Modern Information Systems WS 11/12
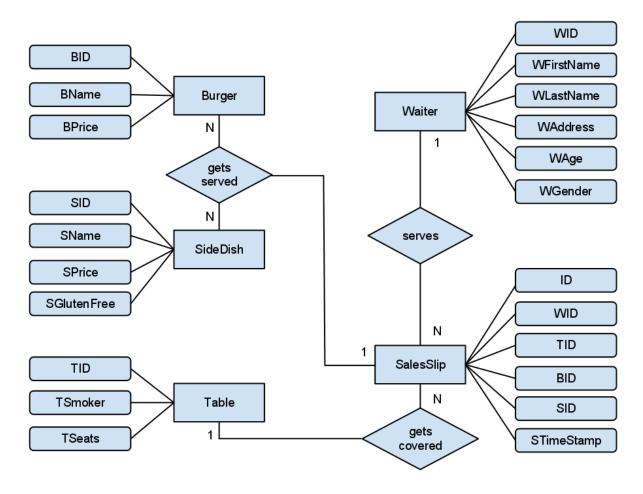
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Inhaltsverzeichnis

1 Database Schema

1.1 Entity-Relationship Diagram

Abbildung 1: Entity-Relationship Diagram

1.2 Domains

Name	DataType	Description
WID	Integer	Waiter ID
WFirstName	String	Firstname of the waiter
WLastName	String	Lastname of the waiter
WAddress	String	Address of the waiter
WAge	Integer	Age of the waiter
WGender	Integer	Gender of the waiter
TID	Integer	Table ID
TSmoker	Boolean	Smokertable?
TSeats	Integer	Amount of seats
BID	Integer	Burger ID
BName	String	Name of the burger
BPrice	Integer	Price of the burger
SID	Integer	Sidedish ID
SName	String	Name of the sidedish
SPrice	Integer	Price of the sidedish
SGlutenfree	Boolean	Glutenfree?
ID	Integer	Sales Slip ID
WID	Integer	Waiter ID
TID	Integer	Table ID
BID	Integer	Burger ID
SID	Integer	Sidedish ID
STimeStamp	TimeStamp	The actual timestamp

1.3 Relations

Waiter	Table	Burger	SideDish	SalesSlip
WID	TID	BID	SID	ID
WFirstName	TSmoker	BName	SName	WID
WLastName	TSeats	BPrice	SPrice	TID
WAddress			SGlutenFree	BID
WAge				SID
WGender				STimeStamp

1.3.1 Additional Description

The domains WID, TID, BID and SID are the foreign keys in the relation SalesSlip.

1.4 Functional Dependencies

- Waiter(WID, WFirstName, WLastName, WAddress, WAge, WGender)
    - WID → WFirstName
    - WID → WLastName
    - WID → WAddress
    - WID → WAge
    - WID → WGender

- Table(TID, TSmoker, TSeats)
    - TID → TSmoker
    - TID → TSeats

- Burger(<u>BID</u>, BName, BPrice)
    - BID → BName
    - BID → BPrice

- SideDish(<u>SID</u>, SName, SPrice, SGlutenFree)
    - SID → SName
    - SID → SPrice
    - SID → SGlutenFree

- SalesSlip(<u>ID</u>, WID, TID, BID, SID, STimeStamp)
    - ID → WID
    - ID → TID
    - ID → BID
    - ID → SID
    - ID → STimeStamp

1.4.1   Additional Description

Every domain in the relation is only identifiable by a unique primary key. Therefore there are no indirect key dependencies and the database is in the 3rd normal form.

2   Practical Implementation