

Homework 5: Third Normal Form (3NF)

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Employee's exercise

Third normal form from exercise about employee with his store's information that contain worker's view.

First table

Staff's number	Name	Position	Salary	Branch's number
S1550	Tom Daniels	Manager	46000	B001
S0003	Sally Adams	Assistant	30000	B001
S0010	Mary Martinez	Manager	50000	B002
S3250	Robert Chin	Supervisor	32000	B002
S2250	Sally Stern	Manager	48000	B004
S0415	Art Peter	Manager	41000	B003

Second table

Branch's number	Branch's Address	Telephone's number
B001	8 Jefferson Way, Portland, OR 97201	503-555-3618
B001	8 Jefferson Way, Portland, OR 97201	503-555-3618
B002	City Center Plaza, Seattle, WA 98122	206-555-6756
B002	City Center Plaza, Seattle, WA 98122	206-555-6756
B004	16-14 th Avenue, Seattle, WA 98128	206-555-3131
B003	14-8 th Avenue, New York, NY 10012	212-371-3000

Conclusion

These tables are in third normal form from normalization's rules:

- 1NF) All elements are atomic and don't have multi-value's attributes, and we don't have repeated row in the tables.
- 2NF) We don't have partial relations of form $x \rightarrow_i y$, $y \rightarrow_i z$.
- 3NF) Tables don't have transition relations, and tables are in second normal form.

Car sale's exercise

Third normal form from exercise about car sale with his store's information that contain sales men view.

Firs table

Car's number	Sale date	Discount
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Second table

Seller	Commission
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Third table

Car's number	Seller
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Conclusion

These tables are in third normal form from normalization's rules:

- 1NF) All elements are atomic and don't have multi-value's attributes, and we don't have repeated row in the tables.
- 2NF) We don't have partial relations of form $x \rightarrow y$, $y \rightarrow z$.
- 3NF) Tables don't have transition relations, and tables are in second normal form. We follow the implications of tables.