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DDL Section

1. Data Integrity is the measure of how accurate, consistent, and complete a data is. To maintain data integrity in SQL Server, we can apply CONSTRAINTs that are classified into 3 different divisions of data integrity:
   a. Entity Integrity
      Using PRIMARY KEY, UNIQUE, NOT NULL
      Guarantees that every row in a table is differentiable data/entity (avoids duplicates that would lead to confusion)
   b. Referential Integrity
      Using FOREIGN KEY
      Maintain relationship between tables (avoids confusion with same keys that might be present in two or more tables, also maintains the data integrity within a relationship)
   c. Domain Integrity
      Using CHECK and DEFAULT
      Ensure data values inserted follows a certain format (to avoid false/unwanted input to the database)

   Reference: https://www.c-sharpcorner.com/blogs/data-integrityin-sql-server

2. Primary Key – column/s that consist only of different values each row to represent different sets of data in that specific row.
   Foreign Key – column/s which references to another column of another table, creating a relationship between two tables.
   Composite Key – two or more columns represents different datasets in each row inside a table. Used when a primary key does not exist in the table.

   Reference: https://www.guru99.com/dbms-keys.html

3. BEGIN TRAN is used to marks a checkpoint of a certain block of code that wants to be executed. It will temporarily save the results (lock the table) and await for either ROLLBACK to undo the changes or COMMIT to permanently apply the changes to the table and unlock the table so that it can be used again

```
BEGIN TRAN
UPDATE Equipments
SET EquipmentName = EquipmentName + ' test'
```

100 %

Results | Messages

	EquipmentId	Herold	EquipmentName	EquipmentRarity	EquipmentPrice
1	EQ001	HE001	a Smelly Mustache test	Rare	12
2	EQ002	HE002	a Winged Bow test	Uncommon	8
3	EQ003	HE003	a Magical Unicorn Horse test	Arcana	150
4	EQ004	HE004	a Highborn Dagger test	Rare	15
5	EQ005	HE005	a Heavenly Thunder test	Immortal	300
6	EQ006	HE001	a Whale Hook test	Immortal	500
7	EQ007	HE004	a Lava Smokescreen test	Rare	16

```
BEGIN TRAN
UPDATE Equipments
SET EquipmentName = EquipmentName + ' test'

ROLLBACK
```

)0 %

Results | Messages

	EquipmentId	Herold	EquipmentName	EquipmentRarity	EquipmentPrice
1	EQ001	HE001	a Smelly Mustache	Rare	12
2	EQ002	HE002	a Winged Bow	Uncommon	8
3	EQ003	HE003	a Magical Unicorn Horse	Arcana	150
4	EQ004	HE004	a Highborn Dagger	Rare	15
5	EQ005	HE005	a Heavenly Thunder	Immortal	300
6	EQ006	HE001	a Whale Hook	Immortal	500
7	EQ007	HE004	a Lava Smokescreen	Rare	16

```
UPDATE Equipments
SET EquipmentName = 'a ' + EquipmentName
```

100 %

Results | Messages

	EquipmentId	Herold	EquipmentName	EquipmentRarity	EquipmentPrice
1	EQ001	HE001	a Smelly Mustache	Rare	12
2	EQ002	HE002	a Winged Bow	Uncommon	8
3	EQ003	HE003	a Magical Unicorn Horse	Arcana	150
4	EQ004	HE004	a Highborn Dagger	Rare	15
5	EQ005	HE005	a Heavenly Thunder	Immortal	300
6	EQ006	HE001	a Whale Hook	Immortal	500
7	EQ007	HE004	a Lava Smokescreen	Rare	16

```
BEGIN TRAN
UPDATE Equipments
SET EquipmentRarity = 'Common'

COMMIT

SELECT
    *
FROM
    Equipments
```

100 %

Results | Messages

	EquipmentId	Herold	EquipmentName	EquipmentRarity	EquipmentPrice
1	EQ001	HE001	a a Smelly Mustache	Common	12
2	EQ002	HE002	a a Winged Bow	Common	8
3	EQ003	HE003	a a Magical Unicorn Horse	Common	150
4	EQ004	HE004	a a Highborn Dagger	Common	15
5	EQ005	HE005	a a Heavenly Thunder	Common	300
6	EQ006	HE001	a a Whale Hook	Common	500
7	EQ007	HE004	a a Lava Smokescreen	Common	16