



26+ Years  
of Experience

**PROGRAMMING  
ADVICES** LEARN THE  
RIGHT WAY

**Mohammed Abu-Hadhoud**

MSA, PSMC, PSMF, PSMF, PSMF, C#, JSP, PHP, JSP, JSP



لا تنسى الاشتراك في قناتنا على اليوتيوب ومشاركة القناة مع اصدقائك  
لتعم الفائدة للجميع وانقاذ الاف الناس من التشتت جزاكم الله خيرا

لا تنسونا من دعائكم وادعو لوالدي بالرحمة

[www.ProgrammingAdvices.com](http://www.ProgrammingAdvices.com)



## مهم جداً

هذا الملف للمراجعة السريعة واخذ الملاحظات عليه فقط ،لانه يحتوي على اقل من 20% مما يتم شرحه في الفيديوهات الاستعجال والاعتماد عليه فقط سوف يجعلك تخسر كميه معلومات وخبرات كثيره

**يجب عليك مشاهدة فيديو الدرس كاملا**

لاتنسى عمل لايك ومشاركة القناة لتعم الفائدة للجميع  
لا تنسونا من دعائكم

**ProgrammingAdvices.com**

Mohammed Abu-Hadhoud





## **Database Level 1 SQL (Concepts & Practice)**

# What is Data Integrity?



**Mohammed Abu-Hadhoud**

MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD



**ProgrammingAdvises.com**




**PROGRAMMING  
ADVISES** LEARN THE  
RIGHT WAY



# Data Integrity

## Primary Key

Employees Table

ID 	FirstName	LastName	Gender	Birthdate	Salary	DepartmentID
1	U@s#5#Z 9E	Abu-Hadhoud	M	6/11/1977	-400	1
2	Ali	Zaher	M	5/7/1990	3000	2
3	Lubna	1/1/2000	F	Hamdi	500	1
5	Fadi	Khalil	M	6/6/1980	1400	4
6	Maha	Majed	M	7/7/2001	300	3
7	Omar	Ali	M	6/6/1977	2000	1
8	Huda	Omar	F	4/2/1990	1000	5

## Primary Key

Departments Table

ID 	Name	Location
1	IT	Amman
2	Finance	Amman
3	HR	UAE
4	Marketing	Qatar

## Foreign Key

# Data Integrity

- Data integrity refers to the accuracy, consistency, and reliability of data over its entire life cycle, from creation to deletion. In other words, it refers to the assurance that data is complete, accurate, and trustworthy.
- There are several factors that can impact data integrity, including human error, hardware or software failure, security breaches, and data transfer errors.
- To maintain data integrity, it is important to establish appropriate policies and procedures, and to implement appropriate technologies, such as encryption, backups, and access controls.

# Data Integrity

There are different types of data integrity that organizations need to consider:

1. Entity integrity: This ensures that each row or record in a table is unique and can be uniquely identified. This is typically achieved through the use of primary keys.
2. Referential integrity: This ensures that relationships between tables are maintained and that there are no orphaned records. This is typically achieved through the use of foreign keys.
3. Domain integrity: This ensures that data is within acceptable ranges or values. For example, a date field should only contain valid dates, and a numeric field should only contain valid numbers.

# Data Integrity

4. Business integrity: This ensures that data meets business rules and requirements. For example, a bank might have rules around minimum and maximum account balances, or a hospital might have rules around patient data confidentiality.

# Data Integrity

- Maintaining data integrity is critical for organizations that rely on accurate and trustworthy data to make informed decisions. Without data integrity, organizations risk making decisions based on incomplete, inaccurate, or unreliable data, which can lead to poor outcomes, financial losses, and damage to reputation.
- To maintain data integrity we use Constraints, we will explain them in the next lesson 😊.





programmingAdvices.com  
Thank You

**Mohammed Abu-Hadhoud**

26+ Years of Experience

MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSB

