

Database Management Systems

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UET Peshawar

Overview

- Multi-valued Attribute
 - Issues
 - Fixes
- Multi-valued Attribute Evaluation
 - Task is due to show on 20th May 2021 in the respective class

Multi-Valued Attribute

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For example:

1. Pre-Requisite attribute
2. Skills attribute,
3. Degrees attribute



Examples of multi-valued attribute

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Q2. How many types of multi-valued (MV) attribute are there?

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Types of multi-valued attribute?

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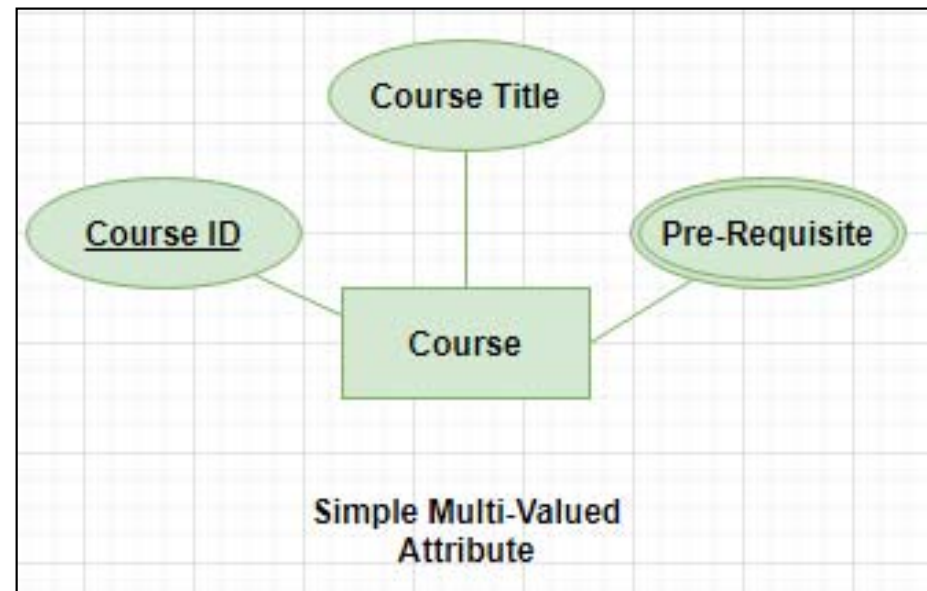
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Example of simple multi-valued attribute

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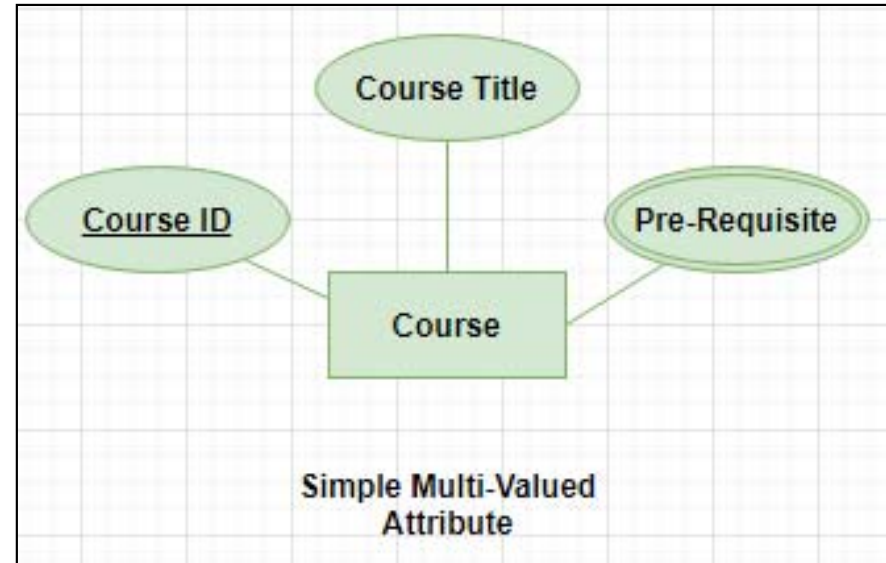
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Table Name: Course
Multi-Valued Attribute: Pre-Requisite

Course ID	Course Name	Pre-Requisite
101	Computer Programming	
102	Object-Oriented Programming	101
103	Data Structure & Algorithms	102, 101

A course can have none or many pre-requisites. Course number 103 i.e. Data Structures & Algorithms has two pre-requisites i.e. Computer Programming and Object-Oriented Programming. Pre-requisite is a simple attribute. It can not be further divided.

NOT VALID for



Example of simple multi-valued attribute

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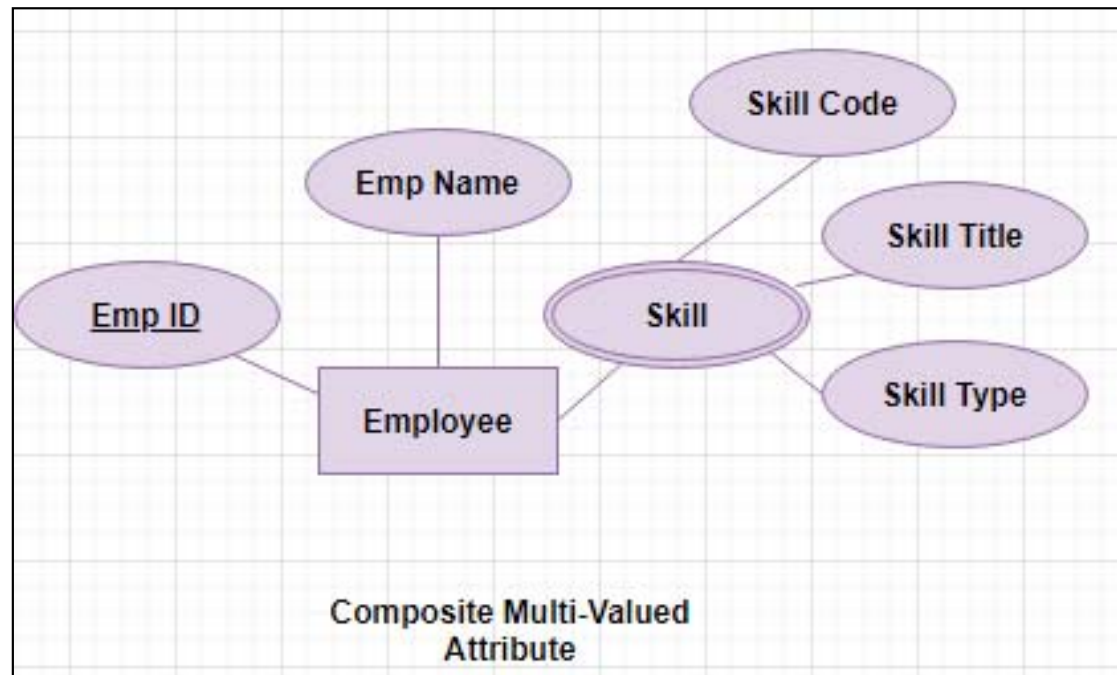
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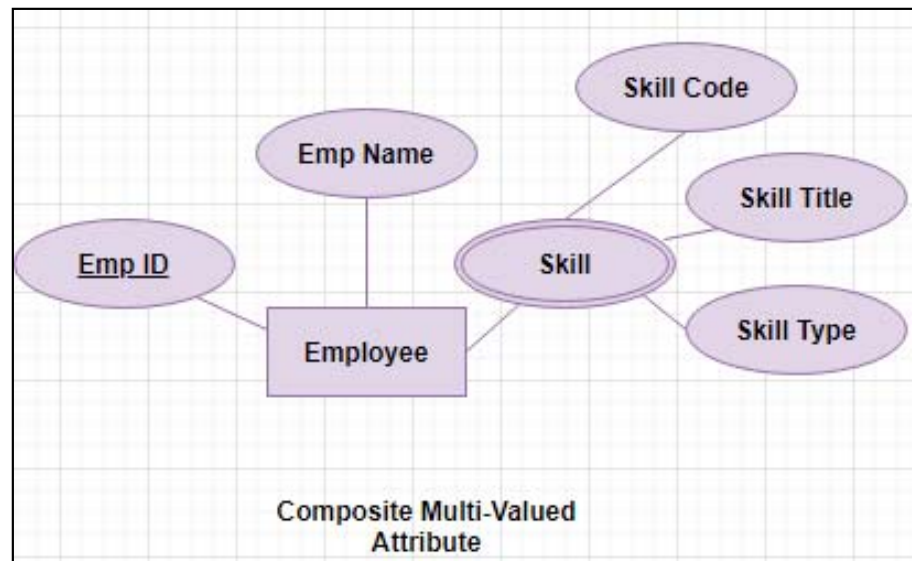
Table Name: Employee
Multi-Valued Attribute: Skill

Emp ID	Emp Name	Skill
10001	Ahmad	1 C++ Programming 2 Java Programming
10002	Zia	1 Filmora Video Editing
10003	Saad	1 Unity Programming 2 Blender Designing

Composite Multi-Valued

For example:

1. Pre-Requisite attribute
2. Skills attribute,
3. Degrees attribute



An employee can have one or many skills. Employee number 10003 i.e. Saad has two skills i.e. Unity and Blender. Skill is composite as well. It can be further broken into three attributes i.e. skill id, skill name, and skill category.

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Example of composite multi-valued attribute

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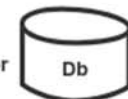
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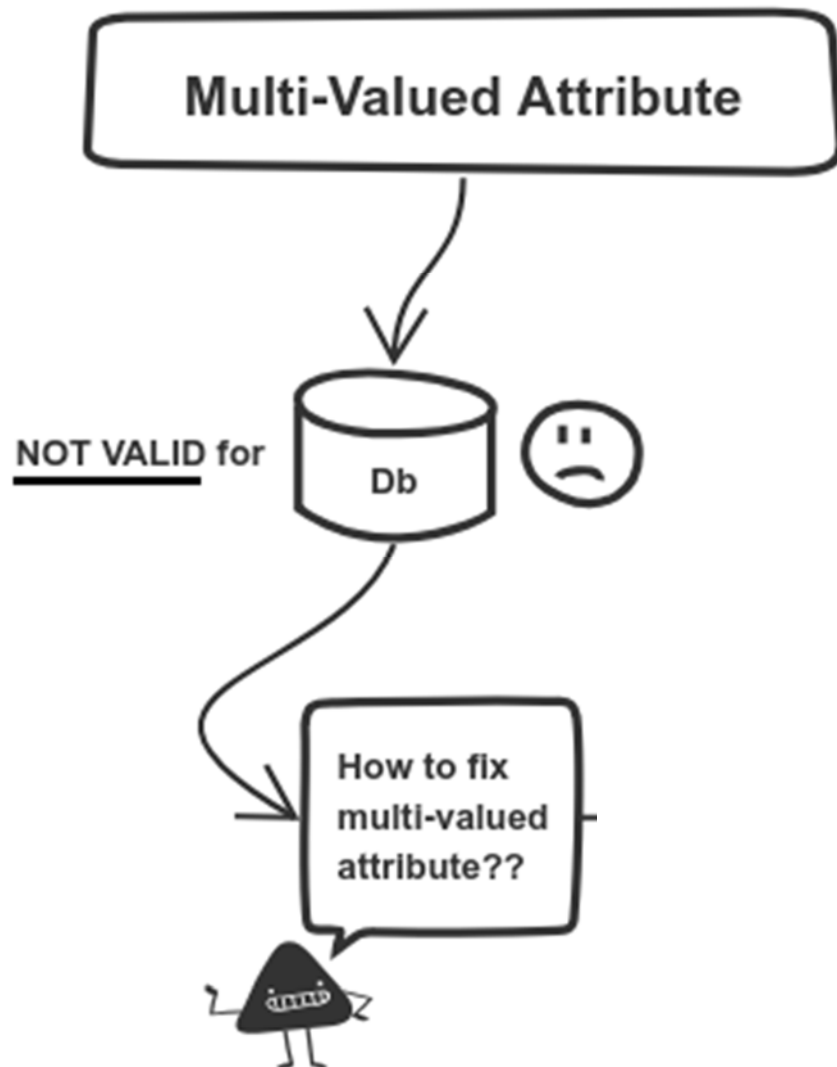
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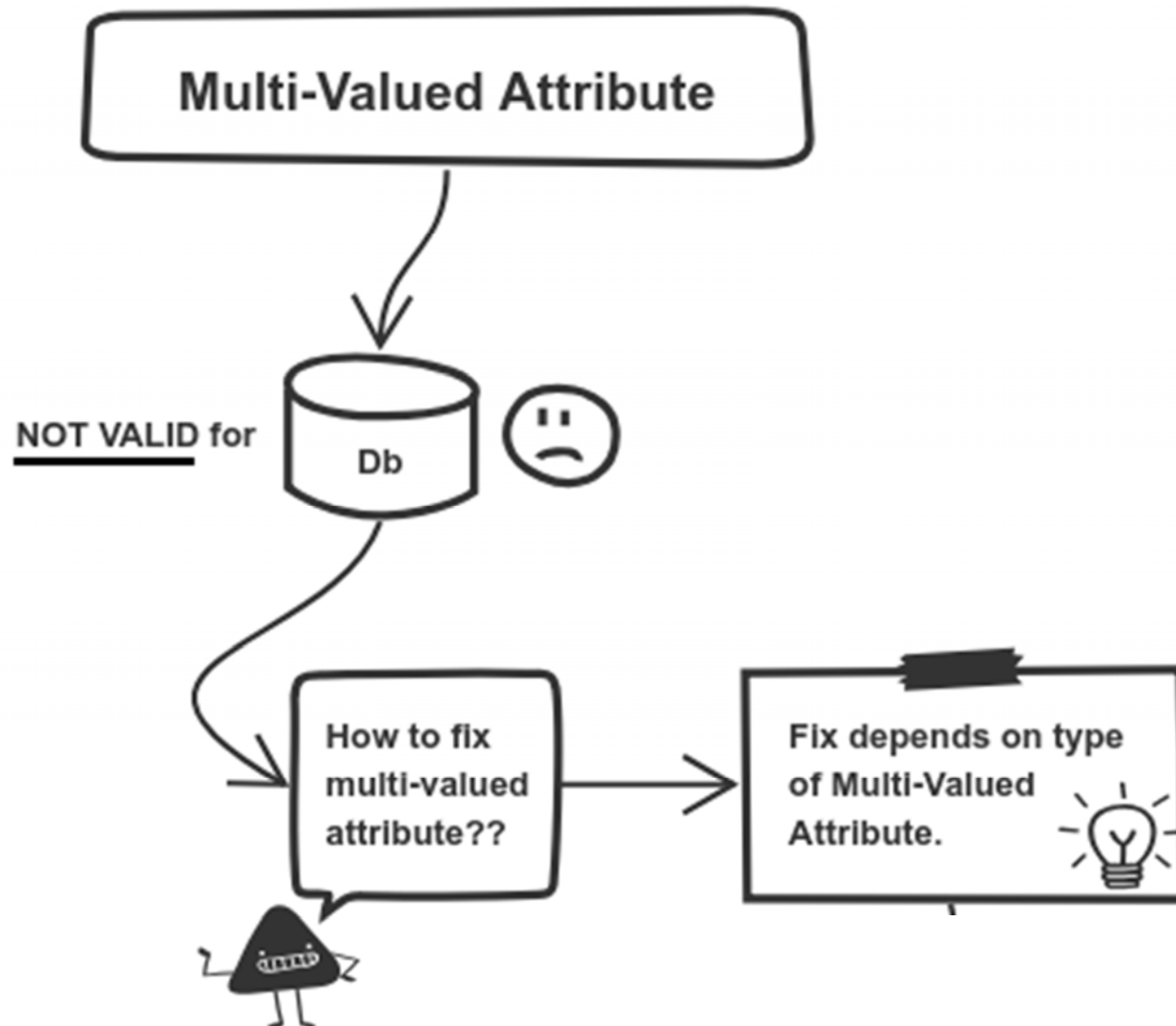
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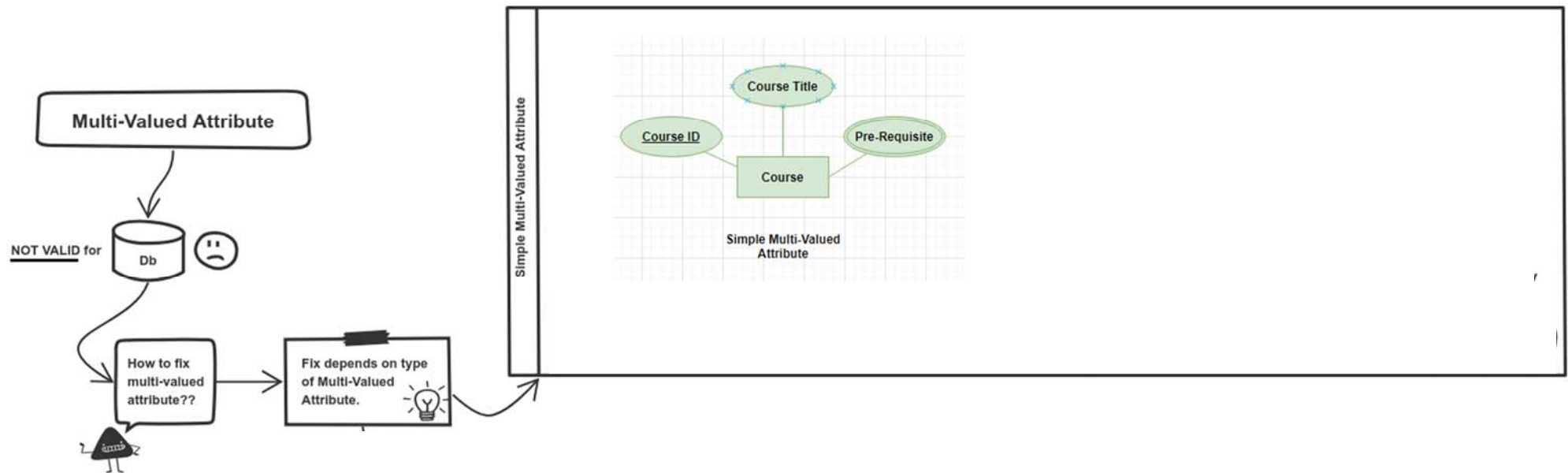
Developed by: Engr. Sumayyea Salahuddin



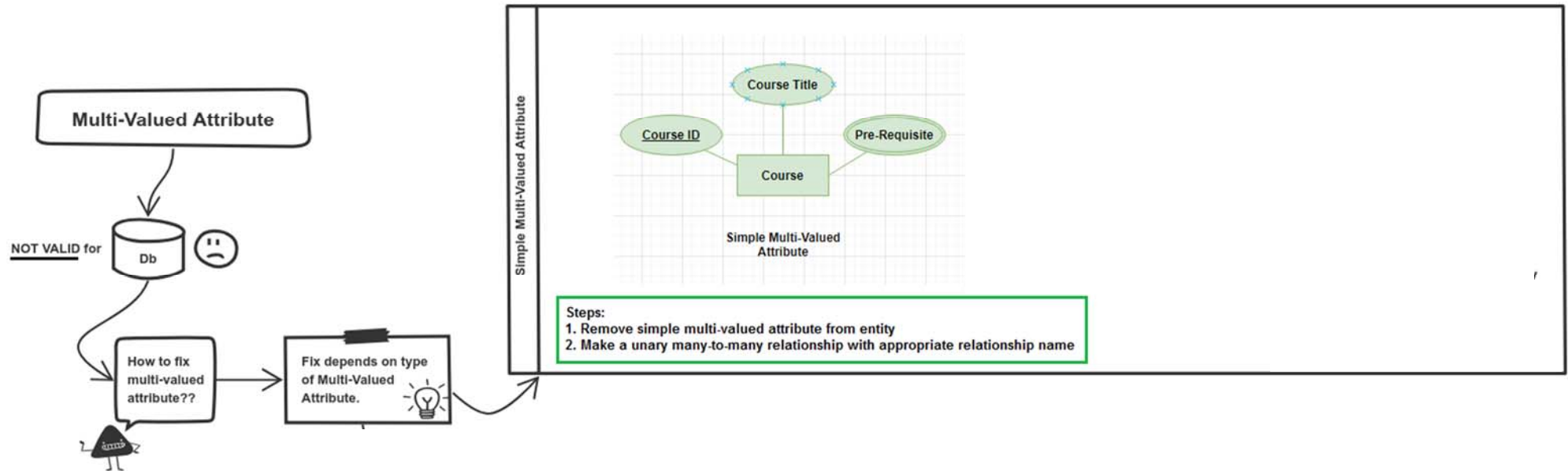
How to fix multi-valued attribute?



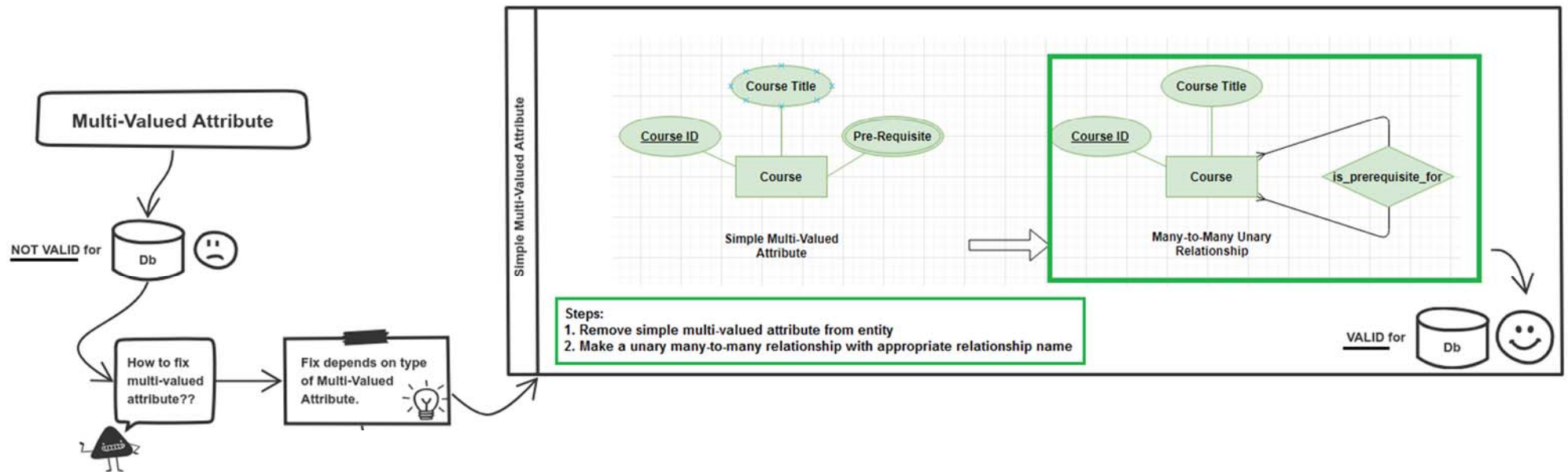
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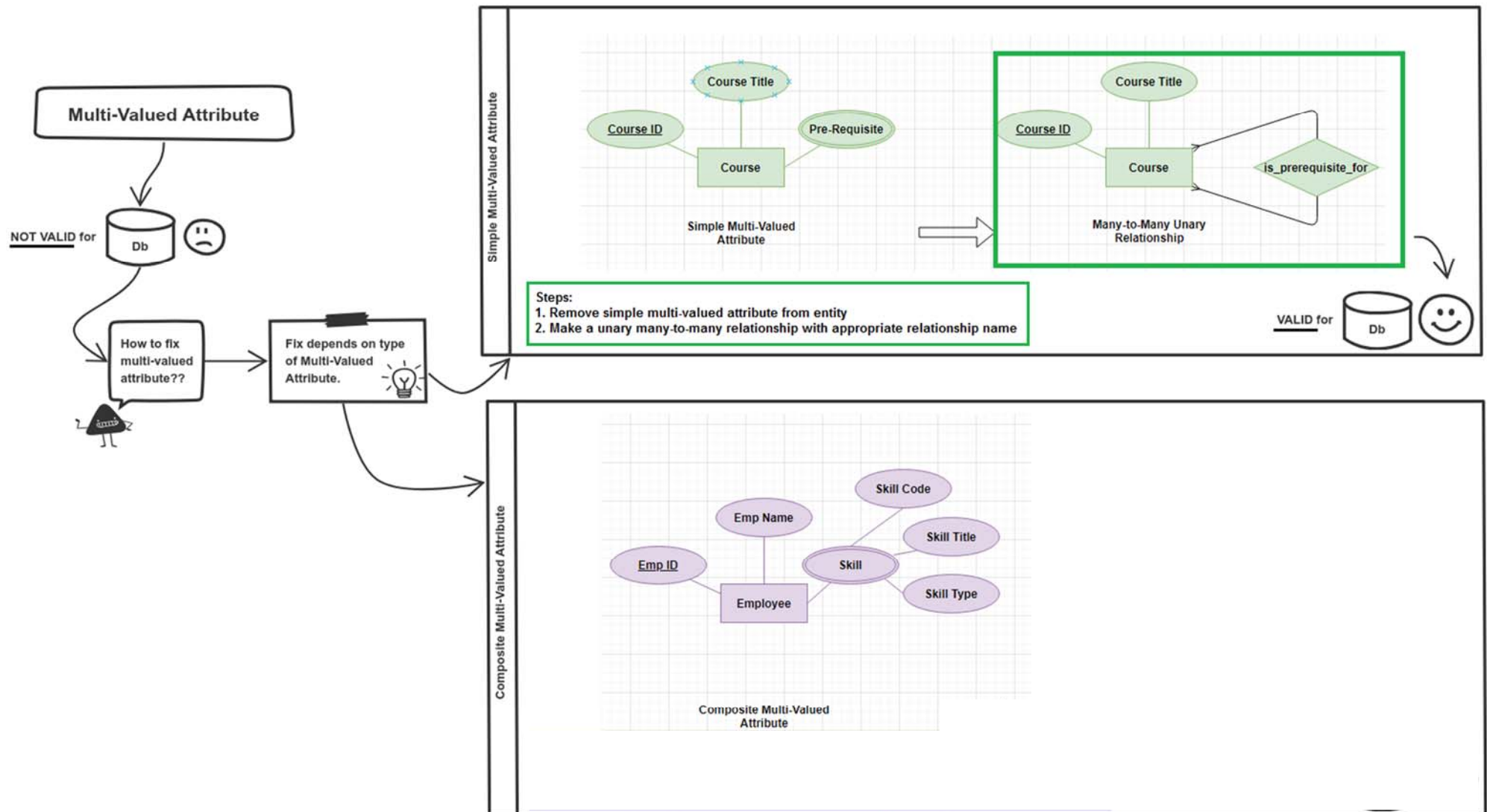
Fixing simple multi-valued attribute



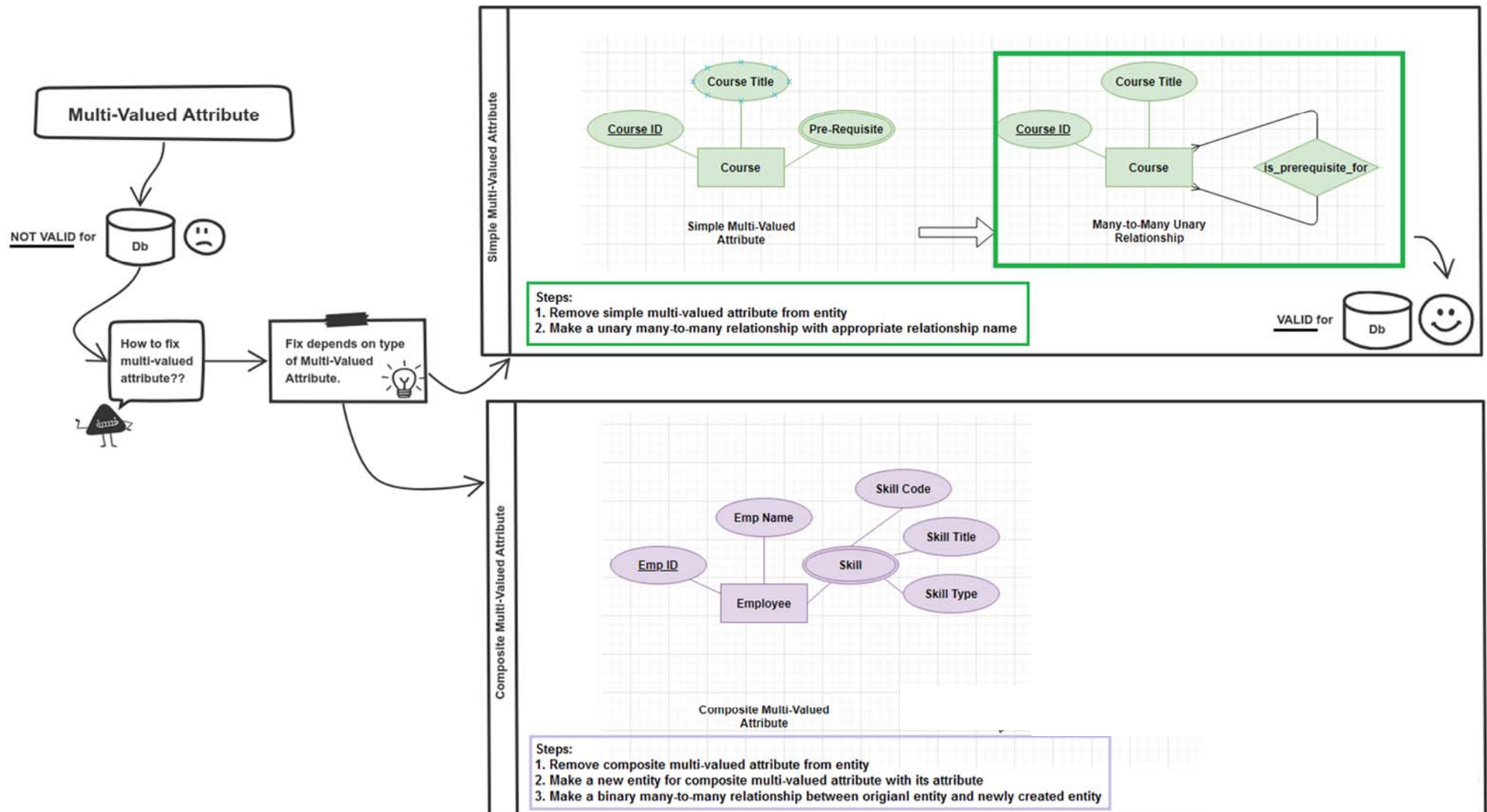
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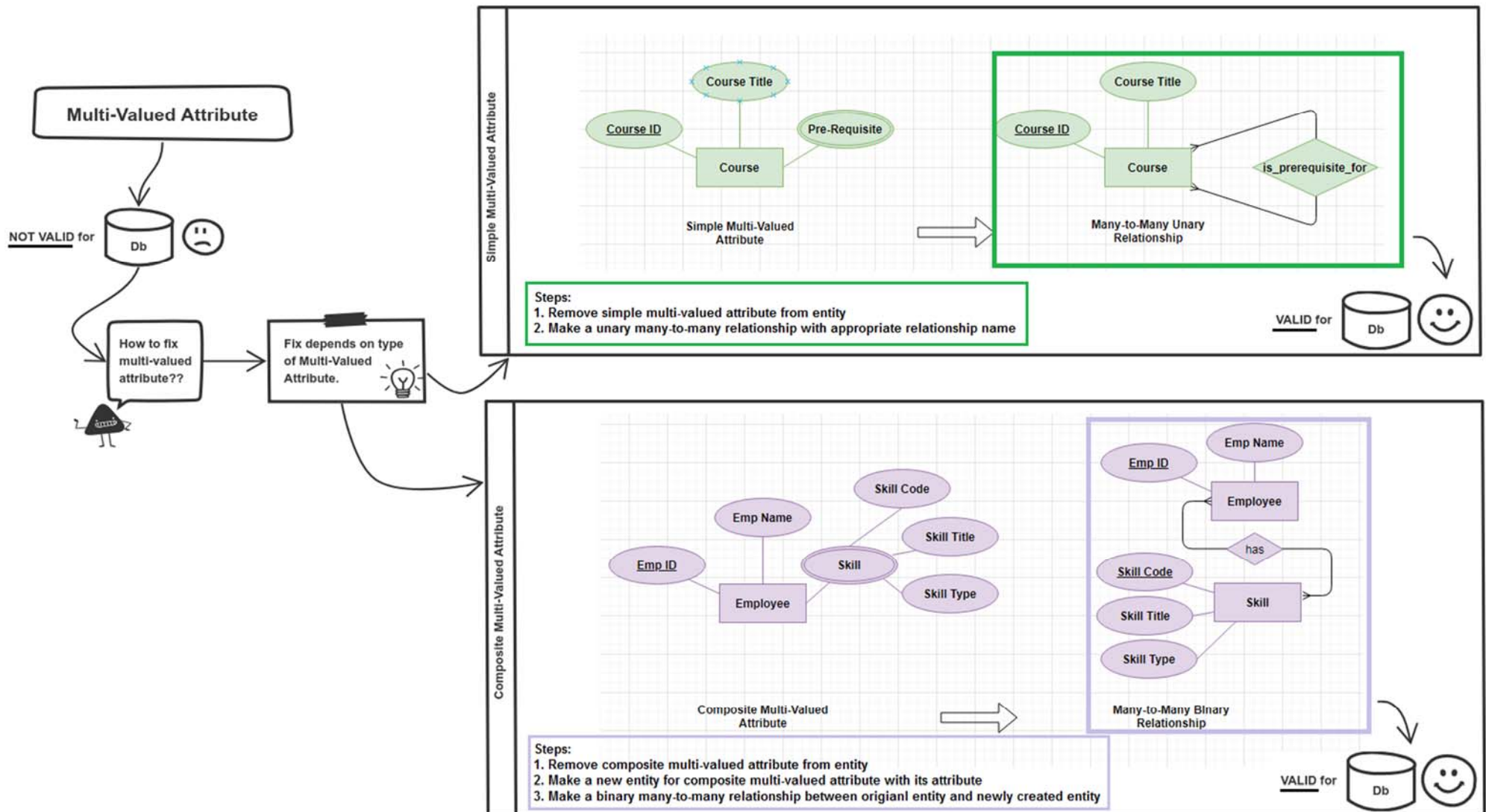
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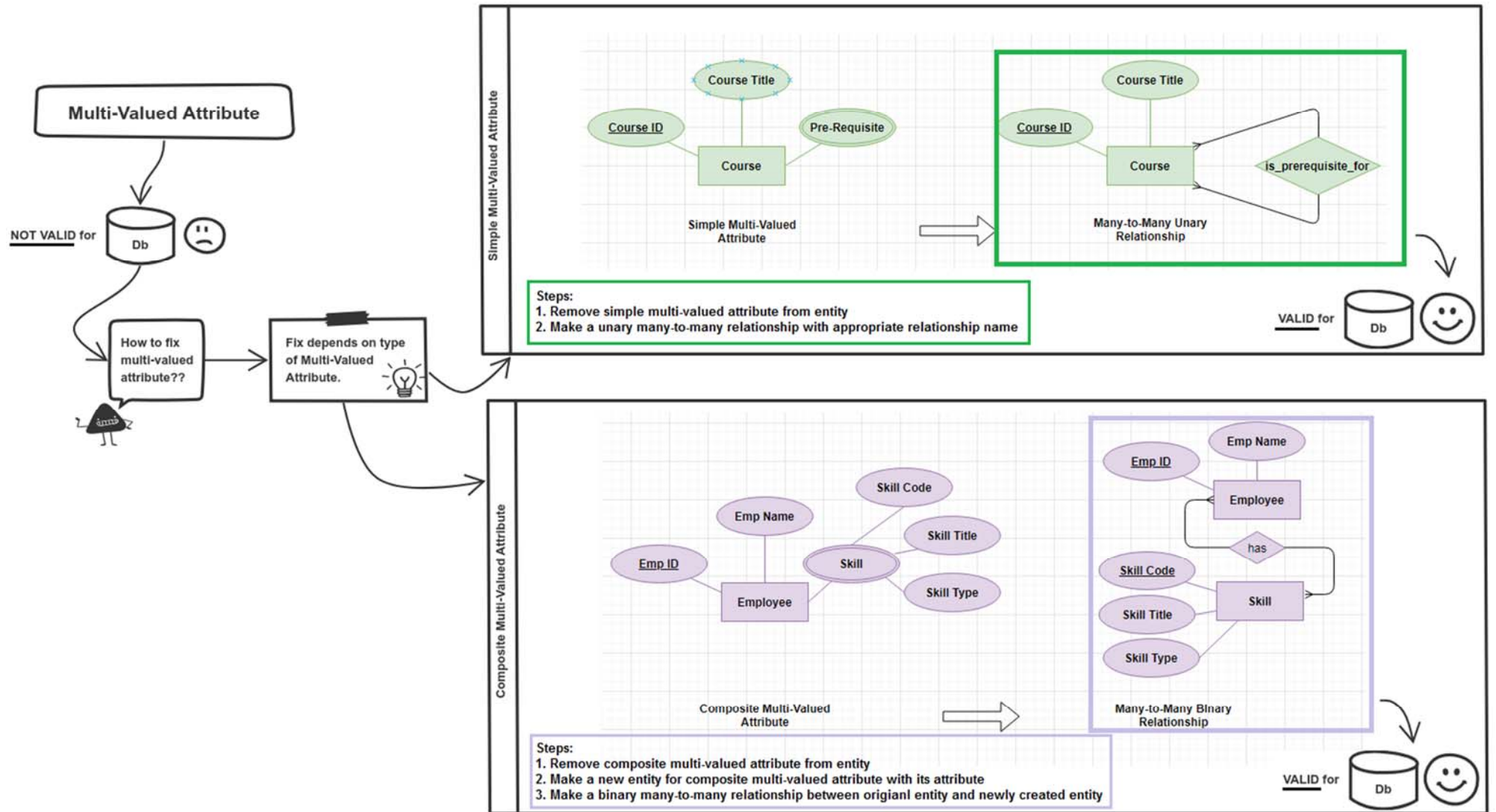
Fixing composite multi-valued attribute



Fixing composite multi-valued attribute



Fixing composite multi-valued attribute



Developed by: Engr. Sumayyeh Salahuddin

Summary

- Discussed multi-valued attribute in detail

Multi-valued Attribute Quiz

- The quiz is open now and must be submitted on or before 8th June 2020. Please note that this quiz is only attempted once.

Multi-valued Attribute Task 1

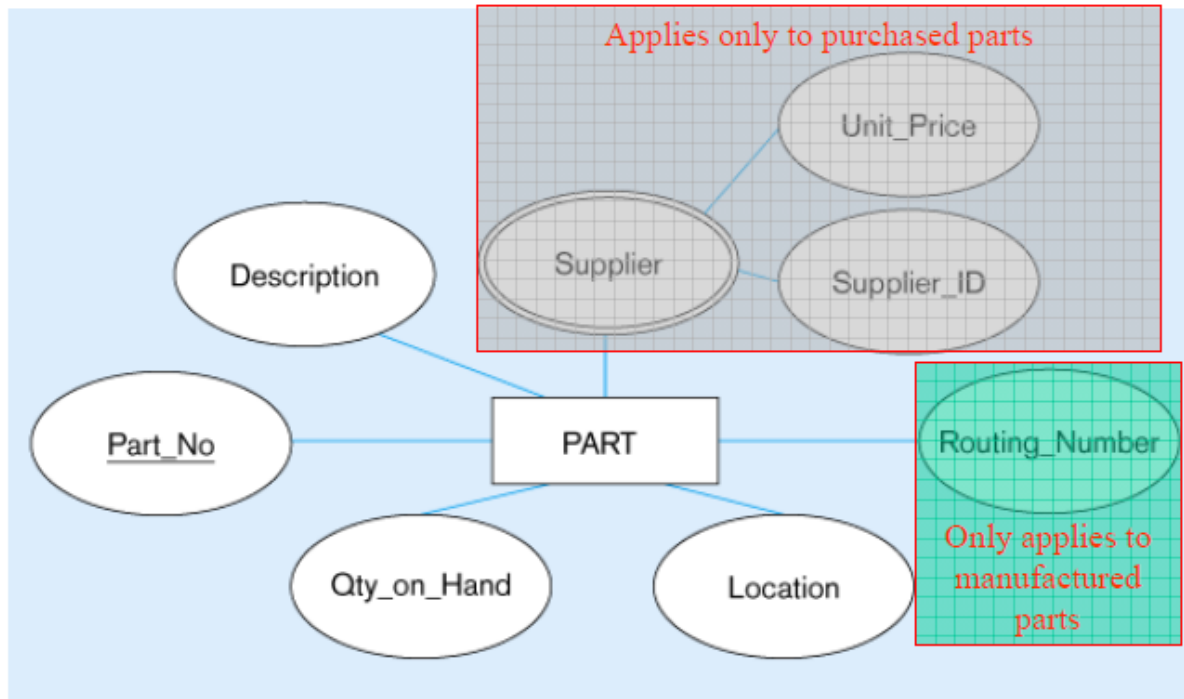


Figure 1 – Part Entity with Multi-valued attribute

- Given the figure 1, answer the following questions briefly:
 - What kind of multivalued attribute supplier is?
 - How to fix supplier attribute?

Task is due to show on 20th May 2021 in the respective class

Multi-valued Attribute Task 2

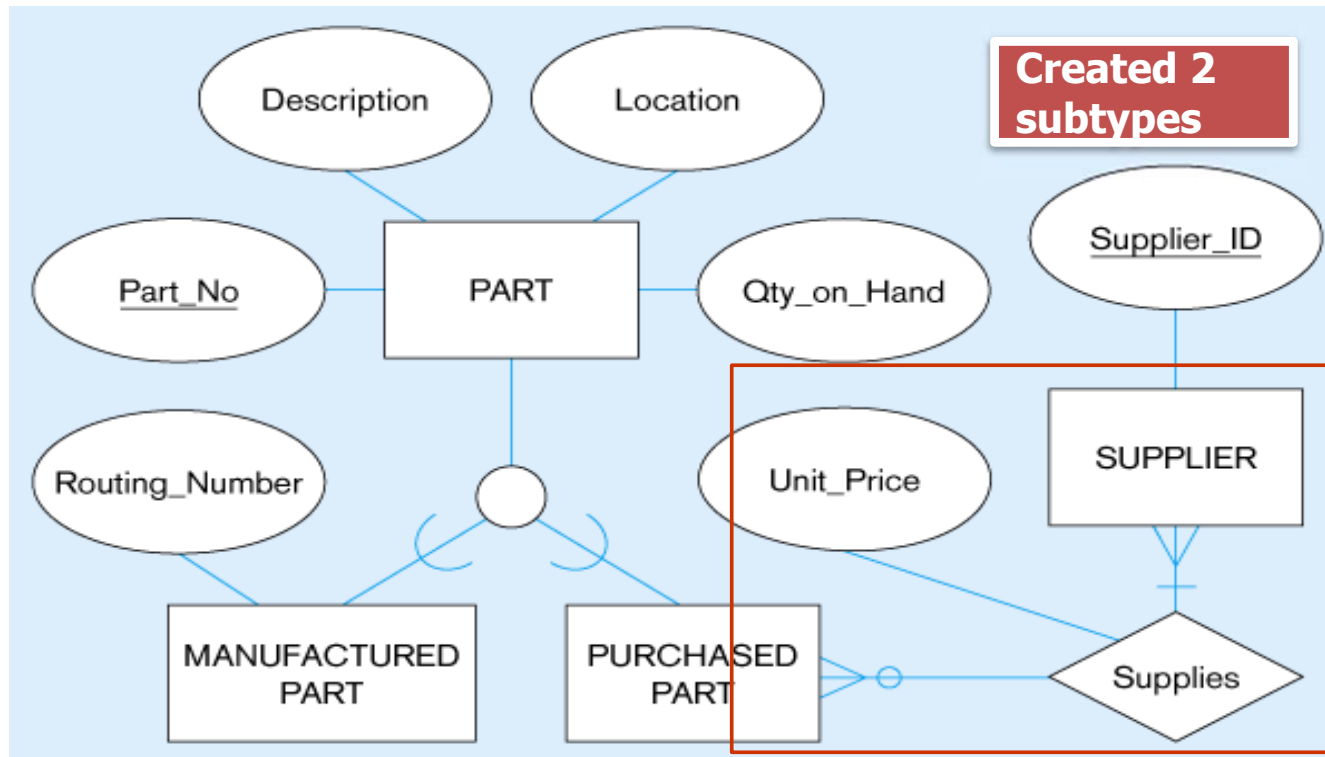


Figure 2 – EERD

- Explain Figure 2 in your words in detail.

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Note

- Following resources are provided with this lecture:
 - Multivalued Attribute Lecture Slides and Video Recording
 - Sketches used in these slides

Thank You