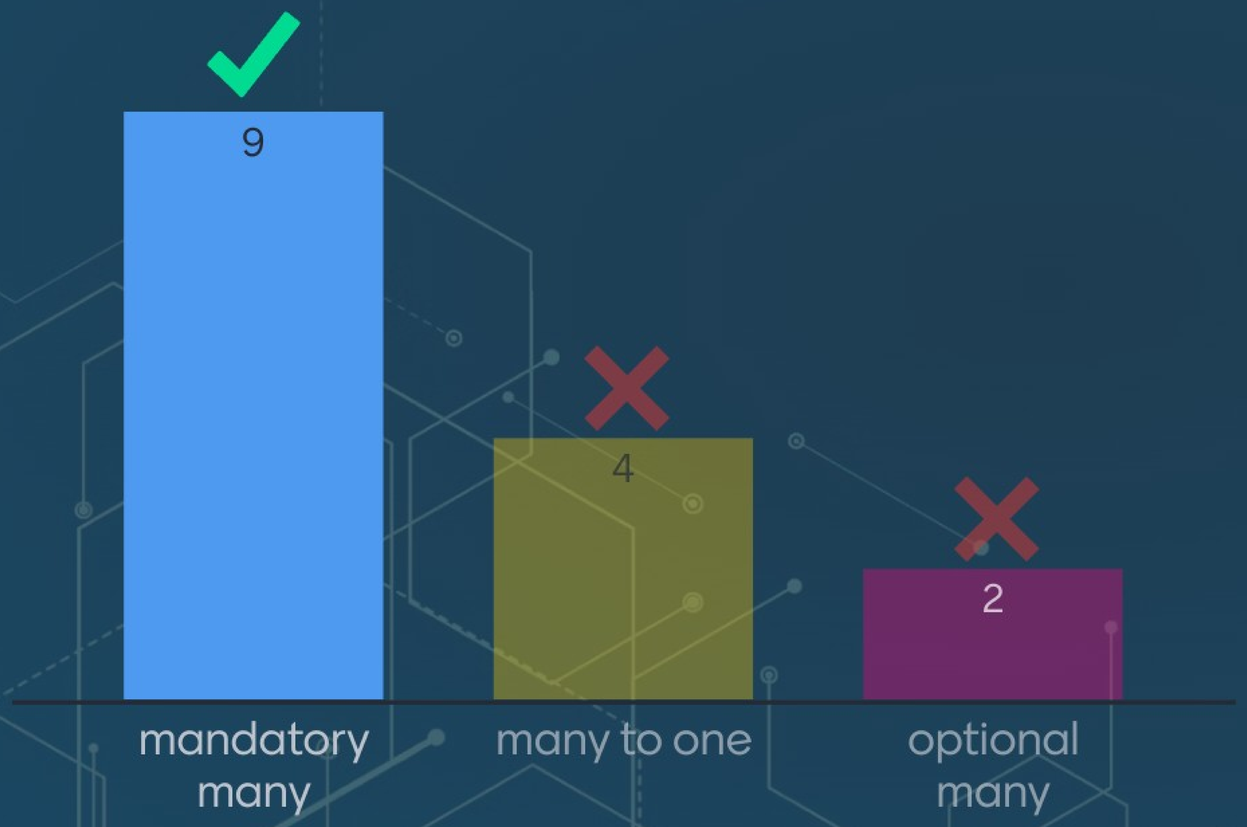
What attribute of a weak entity is used together with primary key of a strong entity to generate primary key for this weak entity?



Which is a valid relationship between entities?



select all true:



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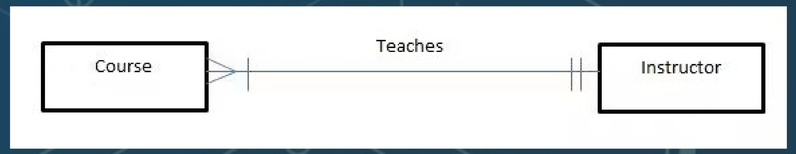
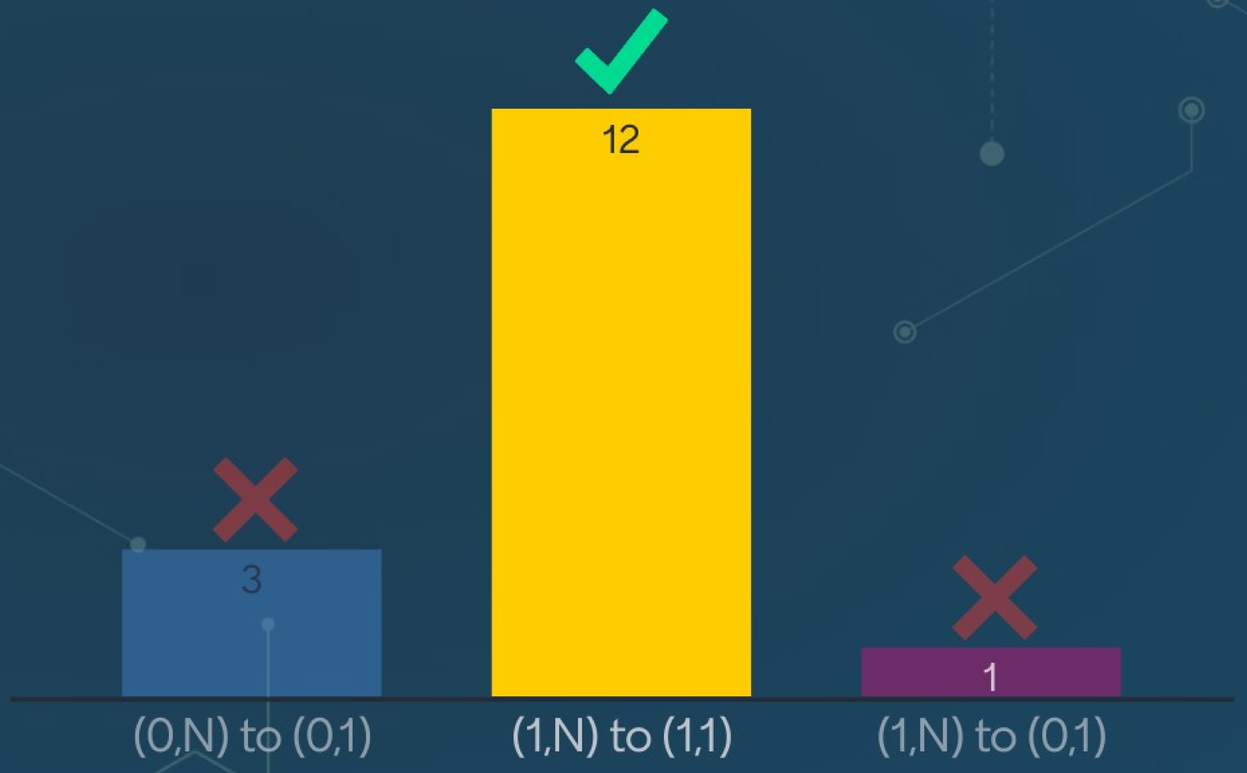
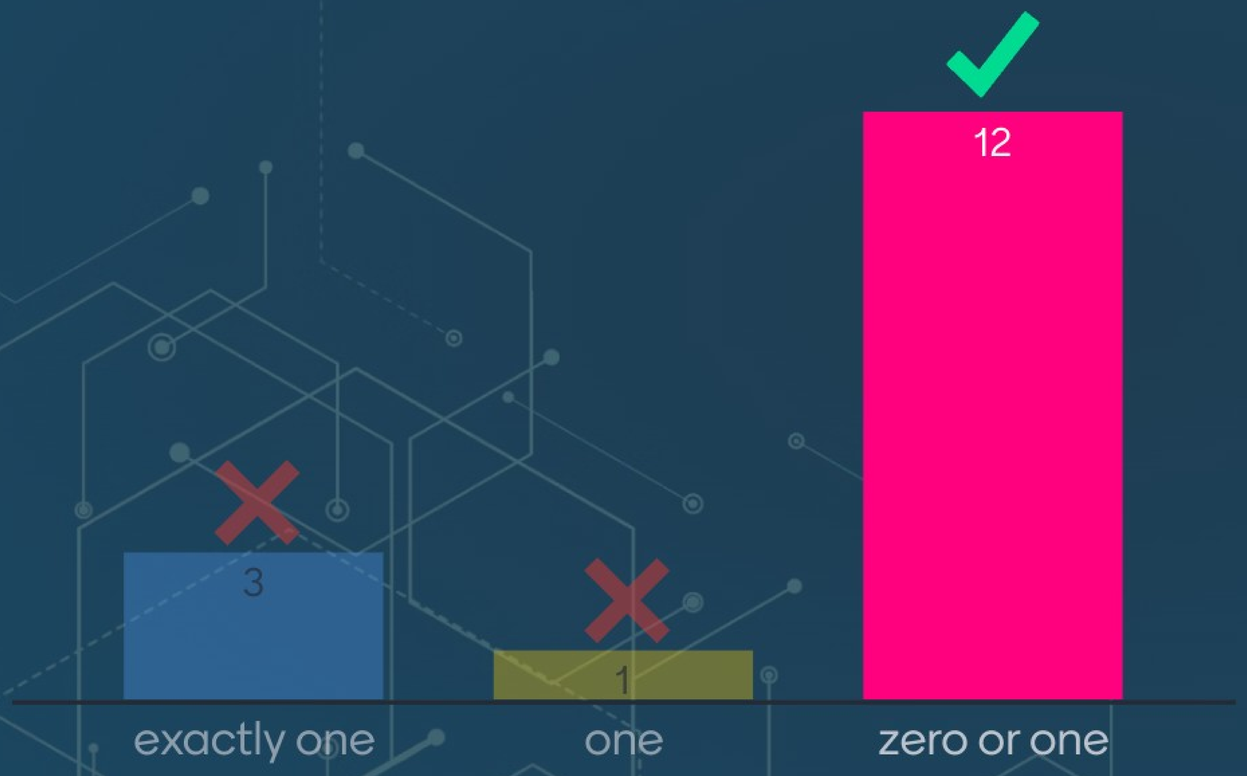
select all true:





1

select all true:



Quiz leaderboard

How to Create an ERD

- Entity
- Relationship
- Cardinality
- Attributes
- follow example: https://www.guru99.com/er-diagram-tutorial-dbms.html

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Discuss the task

https://elearn.university.epam.com/courses/course-v1:UNIVERSITY+SE124_T3+1223/courseware/044040a3ecdf47bf965758eac25d3e57/52a998971fe740988bbf58e0e9029685/

Additional explanation

https://www.geeksforgeeks.org/partial-unique-secondary-composite-and-surrogate-keys-in-dbms/

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https://www.bbc.co.uk/bitesize/guides/z4wf8xs/revision/4

Next time: User Interface Design

Questions?

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