BANCO DE DADOS – Batalhas em Game of Thrones NORMALIZAÇÃO – PASSO A PASSO

ESQUEMA ÑN - NÃO NORMALIZADA

battles(name, year, <u>battle_number</u>, attacker_king, defender_king, attacker_1, attacker_2, attacker_3, attacker_4, defender_1, defender_2, defender_3, defender_4. attacker_outcome, battle_type, major_death, major_capture, attacker_size, defender_size, attacker_commander, defender_commander, summer, location, region, note)

Esquema 1FN - 1 FORMA NORMAL

- ->attacker_king atributo multivalorado
- ->defender_king atributo multivalorado
- ->attacker_commander atributo multivalorado
- ->defender_commander- atributo multivalorado
- -> location atributo multivalorado

TRANSFORMAÇÃO

attacker_king(battle_number, id_king, attacker_king)

defender_king(battle_number, id_king, defender_king)

attacker_commander(battle_number, id_commander, attacker_commander)

defender_commander(<u>battle_number, id_commander</u>, defender_commander)

location(battle_number, id_location, location)

AO FINAL DA TRANSFORMAÇÃO

```
battles(name, year, <u>battle_number</u>, , attacker_1, attacker_2, attacker_3, attacker_4, defender_1, defender_2, defender_3, defender_4. attacker_outcome, battle_type, major_death, major_capture, attacker_size, defender_size, summer, region, note)
```

attacker_king(battle_number, id_king, attacker_king)

defender_king(battle_number, id_king, defender_king)

attacker_commander(<u>battle_number</u>, <u>id_commander</u>, attacker_commander)

defender_commander(<u>battle_number</u>, <u>id_commander</u>, defender_commander)

location(battle_number, id_location, location)

ESQUEMA 2FN - 2 FORMA NORMAL

Já está na 2FN!

1 Coluna na chave primária

battles(name, year, <u>battle_number</u>, , attacker_1, attacker_2, attacker_3, attacker_4, defender_1, defender_2, defender_3, defender_4. attacker_outcome, battle_type, major_death, major_capture, attacker_size, defender_size, summer, region, note)

```
Ajustes
1FN
attacker_king(battle_number, id_king, attacker_king)
id_king -> king_name
1FN
defender_king(battle_number, id_king, defender_king)
id_king -> king_name
1FN
attacker_commander(battle_number, id_commander,
attacker_commander)
id_commander -> commander_name
1FN
defender_commander(battle_number, id_commander,
defender_commander)
id_commander -> commander_name
1FN
location(battle_number, id_location, location)
id_location -> location
```

Transformações

attacker_king(battle_number, id_king, attacker_king)

king(id_king, king_name)

defender_king(battle_number, id_king, defender_king)

attacker_commander(<u>battle_number</u>, <u>id_commander</u>, attacker_commander)



commander(id_commander_ commander_name)



defender_commander(battle_number, id_commander,
 defender_commander)

location(battle_number, id_location, location)

id_location -> location



location(id_location, location)

ESQUEMA 3FN - 3 FORMA NORMAL

Não há depedências transitivas, portanto já está na 3FN!

battles(name, year, <u>battle_number</u>, , attacker_1, attacker_2, attacker_3, attacker_4, defender_1, defender_2, defender_3, defender_4. attacker_outcome, battle_type, major_death, major_capture, attacker_size, defender_size, summer, region, note)

AJUSTES

```
battles(name, year, <u>battle_number</u>, , attacker_1, attacker_2, attacker_3, attacker_4, defender_1, defender_2, defender_3, defender_4. attacker_outcome, battle_type, major_death, major_capture, attacker_size, defender_size, summer, region, note)
```



region(id_region, region)

king(id_king, king_name)

attacker_king(battle_number, id_king)

defender_king(battle_number, id_king)

commander(id_comander, commander)

attacker_commander(battle_number, id_commander)

defender_commander(battle_number, id_commander,)

location(id_location, location)

MAIS AJUSTES

region(id_region, region)
location(id_location, location)

Precisamos saber regiões e locais onde ocorreram batalhas

location_battle(battle_number, id_location)



location_battle(battle_number, id_location)
region_battle(battle_number, id_region)

battles(name, year, <u>battle_number</u>, attacker_1, attacker_2, attacker_3, attacker_4, defender_1, defender_2, defender_3, defender_4. attacker_outcome, battle_type, major_death, major_capture, attacker_size, defender_size, summer, region, note)

Verificamos que as colunas attacker_1, attacker_2, attacker_3, attacker_4, defender_1, defender_2, defender_3, defender_4, se referem as casas de game of thrones. portanto é o mesmo tipo de dado. Optamos por transformar essas colunas em 3 tabelas.

Eliminamos os atributos opcionais!

 $house(\underline{id_house,}\ house_name)$

attacker(battle_number, id_house)

defender(battle_number, id_house)

VERSÃO FINAL

```
battles(name, year, battle_number, attacker_outcome, battle_type,
major_death, major_capture, attacker_size, defender_size, summer,
note)
king(id_king, king_name)
house(id_house, house_name)
region(id_region, region)
location(id_location, location)
commander(id_comander, commander)
attacker_king(battle_number, id_king)
     battle_number referencia battles
     id_king referencia king
defender_king(battle_number, id_king)
     battle_number referencia battles
     id_king referencia king
attacker_commander(battle_number.id_commander)
     battle_number referencia battles
     id_commander referencia commander
defender_commander(battle_number, id_commander,)
     battle number referencia battles
     id commander referencia commander
location_battle(battle_number.id_location)
     battle_number referencia battles
     id_location referencia location
region_battle(<u>battle_number,</u>id_region)
     battle number referencia battles
     id_region referencia region
```

attacker(battle_number, id_house)

battle_number referencia battlesid_house referencia house

defender(battle_number, id_house)

battle_number referencia battles
id_house referencia house