quiz 6

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Ex 6

1. PK(EmpID, TrackingNum)
2. EmpID -> EmpName

TrackingNum -> OrderNo

TrackingNum -> ShipToAddr

TrackingNum -> ShippedDate

OrderNo -> ShipToAddr

1. EmpID EmpName ShippedDate TrackingNum

Example: An order split up into two shipments is handled by two employees

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EmpID** | **EmpName** | **OrderNo** | **ShipToAddr** | **ShippedDate** | **TrackingNum** |
| 1234 | Joe | 223 | 4615 Forbes Ave, Pittsburgh, PA 15147 | 12/21/99 | 12435678 |
| 2134 | Jones | 12/25/99 | 21345678 |

1. unnormalized form

contains repeating groups.

1. UNF -> 1NF

Entering appropriate data into the empty columns of rows containing the repeating data

ORDER(EmpID, EmpName, OrderNo, ShipToAddr, ShippedDate, TrackingNum)

PK(EmpID, TrackingNum)

EmpID -> EmpName

TrackingNum -> OrderNo

TrackingNum -> ShipToAddr

TrackingNum -> ShippedDate

OrderNo -> ShipToAddr

1NF -> 2NF

If partial dependencies exist on the primary key remove them by placing them in a new relation along with a copy of their determinant.

ORDER (EmpID, TrackingNum) PK(EmpID, TrackingNum)

EMPLOYEE(EmpID, EmpName) PK(EmpID)

SHIPMENT(TrackingNum, OrderNo, ShipToAddr, ShippedDate) PK(TrackingNum)

EmpID -> EmpName

TrackingNum -> OrderNo

TrackingNum -> ShipToAddr

TrackingNum -> ShippedDate

OrderNo -> ShipToAddr

2NF -> 3NF

If transitive dependencies exist on the primary key remove them by placing them in a new relation along with a copy of their dominant.

ORDER (EmpID, TrackingNum) PK(EmpID, TrackingNum)

EMPLOYEE(EmpID, EmpName) PK(EmpID)

SHIPMENT(TrackingNum, OrderNo, ShippedDate) PK(TrackingNum)

ORDERADDR(OrderNo, ShipToAddr) PK(OrderNo)

EmpID -> EmpName

TrackingNum -> OrderNo

TrackingNum -> ShippedDate

OrderNo -> ShipToAddr