

## Relation: Department

Attribute: DepCode

Domain: alpha[4]

Attribute: DepName

Domain: alpha[20]

Attribute: Type

Domain: {'Retail', 'Administrative'} NOT NULL

Primary key: DepCode

## Relation: Administrative

Attribute: DepCode

Domain: alpha[4]

Attribute: DepName

Domain: alpha[20]

Primary key: DepCode

Foreign key: DepCode

References: attribute DepCode in relation Department

## Relation: Retail

Attribute: DepCode

Domain: alpha[4]

Attribute: DepName

Domain: alpha[20]

Primary key: DepCode

Foreign key: DepCode

References: attribute DepCode in relation Department

## Relation: Employee

Attribute: EmID

Domain: digit[6]

Attribute: EmName

Domain: alpha[30]

Attribute: Skill

Domain: alpha[30]

Attribute: Assign\_DepCode

Domain: alpha[4] NOT NULL

Attribute: Manage\_DepCode

Domain: alpha[4]

Primary key: EmID, Skill

Foreign key: Assign\_DepCode

References: attribute DepCode in relation Department

Foreign key: Manage\_DepCode

References: attribute DepCode in relation Administrative

## Relation: Items

Attribute: ItemNumber

Domain: digit[6]

Attribute: ItemName

Domain: alpha[30]

Attribute: Description

Domain: alpha[120]

Attribute: Price

Domain:  $X = \{x \mid x \text{ is Real Number} \ \& \ x \geq 0\}$ 

Attribute: Quantity

Domain:  $X = \{x \mid x \text{ is integer} \ \& \ x \geq 0\}$ 

Attribute: ShippingCost

Domain:  $X = \{x \mid x \text{ is Real Number} \ \& \ x \geq 0\}$ 

Attribute: Retail\_DepCode

Domain: alpha[4] NOT NULL

Primary key: ItemNumber

Foreign key: Retail\_DepCode

References: attribute DepCode in relation Retail

## Relation: Supplier

Attribute: SupCode

Domain: digit[6]

Attribute: SupName

Domain: alpha[30]

Attribute: Location

Domain: alpha[30]

Primary key: SupCode

Relation: canSupply

Attribute: Cost Domain:  $X = \{x \mid x \text{ is Real Number} \ \& \ x \geq 0\}$

Attribute: SupCode Domain: digit[6]

Attribute: ItemNum Domain: digit[6]

Primary key: SupCode, ItemNum

Foreign key: SupCode References: attribute SupCode in relation Supplier

Foreign key: ItemNum References: attribute ItemNum in relation Items

Relation: Procurement

Attribute: TransNum Domain: digit[5]

Attribute: Date Domain: char[20]

Attribute: Quantity Domain:  $X = \{x \mid x \text{ is integer} \ \& \ x \geq 0\}$

Attribute: SupCode Domain: digit[6]

Attribute: ItemNum Domain: digit[6]

Primary key: TransNum, SupCode, ItemNum

Foreign key: SupCode References: attribute SupCode in relation Supplier

Foreign key: ItemNum References: attribute ItemNum in relation Items

Relation: Customer

Attribute: Name Domain: alpha[30]

Attribute: CusID Domain: digit[6]

Attribute: Address Domain: char[50]

Primary key: CusID

Foreign key: CreditCard\_Num References:

Relation: CreditCard

Attribute: Number Domain: digit[20]

Attribute: Type Domain: alpha[10]

Attribute: Expiration Domain: digit[4]

Attribute: Limit Domain:  $X = \{x \mid x \text{ is Real Number} \ \& \ x \geq 0\}$

Primary key: Number

Foreign key: References:

Relation: CardOwner

Attribute: CusID Domain: digit[6]

Attribute: CardNum Domain: digit[20]

Primary key: CusID, CardNum

Foreign key: CusID References: attribute CusID in relation Customer

Foreign key: CardNum References: attribute Number in relation CreditCard

Relation: Purchase

Attribute: ItemNum Domain: digit[6]

Attribute: CusID Domain: digit[6]

Attribute: Date Domain: char[20]

Attribute: Quantity Domain:  $X = \{x \mid x \text{ is integer} \ \& \ x \geq 0\}$

Attribute: CardNum Domain: digit[20]

Primary key: CardNum, Date, CusID

Foreign key: CardNum References: attribute Number in relation CreditCard

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HW2

Foreign key: CusID

References: attribute CusID in relation Customer

Foreign key: ItemNum

References: attribute ItemNum in relation Items